The Iowa Administrative Code Supplement is published biweekly pursuant to Iowa Code sections 2B.5A and 17A.6. The Supplement contains replacement chapters to be inserted in the loose-leaf Iowa Administrative Code (IAC) according to instructions included with each Supplement. The replacement chapters incorporate rule changes which have been adopted by the agencies and filed with the Administrative Rules Coordinator as provided in Iowa Code sections 7.17 and 17A.4 to 17A.6. To determine the specific changes in the rules, refer to the Iowa Administrative Bulletin bearing the same publication date.

In addition to the changes adopted by agencies, the replacement chapters may reflect objection to a rule or a portion of a rule filed by the Administrative Rules Review Committee (ARRC), the Governor, or the Attorney General pursuant to Iowa Code section 17A.4(6); an effective date delay or suspension imposed by the ARRC pursuant to section 17A.4(7) or 17A.8(9); rescission of a rule by the Governor pursuant to section 17A.4(8); or nullification of a rule by the General Assembly pursuant to Article III, section 40, of the Constitution of the State of Iowa.

The Supplement may also contain replacement pages for the IAC Index or the Uniform Rules on Agency Procedure.
INSTRUCTIONS
FOR UPDATING THE
IOWA ADMINISTRATIVE CODE

Agency names and numbers in bold below correspond to the divider tabs in the IAC binders. New and replacement chapters included in this Supplement are listed below. Carefully remove and insert chapters accordingly.

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Replace Chapters 10 and 11
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ORGANIZATION AND ADMINISTRATION
[Prior to 2/20/02, see 193F—Chapters 2, 9 and 11]

193F—1.1(543D) Description.

1.1(1) The purpose of the real estate appraiser examining board is to administer and enforce the provisions of Iowa Code chapter 543D (Iowa Voluntary Appraisal Standards and Appraiser Certification Law of 1989) with regard to the appraisal of real property in the state of Iowa, including the examination of candidates and issuance of certificates and registrations; investigation of alleged violations and infractions of the appraisal standards and appraiser certification law; and the disciplining of appraisers. The importance of the role of the appraiser places ethical and professional standards on those who serve in this capacity. To this end, the board has promulgated these rules and has adopted the Uniform Standards of Professional Appraisal Practice (USPAP) to clarify the board’s intent and procedures and to promote and maintain a high level of public trust in professional appraisal practice.

1.1(2) All official communications, including submissions and requests, should be addressed to the board at its official address, 200 E. Grand Avenue, Suite 350, Des Moines, Iowa 50309.

1.1(3) All board action under Iowa Code chapter 543D and 193F—Chapter 17 shall be taken under the supervision of the superintendent, as provided in Iowa Code section 543D.23 and the implementing rules set forth herein.

[ARC 1467C, IAB 5/28/14, effective 7/2/14; ARC 2808C, IAB 11/9/16, effective 1/1/17; ARC 4379C, IAB 3/27/19, effective 5/1/19]

193F—1.2(543D) Administrative authority.

1.2(1) The superintendent is vested with authority to review, approve, modify, or reject all board action pursuant to Iowa Code chapter 543D and 193F—Chapter 17. The superintendent may exercise all authority conferred upon the board and shall have access to all records and information to which the board has access. In supervising the board, the superintendent shall independently evaluate the substantive merits of recommended or proposed board actions which may be anticompetitive.

1.2(2) In performing its duties and in exercising its authority under Iowa Code chapter 543D and 193F—Chapter 17, the board may take action without preclearance by the superintendent if the action is ministerial or nondiscretionary. As used in this chapter, “ministerial or nondiscretionary” shall include any action expressly required by state or federal law, rule, or regulation; by the AQB; or by the appraisal subcommittee. The board may, for example, grant or deny an application for initial or reciprocal certification as a real estate appraiser, an application for registration as an associate real estate appraiser, or an application for a temporary practice permit by an out-of-state appraiser, on any ground expressly required by state or federal law, rule, or regulation; by the AQB; or by the appraisal subcommittee.

1.2(3) Prior to taking discretionary action under Iowa Code chapter 543D and 193F—Chapter 17, the board shall secure approval of the superintendent if the proposed action is or may be anticompetitive, as provided in 193F—Chapter 17. As used in this chapter, “discretionary” shall include any action that is authorized but not expressly required by state or federal law, rule, or regulation; by the AQB; or by the appraisal subcommittee. Examples of discretionary action include orders in response to petitions for rule making, declaratory orders, or waivers from rules, rule making, disciplinary proceedings against licensees, administrative proceedings against unlicensed persons, or any action commenced in the district court.

1.2(4) Determining whether any particular action is or may be anticompetitive is necessarily a fact-based inquiry dependent on a number of factors, including potential impact on the market or restraint of trade. With respect to disciplinary actions, for instance, a proceeding against a single licensee for violating appraisal standards would not have an impact on the broader market and would accordingly not be an anticompetitive action. Commencement of disciplinary proceedings which affect all or a substantial subset of appraisers may have a significant market impact. When in doubt as to whether a proposed discretionary action is or may be anticompetitive, the board may submit the proposed action through the preclearance procedures outlined in 193F—Chapter 17.
1.2(5) A person aggrieved by any final action of the board taken under Iowa Code chapter 543D or 193F—Chapter 17 may appeal that action to the superintendent within 20 days of the date the board issues the action.
   
   a. The appeal process applies whether the board action at issue was ministerial or nondiscretionary, or discretionary, and whether the proposed action was or was not submitted through a preclearance process before the superintendent.
   b. No person aggrieved by a final action of the board may seek judicial review of that action without first appealing the action to the superintendent, as more fully described in 193F—Chapter 17.
   c. Records, filings, and requests for public information. Final board action, regardless of whether such board action is ministerial, nondiscretionary, or discretionary, shall be immediately effective when issued by the board but is subject to review or appeal to the superintendent as permitted by and in accordance with 193F—Chapter 17. If a timely review is initiated or a timely appeal is taken, the effectiveness of such final board action shall be delayed during the pendency of such review or appeal.

193F—1.3(543D) Annual meeting. The annual meeting of the board shall be the first meeting scheduled after April 30. At this time, the chairperson and vice chairperson shall be elected to serve until their successors are elected.

193F—1.4(543D) Other meetings. In addition to the annual meeting, and in addition to other meetings, the time and place of which may be fixed by resolution of the board, any meeting may be called by the chairperson of the board or by joint call of a majority of its members.

193F—1.5(543D) Executive officer’s duties.

   1.5(1) The executive officer shall cause complete records to be kept of applications for examination and registration, certificates and permits granted, and all necessary information in regard thereto.
   1.5(2) The executive officer shall determine when the legal requirements for certification and registration have been satisfied with regard to issuance of certificates or registrations, and the executive officer shall submit to the board any questionable application.
   1.5(3) The executive officer shall keep accurate minutes of the meetings of the board. The executive officer shall keep a list of the names of persons issued certificates as certified general real property appraisers, certified residential real property appraisers and associate real property appraisers.

193F—1.6(543D) Records, filings, and requests for public information. Unless otherwise specified by the rules of the department of commerce, the board is the principal custodian of its own agency orders, statements of law or policy issued by the board, legal documents, and other public documents on file with the board.

   1.6(1) Any person may examine public records promulgated or maintained by the board at its office during regular business hours as specified in 193F—Chapter 25.
   1.6(2) Records, documents and other information may be gathered, stored, and available in electronic format. Information, various forms, documents, and the law and rules may be reviewed or obtained anytime by the public from the board’s Internet website located at idob.state.ia.us/reap.
   1.6(3) Deadlines. Unless the context requires otherwise, such as is the case for timely and late renewal of a registration or certificate, any deadline for filing a document shall be extended to the next working day when the deadline falls on a Saturday, Sunday, or official state holiday.

193F—1.7(543D) Adoption, amendment or repeal of administrative rules.

   1.7(1) The board shall adopt, amend or repeal its administrative rules in accordance with the provisions of Iowa Code section 17A.4. Prior to the adoption, amendment or repeal of any rule of the board, any interested person, as described in Iowa Code section 17A.4(1) “b, ” may submit any
data, views, or arguments in writing concerning such rule or may request to make an oral presentation concerning such rule. Such written comments or requests to make oral presentations shall be filed with the board at its official address and shall clearly state:
   a. The name, address, and telephone number of the person or agency authoring the comment or request;
   b. The number and title of the proposed rule, which is the subject of the comment or request as given in the Notice of Intended Action;
   c. The general content of the oral presentation. A separate comment or request to make an oral presentation shall be made for each proposed rule to which remarks are to be asserted.

1.7(2) The receipt and acceptance for consideration of written comments and requests to make oral presentations shall be acknowledged by the board.

1.7(3) Written comments received after the deadline set forth in the Notice of Intended Action may be accepted by the board although their consideration is not assured. Requests to make an oral presentation received after the deadline shall not be accepted and shall be returned to the requester.

193F—1.8(22) Public records and fair information practices. Rescinded ARC 4379C, IAB 3/27/19, effective 5/1/19.

193F—1.9(68B) Sales of goods and services. Rescinded ARC 4379C, IAB 3/27/19, effective 5/1/19.

193F—1.10(17A) Petitions for rule making. Rescinded ARC 4379C, IAB 3/27/19, effective 5/1/19.


193F—1.12(252J,261) Denial of issuance or renewal of license for nonpayment of child support or student loan. Rescinded ARC 4379C, IAB 3/27/19, effective 5/1/19.


193F—1.16(272C) Impaired licensees. Rescinded ARC 4379C, IAB 3/27/19, effective 5/1/19.

193F—1.17(543D) Types of appraiser classifications. There are three types of appraiser classifications:
   1. Associate real property appraiser. This classification consists of those persons who meet the requirements of 193F—Chapter 4.
   2. Certified residential real property appraiser. This classification consists of those persons who meet the requirements of 193F—Chapter 5.
   3. Certified general real property appraiser. This classification consists of those persons who meet the requirements of 193F—Chapter 6.

193F—1.18(543D) Qualified state appraiser certifying agency.

1.18(1) The real estate appraiser examining board is a state appraiser certifying agency in compliance with Title XI of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA). As a result, persons who are issued certificates by the board to practice as certified real estate appraisers are authorized under federal law to perform appraisal services for federally related transactions and are identified as such in the National Registry maintained by the Appraisal Subcommittee (ASC).
1.18(2) The board must adhere to the criteria established by the Appraiser Qualifications Board (AQB) of the Appraisal Foundation when registering associate appraisers or certifying certified appraisers under Iowa Code chapter 543D. To the extent that the rules conflict with the minimum requirements outlined in the current version of the AQB criteria, the minimum standards established in the criteria shall apply and these rules shall give way to the minimum requirements to comply with federal rule, law, or policy.

[ARC 1467C, IAB 5/28/14, effective 7/2/14; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—1.19(543D) May 1, 2018, criteria.

1.19(1) Effective on and after May 1, 2018, the AQB has changed the criteria for eligibility for certification as a certified appraiser. No person may be certified as a certified appraiser on or after May 1, 2018, unless the person is eligible under the most recent criteria.

1.19(2) The May 1, 2018, criteria were adopted by the AQB in 2018 and have been widely disseminated, including on the board’s website at: idob.state.ia.us/reap/. The May 1, 2018, criteria modify the conditions under which applicants for certification are eligible to take the required examinations.

[ARC 1467C, IAB 5/28/14, effective 7/2/14; ARC 4169C, IAB 12/5/18, effective 1/9/19]

193F—1.20(543D) Application and work product deadlines.

1.20(1) Summary of registration requirements for registration as an associate. The associate appraiser and supervisory appraiser provisions are more fully set out in 193F—Chapters 4 and 15, respectively. Before submitting an application for registration with the board, a person seeking registration as an associate appraiser must have completed a state and national criminal history check with the board within the past 180 days, have completed 75 hours of appraisal education within the past five years, take a supervisory/trainee appraiser course, and secure a qualified supervisory appraiser. An associate appraiser applicant who submits an application to the board office must have completed all requirements prior to submitting an application for registration.

1.20(2) Summary of certification requirements. As more fully set out in 193F—Chapters 3, 5, and 6, a person who is in the process of completing the education, experience, and examination required for certification as a certified appraiser may not submit an application for certification to the board until all prerequisites have been satisfactorily completed. The prerequisites include the following: qualifying college and core criteria appraiser education, qualifying examination, 1,500 hours of qualifying experience in a minimum of 12 months for residential appraisers or 3,000 hours of qualifying experience in a minimum of 18 months for general appraisers, work product review, and a state and national criminal history check consistent with Iowa Code section 543D.22. Work product review requires numerous steps, as provided in 193F—5.6(543D) and 193F—6.6(543D). The work product review process includes the applicant’s submission of a work product experience log to the board; the board’s selection of three appraisals to review; communication of the selected appraisals to the applicant; the applicant’s submission of the three appraisals and associated work files to the board in electronic and paper formats; review of the appraisals and work files by a reviewer retained by the board; the reviewer’s submission of review reports to the board; a meeting between the applicant, the applicant’s supervisor, and the board’s work product review committee; a formal board vote at a board meeting; and communication of approval, denial, or deferral to the applicant. All of these steps must be completed before an applicant with approved work product can submit an application for certification to the board office. If the applicant’s supervisor is unable to attend the work product review meeting, the applicant, or the applicant’s supervisor, must submit the circumstances surrounding the absence to the executive officer so that it may be determined if the work product review meeting should be rescheduled.

[ARC 1467C, IAB 5/28/14, effective 7/2/14; ARC 4169C, IAB 12/5/18, effective 1/9/19; ARC 4707C, IAB 10/9/19, effective 11/13/19; ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—1.21(543D) National criminal history check. All applicants for any of the classifications listed in 193F—1.17(543D), including an applicant seeking to upgrade from a certified residential credential
to a certified general credential, must satisfactorily complete a state and national criminal history check as a condition of registration as an associate real property appraiser, certification as a residential, or certification as or upgrade to a general real property appraiser. The applicant shall authorize release of the results of the criminal history check to the board. If the criminal history check was not completed within 180 calendar days prior to the date the license application is received by the board, the board may perform a new state and national criminal history check or may reject and return the application to the applicant. The background check fee is specified in 193F—Chapter 12.

[ARC 1467C, IAB 5/28/14, effective 7/2/14; ARC 3084C, IAB 5/24/17, effective 6/28/17; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—1.22(272C,543D) Process for board review of eligibility.

As more fully set forth in, as described in, and in accordance with 193F—Chapter 13, before applying for registration as an associate appraiser or certification as a certified appraiser, a person with a criminal history that may impair registration or certification may request that the board evaluate the prospective applicant’s criminal history.

[ARC 1467C, IAB 5/28/14, effective 7/2/14; ARC 5484C, IAB 2/24/21, effective 3/31/21]

193F—1.23(272C,543D) Applications. Unless otherwise provided by rule of the board, abandoned applications shall be deemed withdrawn. An application is abandoned if the applicant has not accessed or modified the application through the board’s electronic licensing database within the preceding six months, or when approved by the board but the applicant has failed to pay any required fees within 30 calendar days of the date approved by the board. For purposes of this rule, “application” means any request, application, registration, or petition submitted to the board through the licensing database, including but not limited to the following:

1. Add supervisor appraiser;
2. Associate appraiser registration;
3. Conversion application;
4. Course application;
5. Course instructor application;
6. Course provider application;
7. Examination and experience application;
8. Formal wall certificate request;
9. Pre-/post-course approval request;
10. Reactivation application;
11. Reciprocity application;
12. Reinstatement application;
13. Removal of associate from supervisor;
14. Removal of supervisor from associate;
15. Renewal application;
16. Temporary practice permit application;
17. General application to apply military service to an experience or educational requirement for licensure;
18. Background packet request;
19. Petition for waiver from administrative rules;
20. Request for change of legal name;
21. Request for verification (license and/or examination history); or
22. Request to change license address.

[ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21]

These rules are intended to implement Iowa Code sections 543D.4, 543D.5, 543D.7, 543D.17, 543D.20 and 543D.22 and chapter 272C.

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CHAPTER 4
ASSOCIATE REAL PROPERTY APPRAISER
[Prior to 2/20/02, see rule 193F—3.6(543D)]

193F—4.1(543D) Qualifications to register as an associate appraiser.

4.1(1) Education.
   a. A person applying for registration as an associate appraiser shall, at a minimum, satisfactorily complete all AQB-approved, qualifying education courses required under the current AQB criteria specifying educational standards applicable for registration as an associate residential appraiser or associate general appraiser. Each required course must be completed before the person can obtain an associate credential.
   b. The initial qualifying education must be completed no more than five years prior to the date of application. Credit toward all or part of the core criteria qualifying education requirements in this rule may also be obtained via the completion of a degree in real estate from an accredited degree-granting college or university, provided that the college or university has had its curriculum reviewed and approved by the AQB and so long as the degree was granted no more than five years prior to the date of application.

4.1(2) Training. Prior to registration as an associate, a person must complete a course that complies with the specifications for course content established by the AQB specifically oriented to the requirements and responsibilities of supervisory appraisers and associate appraisers. The course must be completed before the person can obtain an associate credential. This course cannot be applied toward the required hours of qualifying or continuing education.

4.1(3) Background check. A state and national criminal history check shall be performed on any new associate appraiser. The applicant shall authorize release of the results of the criminal history check to the board. If the criminal history check was not completed within 180 calendar days prior to the date the license application is received by the board, the board may perform a new state and national criminal history check or may reject and return the application to the applicant.

4.1(4) Supervision. An applicant must obtain the services of a certified appraiser who meets the supervisor qualification criteria in rule 193F—15.3(543D).

4.1(5) Application form. After completing the education, training, background check, and obtainment of a supervisor outlined in subrules 4.1(1) to 4.1(4), a person applying for registration as an associate appraiser shall apply for registration. A sufficient application within the meaning of Iowa Code section 17A.18(2) must:
   a. Be on a form and in the manner prescribed by the board;
   b. Be signed by the applicant and supervisor(s), be certified as accurate, or display an electronic signature by the applicant and supervisor(s) if submitted electronically;
   c. Be fully completed;
   d. Reflect, on its face, full compliance with all applicable qualifying education requirements including the supervisory appraiser/trainee appraiser course;
   e. Be accompanied by the fee as identified in 193F—Chapter 12.

4.1(6) Registration denial. The board may deny an application for registration as an associate appraiser on any ground identified in 193F—subrule 3.4(1) or on any ground upon which the board may impose discipline against an associate appraiser, as provided in 193F—Chapter 7.

193F—4.2(543D) Supervision of associate appraisers.

4.2(1) Direct supervision. An associate appraiser is subject to the direct supervision of a certified real property appraiser. Qualifications for a supervisory appraiser are outlined in 193F—Chapter 15. An associate appraiser may be supervised by more than one supervisory appraiser.

4.2(2) Supervisor registration. An associate appraiser shall identify all supervisors by whom the associate will be supervised on forms provided by the board and shall promptly notify the board in the
event of an addition of a, or change in, supervisor or if the associate will no longer be supervised by a previously identified supervisor. An associate appraiser who does not have at least one approved active supervisor meeting the requirements of 193F—Chapter 15 will be placed in inactive status until such time as the associate finds a supervisor meeting the requirements of 193F—Chapter 15. Associate appraisers wishing to maintain an inactive license must continue to renew on a biennial basis in accordance with rule 193F—4.3(543D).

4.2(3) Scope of practice. The scope of practice of an associate appraiser is the same as the scope of practice of the supervisory appraiser. An associate appraiser supervised by a certified residential appraiser shall accordingly be restricted to the scope of practice of a certified residential appraiser, while an associate appraiser supervised by a certified general appraiser shall be subject to the same scope of practice as a certified general appraiser.

4.2(4) Logs. An associate appraiser shall maintain an appraisal experience log that includes all information required by the AQB and the board as a precondition for certification and shall maintain the log contemporaneously with the performance of supervised real property appraisal services. Every log page shall have the names and signatures of the associate appraiser and supervisory appraiser, the state certification number of the supervisory appraiser, and the date of signatures. Required log entries shall, at a minimum, include the following for each appraisal:

a. Type of property;
b. Date of report;
c. Complete address of appraised property or full legal description;
d. A specific description of work performed by the associate appraiser, scope of review, and supervision of the supervisory appraiser;
e. Number of actual work hours by the associate on the assignment; and
f. The approach(es) to value utilized in the report.

4.2(5) Monitoring of logs. The associate appraiser shall have the appraisal log reviewed and signed by the supervisory appraiser at least monthly. Upon written request by the board, the associate appraiser and the supervisory appraiser shall submit a copy of the associate appraiser’s log by letter or email within ten calendar days. The failure of an associate appraiser or supervisory appraiser to submit the requested log is a ground for disciplinary action. A separate appraisal log shall be maintained for each supervisory appraiser.

[ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21]

193F—4.3(543D) Renewal of associate appraiser registration. An associate appraiser registration must be renewed on a biennial basis as more fully described in 193F—Chapter 9. An associate appraiser is subject to the same continuing education requirements as are applicable to a certified appraiser as a precondition for renewal. Continuing education requirements are outlined in 193F—Chapter 11.

193F—4.4(543D) Progress toward certification as a certified residential appraiser or certified general appraiser.

4.4(1) Associate classification. The associate appraiser classification is intended for those persons training to become certified appraisers and is not intended as a long-term method of performing appraisal services under the supervision of a certified appraiser in the absence of progress toward certification. As a result, the board may impose deadlines for achieving certification, or for satisfying certain prerequisites toward certification. Deadlines, if any, would be imposed as a condition for the third or subsequent renewal.

4.4(2) Factors to consider:

a. The board may consider the following noninclusive list of factors when deciding whether to impose a deadline for achieving certification:

(1) An associate appraiser’s access to the educational courses required for certification;
(2) Whether the associate appraiser had completed the college requirement for certification in advance of registering as an associate appraiser or whether college coursework is in progress;
(3) The associate appraiser’s access to supervisory appraisers, the volume of the supervisory appraiser’s practice, and the type of certification the associate is training to achieve; and
(4) Such additional factors as may be relevant to the board’s determination as to whether the associate appraiser is making good-faith progress toward certification.

b. While the board’s policy is to work with associate appraisers and their supervisors in a cooperative manner, an associate appraiser who does not demonstrate good-faith progress toward certification shall be subject to the imposition of deadlines as described in subrule 4.4(1).

4.4(3) Progress reports. In order to assess an associate appraiser’s progress toward certification, the board may request periodic progress reports from the associate appraiser and from the associate appraiser’s supervisory appraiser or appraisers. Progress reports on the steps an associate appraiser has taken toward certification and the associate appraiser’s plans for completing certification prerequisites shall be submitted to the board within ten calendar days of the board’s written request. The failure of an associate appraiser or supervisory appraiser to submit the requested progress report is a ground for disciplinary action.

[ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—4.5(543D) Applying for certification as a certified residential appraiser or certified general appraiser. An associate appraiser may apply for certification as a certified residential real property appraiser by satisfying the requirements of 193F—Chapter 5, or as a certified general real property appraiser by satisfying the requirements of 193F—Chapter 6. The requirements for each type of certification include a state and national criminal history check consistent with Iowa Code section 543D.22; education; experience, which includes work product review; and examination.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—4.6(272C,543D) Reinstating or reactivating an associate registration.

4.6(1) In order to reinstate or reactivate an associate registration that has lapsed or been placed in inactive or retired status, the applicant must complete all continuing education required for reinstatement pursuant to 193F—subrule 11.2(5). For purposes of this rule, in addition to the most recent edition of a seven-hour USPAP course, the board shall allow for continuing education only those courses that have been AQB-approved as qualifying education required for certification, as outlined in rules 193F—5.2(543D) and 193F—6.2(543D). The purpose of this requirement is to ensure that those associates reinstating a lapsed, retired, or inactive registration are progressing toward certification. Any qualifying education course taken under this rule as continuing education shall also apply as qualifying education toward certification. If the applicant has completed all qualifying education prior to applying to reinstate a lapsed, retired, or inactive associate registration, the applicant may use any approved continuing education course as provided in 193F—Chapter 11, in addition to the required seven-hour USPAP update course, toward the continuing education required for reinstatement.

4.6(2) If an appraiser’s registration is placed in inactive status as a result of the appraiser’s failure to maintain at least one approved active supervisor meeting the requirements of 193F—Chapter 15 pursuant to subrule 4.2(2), the applicant must complete the continuing education required by subrule 4.6(1) in order to reinstate the associate registration but is not required to pay any fee that would otherwise be required in connection with such reinstatement so long as the associate has not renewed the registration to inactive status or allowed the registration to lapse prior to reinstating or reactivating the registration.

[ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21]

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CHAPTER 5
CERTIFIED RESIDENTIAL REAL PROPERTY APPRAISER

[Prior to 2/20/02, see rule 193F—3.4(543D) and 193F—Chapter 4]

193F—5.1(543D) General.

5.1(1) The certified residential real property appraiser classification qualifies the appraiser to appraise one- to four-unit residential properties without regard to value or complexity. The classification includes the appraisal of vacant or unimproved land that is utilized for one- to four-unit residential properties or for which the highest and best use is for one- to four-unit residential properties. The classification does not include the appraisal of subdivisions for which a development analysis/appraisal is necessary.

5.1(2) Certification is composed of three parts: education, examination, and experience, which includes work product review.

5.1(3) All certified residential real property appraisers must comply with USPAP.  
[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/12/14, effective 12/17/14]

193F—5.2(543D) Education. Education requirements for an applicant to obtain a certificate as a certified residential real property appraiser shall be in compliance with the criteria as set forth by the Appraiser Qualifications Board (AQB) of the Appraisal Foundation. If an accredited college or university (accredited by the Commission on Colleges, by a regional or national accreditation association, or by an accrediting agency that is recognized by the U.S. Secretary of Education) accepts the College-Level Examination Program© (CLEP) examination(s) and issues a transcript for the examination(s) showing the college’s or university’s approval, the CLEP credit will be considered as credit for the college course.

5.2(1) Collegiate education. There are five options for the collegiate education aspect of the requirements toward certification as a certified residential real property appraiser as specified in the AQB criteria.

5.2(2) Core criteria. In addition to the formal education in subrule 5.2(1), an applicant must meet the current AQB criteria requirements before taking the AQB-approved examination. All courses must be AQB-approved current core criteria to be considered creditable. The creditable class hours under the general certification AQB-approved current core criteria courses satisfy the residential requirement.

5.2(3) Degree program. Credit toward core criteria qualifying education requirements may also be obtained via the completion of a degree in real estate from an accredited degree-granting college or university, provided that the college or university has had its curriculum reviewed and approved by the AQB.  
[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 4169C, IAB 12/5/18, effective 1/9/19; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—5.3(543D) Examination. The prerequisite for taking the AQB-approved examination is collegiate education, experience, work product review and completion of all creditable course hours as specified in subrule 5.2(2). The creditable course hours, collegiate education, and all experience must be completed as specified in subrules 5.2(1) and 5.2(2) and rules 193F—5.4(543D) and 193F—5.6(543D) prior to the examination. Equivalency shall be determined through the AQB Course Approval Program or by an alternate method established by the AQB. USPAP qualifying education shall be awarded only when the class is instructed by at least one AQB-certified USPAP instructor who holds a state-issued certified residential or certified general appraiser credential in active status and good standing.

5.3(1) In order to qualify to sit for the certified residential real property appraiser examination, the applicant must complete the board’s application form and provide copies of documentation of completion of all courses claimed that qualify the applicant to sit for the examination.

a. A sufficient application within the meaning of Iowa Code section 17A.18(2) must:

(1) Be on a form and in the manner prescribed by the board;

(2) Be signed by the applicant, be certified as accurate, or display an electronic signature by the applicant if submitted electronically;
(3) Be fully completed;
(4) Reflect, on its face, full compliance with all applicable continuing education requirements; and
(5) Be accompanied by the fee specified in 193F—Chapter 12.

b. The core criteria, collegiate education, experience, and work product review must be completed and the documentation submitted to the board at the time of application to sit for the examination.

5.3(2) The board may verify educational credits claimed. Undocumented credits will be sufficient cause to invalidate the examination results pursuant to 193F—paragraph 3.3(2) “c.”

5.3(3) Responsibility for documenting the educational credits claimed rests with the applicant.

5.3(4) An applicant must supply a true and accurate copy of the original examination scores when applying for certification.

5.3(5) If an applicant who has passed an examination does not obtain the related appraiser credential within 24 months after passing the examination, that examination result loses its validity to support issuance of an appraiser credential. To regain eligibility for the credential, the applicant must retake and pass the examination. This requirement applies to individuals obtaining an initial certified credential or upgrading from an associate credential.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 4169C, IAB 12/5/18, effective 1/9/19; ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—5.4(543D) Supervised experience required for initial certification. Except as otherwise permitted herein, all experience required for initial certification pursuant to Iowa Code section 543D.9 shall be performed as a registered associate real property appraiser under the direct supervision of a certified residential or general real property appraiser pursuant to the provisions of 193F—Chapter 15.

5.4(1) Acceptable experience. The board will accept as qualifying experience the documented experience attained while the applicant for initial certification was in an educational program recognized by the Appraiser Qualifications Board and Appraisal Subcommittee as providing qualifying experience for initial certification, whether or not the applicant was registered as an associate real property appraiser at the time the educational program was completed. Such programs, if approved by federal authorities, will incorporate direct supervision by a certified real property appraiser and such additional program features as to satisfy the purpose of requiring that qualifying experience be attained by the applicant as an associate real property appraiser.

5.4(2) Exceptions. Applicants for certified residential real property certification in Iowa may utilize experience obtained in the absence of registration as an associate real property appraiser under the following circumstances:

a. Subject to any requirements or limitations established by applicable federal authorities, including the AQB and ASC, or applicable federal law, rule, or policy, hours qualifying for experience in any jurisdiction, including in a bordering state, will be considered qualifying hours for experience in Iowa without board approval or authorization, as long as the applicant is able to establish by clear and convincing evidence all of the following:

(1) A majority of the applicant’s total qualifying experience hours are completed in Iowa under the direct supervision of a certified real property appraiser pursuant to the provisions of 193F—Chapter 15.

(2) The qualifying hours obtained in another jurisdiction and claimed as experience hours in Iowa were completed in a jurisdiction under the direct supervision of an active certified real estate appraiser in that jurisdiction as required by the AQB and the jurisdiction’s laws, rules, or policies.

(3) The nature of the experience attained in another jurisdiction is qualitatively and substantially equivalent to the experience an associate real property appraiser would receive under the direct supervision of a certified real property appraiser pursuant to the standards established in 193F—Chapter 15.

b. Requests for experience performed in the absence of registration as an associate real property appraiser shall be made on forms prescribed by the board.

(1) The burden shall be on the applicant to establish by clear and convincing evidence all of the following:
1. The experience is qualifying experience under the substantive and documentation standards of the AQB and ASC.
2. Denial of the application would impose an undue hardship on the applicant.
3. The nature of the experience attained is qualitatively and substantially equivalent to the experience an associate real property appraiser would receive under the direct supervision of a certified real property appraiser pursuant to the standards established in 193F—Chapter 15.
4. Approval of the application would foster the board’s goal of fair and consistent treatment of applicants.
5. A basis exists beyond the individual control of the applicant to explain why the experience at issue could not have been attained by the applicant as an associate real property appraiser under the direct supervision of a certified real property appraiser.

(2) Among the circumstances the board may consider favorably in ruling on an application for approval of unsupervised experience or experience attained by the applicant in the absence of registration as an associate real property appraiser are:

1. The experience was attained before receiving an associate credential in Iowa in a jurisdiction that, at the time, did not register associate real property appraisers or otherwise offer an associate, trainee or equivalent category of certification.
2. The applicant attained the experience while employed in a county assessor’s office engaged in mass appraisals, and the experience would otherwise qualify under applicable federal standards.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 4169C, IAB 12/5/18, effective 1/9/19; ARC 5484C, IAB 2/24/21, effective 3/31/21]

193F—5.5(543D) Demonstration of experience. The experience necessary for certification pursuant to Iowa Code section 543D.9 must meet the requirements of this rule. The objective of the demonstration of experience is to ensure that, before the applicant is issued a certificate, the applicant has obtained sufficient diversified experience to perform an appraisal.

5.5(1) The applicant shall provide to the board an appraisal log that includes all information required by the AQB as a precondition for certification and shall maintain the log contemporaneously with the performance of supervised real property appraisal services. The appraisal log shall, at a minimum, include all information as described in 193F—subrule 4.2(4).

5.5(2) The applicant shall accumulate a total of 1,500 hours of residential appraisal experience in no fewer than 12 months while in active status. While the hours may be cumulative, the 12 months must have elapsed before the applicant can apply to take the examination. Experience claimed must have been performed in compliance with USPAP in which the appraiser demonstrates proficiency in appraisal principles methodology, procedures and reporting conclusions. Acceptable appraisal experience includes, but is not limited to, the following:

- Fee and staff appraisal;
- Ad valorem tax appraisal;
- Review appraisal;
- Appraisal analysis;
- Appraisal consulting;
- Highest and best use analysis;
- Feasibility analysis/study; and
- Mass appraisal.

5.5(3) The types of experience set out in (2) are intended neither to exclude other sorts of appraisal experience nor to prescribe a specified minimum array of experience. However, an applicant who cannot demonstrate a background of experience of the diversity manifested by this rule shall bear the burden of showing that the applicants’ experience is of sufficient quality and diversity to fulfill the objective of the demonstration of experience. A diversity of experience includes, but is not limited to, the following:

- Performing all approaches to value (i.e., cost, income, sales);
- Various reporting types;
- Appropriate use of various forms (e.g., gPAR, 1004) and formats;
d. Various property types (e.g., vacant land, condominium, manufactured home, and rental);

e. Various assignments that include varying scopes of work (e.g., as is, as completed or proposed, foreclosure, rural properties, estates, use of extraordinary assumption or hypothetical conditions); and

f. Diversity in value ranges.

5.5(4) An applicant may be required to appear before the board or its representative to supplement or verify evidence of experience, which shall be in the form of written reports or file memoranda.

5.5(5) The board may require inspection, by the board itself or by its representatives, of documentation relating to an applicant’s claimed experience. Such inspection may be made at the board’s offices or such other place as the board may designate.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 4169C, IAB 12/5/18, effective 1/9/19; ARC 5237C, IAB 10/21/20, effective 11/25/20]

193F—5.6(543D) Work product review.

5.6(1) An applicant shall submit a complete appraisal log at the time of application for examination and work product review. Three appraisal reports will be selected to demonstrate a diversity of experience and approaches to value over various time frames for work product review. The applicant shall submit, both electronically and on paper, one copy of each report and work file for each of the selected appraisals along with the appropriate form and fee. The work product submission shall not be redacted by the applicant; however, the applicant may request that the reports remain confidential as specified in subrule 5.6(2). The fee for work product review of the appraisals is provided in 193F—Chapter 12. Appraisals may be selected at random from the entire log or within certain types of appraisals. The board reserves the right to request one or more additional appraisals if those submitted by the applicant raise issues concerning the applicant’s competency or compliance with applicable appraisal standards or the degree to which the submitted appraisals are representative of the applicant’s work product. Such additional appraisals may be selected at random from the applicant’s log or may be selected specifically to provide an example of the applicant’s work product regarding a particular type of appraisal.

5.6(2) The board shall treat all appraisals received as public records unless the applicant notifies the board at the time of submission that a submitted appraisal is subject to the confidentiality provisions of appraisal standards or is otherwise confidential under state or federal law. While applicants are encouraged to submit appraisals actually performed for clients, applicants may submit one or more demonstration appraisals if the appraisals are prepared based on factual information in the same manner as applicable to actual appraisal assignments and are clearly marked as demonstration appraisals. Experience gained for work without a traditional client (i.e., a client hiring an appraiser for a business purpose), for example a demonstration appraisal, cannot exceed 50 percent of the total experience requirement.

5.6(3) An applicant seeking to upgrade to a certified residential real property appraiser shall submit three residential appraisals for review.

5.6(4) The board will submit the appraisals to a peer review consultant for an opinion on the appraiser’s compliance with applicable appraisal standards.

5.6(5) The work product review process is not intended as an endorsement of an applicant’s work product. No applicant or appraiser shall represent the results of work product review in communications with a client or in marketing to potential clients in a manner which falsely portrays the board’s work product review as an endorsement of the appraiser or the appraiser’s work product. Failure to comply with this prohibition may be grounds for discipline as a practice harmful or detrimental to the public.

5.6(6) The board views work product review, in part, as an educational process. While the board may deny an application based on an applicant’s failure to adhere to appraisal standards or otherwise demonstrate a level of competency upon which the public interest can be protected, the board will attempt to work with applicants deemed in need of assistance to arrive at a mutually agreeable remedial plan. A remedial plan may include additional education, desk review, a mentoring program, or additional precertification experience.
5.6(7) An applicant who is denied certification based on the work product review described in this rule, or on any other ground, shall be entitled to a contested case hearing as provided in rule 193F—20.39(546,543D,272C). Notice of denial shall specify the grounds for denial, which may include any of the work performance-related grounds for discipline against a certified appraiser.

5.6(8) If probable cause exists, the board may open a disciplinary investigation based on the work product review of an applicant. A potential disciplinary action could arise, for example, if the applicant is a certified residential real property appraiser seeking an upgrade to a certified general real property appraiser, or where the applicant is uncertified and is working under the supervision of a certified real property appraiser who signed the appraisal report.

5.6(9) After accumulating a minimum of 500 hours of appraisal experience, an applicant may voluntarily submit work product to the board to be reviewed by a peer reviewer for educational purposes only. A maximum of three reports may be submitted for review during the experience portion of the certification process. Work product submitted for educational purposes only will not result in disciplinary action on either the associate appraiser or the associate appraiser’s supervisor so long as the appraisal review does not reveal negligent or egregious errors or omissions. The fee for voluntary submissions of work product for review is provided in 193F—Chapter 12.

5.6(10) The board will retain the appraisals for as long as needed as documentation of the board’s actions for the Appraisal Subcommittee or as needed in a pending proceeding involving the work product of the applicant or the applicant’s supervisor. When no longer needed for such purposes, the work product may be retained or destroyed at the board’s discretion.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/14/14, effective 12/17/14; ARC 4169C, IAB 12/5/18, effective 1/9/19; ARC 4379C, IAB 3/27/19, effective 5/1/19; ARC 4707C, IAB 10/9/19, effective 11/13/19; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—5.7(543D) Background check. A state and national criminal history check shall be performed on any appraiser upgrading to a new credential consistent with Iowa Code section 543D.22.

[ARC 6007C, IAB 11/3/21, effective 12/8/21]

These rules are intended to implement Iowa Code sections 543D.5, 543D.8, and 543D.9.

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CHAPTER 6
CERTIFIED GENERAL REAL PROPERTY APPRAISER
[Prior to 2/20/02, see rule 193F—3.3(543D) and 193F—Chapter 4]


6.1(1) The certified general real property appraiser classification qualifies the appraiser to appraise all types of real property.

6.1(2) All certified general real property appraisers must comply with USPAP.

6.1(3) Certification is composed of three parts: education, examination, and experience, which includes work product review.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/12/14, effective 12/17/14]

193F—6.2(543D) Education. Education requirements for an applicant to obtain a certificate as a certified general real property appraiser shall be in compliance with the criteria as set forth by the Appraiser Qualifications Board (AQB) of the Appraisal Foundation.

6.2(1) Collegiate education. Applicants must hold a bachelor’s degree or higher from an accredited college, junior college, community college, or university. If an accredited college or university (accredited by the Commission on Colleges, by a regional or national accreditation association, or by an accrediting agency that is recognized by the U.S. Secretary of Education) accepts the College-Level Examination Program© (CLEP) examination(s) and issues a transcript for the examination(s) showing the college’s or university’s approval, the CLEP credit will be considered as credit for the college course. An applicant who submits a master’s degree or higher as proof of the applicant’s bachelor’s degree must include an affidavit or a copy of the bachelor’s degree attesting that the bachelor’s degree is from an accredited college or university.

6.2(2) Core criteria. In addition to the formal education in 6.2(1), an applicant must meet the current AQB requirements before taking the AQB-approved examination. All courses must be AQB-approved under current core criteria to be considered creditable.

6.2(3) Degree program. Credit toward core criteria qualifying education requirements may also be obtained via the completion of a degree in real estate from an accredited degree-granting college or university, provided that the college or university has had its curriculum reviewed and approved by the AQB.

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193F—6.3(543D) Examination. The prerequisite for taking the AQB-approved examination is collegiate education, experience, work product review and completion of all creditable course hours as specified in subrule 6.2(2). The core criteria hours, collegiate education, and all experience must be completed as specified in subrules 6.2(1) and 6.2(2) and rules 193F—6.4(543D) and 193F—6.6(543D) prior to the examination. Equivalency shall be determined through the AQB Course Approval Program or by an alternate method established by the AQB. USPAP qualifying education shall be awarded only when the class is instructed by at least one AQB-certified USPAP instructor who holds a state-issued certified residential or certified general appraiser credential in active status and good standing.

6.3(1) In order to qualify to sit for the certified general real property appraiser examination, the applicant must complete the board’s application form and provide copies of documentation of completion of all courses claimed that qualify the applicant to sit for the examination.

a. A sufficient application within the meaning of Iowa Code section 17A.18(2) must:

(1) Be on a form and in the manner prescribed by the board;

(2) Be signed by the applicant, be certified as accurate, or display an electronic signature by the applicant if submitted electronically;

(3) Be fully completed;

(4) Reflect, on its face, full compliance with all applicable continuing education requirements; and

(5) Be accompanied by the fee specified in 193F—Chapter 12.
b. The core criteria, collegiate education, experience, and work product review must be completed and documentation submitted to the board at the time of application to sit for the examination.

6.3(2) The board may verify educational credits claimed. Undocumented credits will be sufficient cause to invalidate the examination results pursuant to 193F—paragraph 3.3(2) “c.”

6.3(3) Responsibility for documenting the educational credits claimed rests with the applicant.

6.3(4) An applicant must supply a true and accurate copy of the original examination scores when applying for certification.

6.3(5) If an applicant who has passed an examination does not obtain the related appraiser credential within 24 months after passing the examination, that examination result loses its validity to support issuance of an appraiser credential. To regain eligibility for the credential, the applicant must retake and pass the examination. This requirement applies to individuals obtaining an initial certified credential or upgrading from an associate credential.

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193F—6.4(543D) Supervised experience required for initial certification. Except as otherwise permitted herein, all experience required to obtain certification as a certified general real property appraiser pursuant to Iowa Code section 543D.9 shall be performed under the direct supervision of a certified general real property appraiser pursuant to the provisions of 193F—Chapter 15.

6.4(1) Acceptable experience. The board will accept as qualifying experience the documented experience attained while the applicant for initial certification was in an educational program recognized by the Appraiser Qualifications Board and Appraisal Subcommittee as providing qualifying experience for certification, whether or not the applicant was registered as an associate real property appraiser at the time the educational program was completed. Such programs, if approved by federal authorities, will incorporate direct supervision by a certified real property appraiser and such additional program features as to satisfy the purpose of requiring that qualifying experience be attained by the applicant as a real property appraiser.

6.4(2) Exceptions. Applicants for certified general real property certification in Iowa may utilize experience obtained in the absence of registration as an associate real property appraiser under the following circumstances.

a. Subject to any requirements or limitations established by applicable federal authorities, including the AQB and ASC, or applicable federal law, rule, or policy, hours qualifying for experience in any jurisdiction, including a bordering state, will be considered qualifying hours for experience in Iowa without board approval or authorization, as long as the applicant is able to establish by clear and convincing evidence all of the following:

(1) A majority of the applicant’s total qualifying experience hours are completed in Iowa under the direct supervision of a certified real property appraiser pursuant to the provisions of 193F—Chapter 15.

(2) The qualifying hours obtained in the jurisdiction and claimed as experience hours in Iowa were completed in another jurisdiction under the direct supervision of an active certified real estate appraiser in that jurisdiction as required by the AQB and the jurisdiction’s laws, rules, or policies.

(3) The nature of the experience attained in another jurisdiction is qualitatively and substantially equivalent to the experience an associate real property appraiser would receive under the direct supervision of a certified real property appraiser pursuant to the standards established in 193F—Chapter 15.

b. Requests for experience performed in the absence of registration as an associate real property appraiser shall be made on forms prescribed by the board.

(1) The burden shall be on the applicant to establish by clear and convincing evidence all of the following:

1. The experience is qualifying experience under the substantive and documentation standards of the AQB and ASC.

2. Denial of the application would impose an undue hardship on the applicant.
3. The nature of the experience attained is qualitatively and substantially equivalent to the experience an associate real property appraiser would receive under the direct supervision of a certified real property appraiser pursuant to the standards established in 193F—Chapter 15.

4. Approval of the application would foster the board’s goal of fair and consistent treatment of applicants.

5. A basis exists beyond the individual control of the applicant to explain why the experience at issue could not have been attained by the applicant under the direct supervision of a certified general real property appraiser.

(2) Among the circumstances the board may consider favorably in ruling on an application for approval of unsupervised experience or experience attained by the applicant in the absence of registration as an associate real property appraiser are:

1. The experience was attained before receiving an associate credential in Iowa in a jurisdiction that, at the time, did not require direct supervision or register associate real property appraisers or otherwise offer a category of certification.

2. The applicant attained the experience while employed in a county assessor’s office engaged in mass appraisals, and the experience would otherwise qualify under applicable federal standards.

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193F—6.5(543D) Demonstration of experience. The experience necessary for certification pursuant to Iowa Code section 543D.9 must meet the requirements of this rule. The objective of the demonstration of experience is to ensure that, before the applicant is issued a certificate, the applicant has obtained sufficient diversified experience to perform an appraisal.

6.5(1) The applicant shall provide to the board an appraisal log that includes all information required by the AQB as a precondition for certification and shall maintain the log contemporaneously with the performance of supervised real property appraisal services. The appraisal log shall, at a minimum, include all information as described in 193F—subrule 4.2(4).

6.5(2) The applicant shall accumulate a total of 3,000 hours of appraisal experience in no fewer than 18 months while in active status, of which 1,500 hours must consist of nonresidential appraisal experience. While the hours may be cumulative, the 18 months must have elapsed before an applicant can be certified. Experience claimed must have been performed in compliance with USPAP where the appraiser demonstrates proficiency in appraisal principles methodology, procedures and reporting conclusions. Acceptable appraisal experience includes, but is not limited to, the following:

a. Fee and staff appraisal;
b. Ad valorem tax appraisal;
c. Review appraisal;
d. Appraisal analysis;
e. Appraisal consulting;
f. Highest and best use analysis;
g. Feasibility analysis/study; and
h. Mass appraisal.

6.5(3) The types of experience set out in 6.5(2) are intended neither to exclude other sorts of appraisal experience nor to prescribe a specified minimum array of experience. However, an applicant who cannot demonstrate a background of experience of the diversity manifested by this rule shall bear the burden of showing that the applicant’s experience is of sufficient quality and diversity to fulfill the objective of the demonstration of experience. A diversity of experience includes, but is not limited to, the following:

a. Performing all approaches to value (i.e., cost, income, sales);
b. Various reporting types;
c. Appropriate use of various forms (e.g., gPAR, 1004) and formats;
d. Various property types (e.g., vacant land, single-family, multifamily, agricultural, retail, industrial, and special purpose);
e. Various assignments that include varying scopes of work (e.g., as is, as completed or proposed, foreclosure, rural properties, acres, estates, eminent domain, use of extraordinary assumption or hypothetical conditions); and

f. Diversity in value ranges.

6.5(4) An applicant may be required to appear before the board or its representative to supplement or verify evidence of experience, which shall be in the form of written reports or file memoranda.

6.5(5) The board may require inspection, by the board itself or by its representatives, of documentation relating to an applicant’s claimed experience. Such inspection may be made at the board’s offices or such other place as the board may designate.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 1731C, IAB 11/12/14, effective 12/17/14; ARC 4169C, IAB 12/5/18, effective 1/9/19; ARC 5237C, IAB 10/21/20, effective 11/25/20]

193F—6.6(543D) Work product review.

6.6(1) An applicant shall submit a complete appraisal log at the time of application for examination and work product review. Three appraisal reports will be selected to demonstrate a diversity of experience and approaches to value over various time frames for work product review. The applicant shall submit, both electronically and on paper, one copy of each report and work file for each of the selected appraisals along with the appropriate form and fee. The work product submission shall not be redacted by the applicant; however, the applicant may request the reports remain confidential as specified in subrule 6.6(2). The fee for work product review of the appraisals is provided in 193F—Chapter 12. Appraisals may be selected at random from the entire log or within certain types of appraisals. The board reserves the right to request one or more additional appraisals if those submitted by the applicant raise issues concerning the applicant’s competency or compliance with applicable appraisal standards or the degree to which the submitted appraisals are representative of the applicant’s work product. Such additional appraisals may be selected at random from the applicant’s log or may be selected specifically to provide an example of the applicant’s work product regarding a particular type of appraisal.

6.6(2) The board shall treat all appraisals received as public records unless the applicant notifies the board at the time of submission that a submitted appraisal is subject to the confidentiality provisions of appraisal standards or is otherwise confidential under state or federal law. While applicants are encouraged to submit appraisals actually performed for clients, applicants may submit one or more demonstration appraisals if the appraisals are prepared based on factual information in the same manner as applicable to actual appraisal assignments and are clearly marked as demonstration appraisals. Experience gained for work without a traditional client (i.e., a client hiring an appraiser for a business purpose), for example a demonstration appraisal, cannot exceed 50 percent of the total experience requirement.

6.6(3) An applicant seeking original or upgrade certification as a certified general real property appraiser shall submit one residential appraisal and two nonresidential appraisals for review.

6.6(4) The board will submit the appraisals to a peer review consultant for an opinion on the appraiser’s compliance with applicable appraisal standards.

6.6(5) The work product review process is not intended as an endorsement of an applicant’s work product. No applicant or appraiser shall represent the results of work product review in communications with a client or in marketing to potential clients in a manner which falsely portrays the board’s work product review as an endorsement of the appraiser or the appraiser’s work product. Failure to comply with this prohibition may be grounds for discipline as a practice harmful or detrimental to the public.

6.6(6) The board views work product review, in part, as an educational process. While the board may deny an application based on an applicant’s failure to adhere to appraisal standards or otherwise demonstrate a level of competency upon which the public interest can be protected, the board will attempt to work with applicants deemed in need of assistance to arrive at a mutually agreeable remedial plan. A remedial plan may include additional education, desk review, a mentoring program, or additional precertification experience.
6.6(7) An applicant who is denied certification based on the work product review described in this rule, or on any other ground, shall be entitled to a contested case hearing as provided in rule 193F—20.39(546,543D,272C). Notice of denial shall specify the grounds for denial, which may include any of the work performance-related grounds for discipline against a certified appraiser.

6.6(8) If probable cause exists, the board may open a disciplinary investigation based on the work product review of an applicant. A potential disciplinary action could arise, for example, if the applicant is a certified residential real property appraiser seeking an upgrade to a certified general real property appraiser, or where the applicant is uncertified and is working under the supervision of a certified real property appraiser who signed the appraisal report.

6.6(9) After accumulating a minimum of 500 hours of appraisal experience, an applicant may voluntarily submit work product to the board to be reviewed by a peer reviewer for educational purposes only. A maximum of three reports may be submitted for review during the experience portion of the certification process. Work product submitted for educational purposes only will not result in disciplinary action on either the associate appraiser or the associate appraiser’s supervisor so long as the appraisal review did not reveal negligent or egregious errors or omissions. The fee for voluntary submissions of work product for review is provided in 193F—Chapter 12.

6.6(10) The board will retain the appraisals for as long as needed as documentation of the board’s actions for the Appraisal Subcommittee or as needed in a pending proceeding involving the work product of the applicant or the applicant’s supervisor. When no longer needed for such purposes, the work product may be retained or destroyed at the board’s discretion.

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193F—6.7(543D) Background check. A state and national criminal history check shall be performed on any appraiser upgrading to a new credential consistent with Iowa Code section 543D.22.


193F—6.8(543D) Upgrade from a certified residential real property appraiser to a certified general real property appraiser. To upgrade from a certified residential real property appraiser to a certified general real property appraiser, an applicant must complete the following additional education, examination, supervision, and experience requirements, which include work product review and a state and national criminal history check as provided in Iowa Code section 543D.22. For all intents and purposes, a certified residential real property appraiser seeking to upgrade to a certified general status will be considered an associate appraiser as it relates to differences between the scope of practice of the two licensure categories, and the upgrade process will generally follow the same registration requirements, supervisory identification and maintenance requirements, and processes and procedures generally applicable to associate appraisers set forth in 193F—Chapter 4.

6.8(1) Education.

a. Collegiate education. Certified residential real property appraisers must satisfy the college-level education requirements as specified in rule 193F—6.2(543D).

b. Core criteria. In addition to the formal education and core criteria educational requirements originally required to obtain a certified residential credential, an applicant must meet the current AQB requirements before taking the AQB-approved examination.

6.8(2) Examination. An applicant must satisfy the examination requirements as specified in rule 193F—6.3(543D).

6.8(3) Supervision and experience.

a. Experience. An applicant must satisfy all of the experience requirements as specified in rules 193F—6.4(543D) and 193F—6.5(543D). In obtaining and documenting the 3,000 total experience hours required by subrule 6.5(2), as is the case for initial licensure, such hours must be accumulated in no fewer than 18 months while in active status as, in effect, a registered associate appraiser pursuing an upgrade.
pursuant to this rule and subject to the supervision of an Iowa-certified appraiser. Notwithstanding the foregoing:

1. To the extent residential appraisal experience may be counted toward licensure in accordance with subrule 6.5(2), residential appraisal experience obtained as a certified residential appraiser prior to initiating the upgrade process may be included on the appraisal log and, subject to the work product review process, counted toward the experience-hours requirement for purposes of upgrading from a certified real property appraiser to a certified general real property appraiser; provided that such residential appraisal experience obtained prior to initiating the upgrade process shall not apply toward the 18-month requirement.

2. Applicants may request that the board approve experience hours performed in the absence of registration as an associate real property appraiser by filing an application for approval on a form provided by the board, which application will be subject to and governed by the same processes and standards set forth in rule 193F—6.4(543D).

b. Supervision. Subject to applicable exceptions, all nonresidential experience obtained and applied toward obtaining a certified general credential as part of the upgrade process shall be performed under the direct supervision of a certified general real property appraiser pursuant to the provisions of 193F—Chapter 15 and shall be subject to the identification, notification, maintenance, approval, scope-of-practice, log, and monitoring requirements set forth in 193F—Chapter 4. Both the applicant and the applicant’s supervisor(s) must complete a supervisor/trainee course within the five years prior to the board’s receipt of the associate registration application identifying a supervisor with the board or prior to the applicant’s obtaining or claiming any experience hours under the supervision of that supervisor.

6.8(4) Work product review. An applicant must satisfy the work product review requirements as specified in rules 193F—6.5(543D) and 193F—6.6(543D).

6.8(5) Background check. A state and national criminal history check shall be performed on any appraiser upgrading to a new credential consistent with Iowa Code section 543D.22.

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CHAPTER 8
INVESTIGATIONS AND DISCIPLINARY PROCEDURES

193F—8.1(272C,543D) Disciplinary action. The real estate appraiser examining board has authority pursuant to Iowa Code chapters 543D, 17A and 272C to impose discipline for violations of these Iowa Code chapters and the rules promulgated thereunder.

193F—8.2(17A,272C,543D) Initiation of disciplinary investigations. The board may initiate a licensee disciplinary investigation upon the board’s receipt of information suggesting that a licensee may have violated a law or rule enforced by the board which, if true, would constitute grounds for licensee discipline.

193F—8.3(272C,543D) Sources of information. Without limitation, the following nonexclusive list of information sources may form the basis for the initiation of a disciplinary investigation or proceeding:
1. News articles or other media sources.
2. General or random review of publicly available work product.
3. Reports filed with the board by the commissioner of insurance pursuant to Iowa Code subsection 272C.4(9).
4. Complaints, including anonymous complaints, filed with the board by any member of the public.
5. License applications or other documents submitted to the board, including appraisal logs and appraisal reports.
6. Reports to the board from any regulatory or law enforcement agency from any jurisdiction.
7. Board audits of licensee compliance with conditions for licensure, such as continuing education or qualifying experience.
[ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—8.4(17A,272C,543D) Conflict of interest. If the subject of a complaint is a member of the board, or if a member of the board has a conflict of interest in any disciplinary matter before the board, that member shall abstain from participation in any consideration of the complaint and from participation in any disciplinary hearing that may result from the complaint.

193F—8.5(272C,543D) Complaints. Written complaints may be submitted to the board office by mail, email, facsimile or personal delivery by members of the public, including clients, business organizations, lenders, governmental bodies, licensees, or other individuals or entities with knowledge of possible law or rule violations by licensees.

8.5(1) Contents of a written complaint. Written complaints may be submitted on forms provided by the board that are available from the board office and on the board’s website. Written complaints, whether submitted on a board complaint form or in other written media, shall contain the following information:
   a. The full name, address, and telephone number of the complainant (person complaining), unless the complaint is submitted anonymously.
   b. The full name, address, and telephone number of the respondent (licensee against whom the complaint is filed).
   c. A statement of the facts and circumstances giving rise to the complaint, including a description of the alleged acts or omissions that the complainant believes demonstrate that the respondent has violated or is violating laws or rules enforced by the board.
   d. If known, citations to the laws or rules allegedly violated by the respondent.
   e. Evidentiary supporting documentation.
   f. Steps, if any, taken by the complainant to resolve the dispute with the respondent prior to filing a complaint.

8.5(2) Immunity. As provided by Iowa Code section 272C.8, a person shall not be civilly liable as a result of filing a report or complaint with the board unless such act is done with malice, nor shall an
employee be dismissed from employment or discriminated against by an employer for filing such a report or complaint.

**8.5(3) Role of complainant.** The role of the complainant in the disciplinary process is limited to providing the board with factual information relative to the complaint. A complainant is not party to any disciplinary proceeding which may be initiated by the board based in whole or in part on information provided by the complainant.

**8.5(4) Role of the board.** The board does not act as an arbiter of disputes between private parties, nor does the board initiate disciplinary proceedings to advance the private interest of any person or party. The role of the board in the disciplinary process is to protect the public by investigating complaints and initiating disciplinary proceedings in appropriate cases. The board possesses sole decision-making authority throughout the disciplinary process, including the authority to determine whether a case will be investigated, the manner of the investigation, whether a disciplinary proceeding will be initiated, and the appropriate licensee discipline to be imposed, if any.

**8.5(5) Initial complaint screening.** All written complaints received by the board shall be initially screened by the board’s executive officer to determine whether the allegations of the complaint fall within the board’s investigatory jurisdiction and whether the facts presented, if true, would constitute a basis for disciplinary action against a licensee. Complaints which are clearly outside the board’s jurisdiction, which clearly do not allege facts upon which disciplinary action would be based, or which are frivolous shall be referred by the board’s executive officer to the board for closure at the next scheduled board meeting. All other complaints shall be investigated and referred by the board’s executive officer to the board’s disciplinary committee for committee review as described in subrule 8.8(1).

[ARC 6170C, IAB 2/9/22, effective 3/16/22]

**193F—8.6(272C,543D) Case numbers.** Whether based on written complaint received by the board or complaint initiated by the board, all complaint files shall be tracked by a case numbering system. Complaints are assigned case numbers in chronological order with the first two digits representing the year in which the complaint was received or initiated, and the second two digits representing the order in which the case file was opened (e.g., 01-01, 01-02, 01-03, etc.). The board’s executive officer shall maintain a case file log noting the date each case file was opened, whether disciplinary proceedings were initiated in the case, and the final disposition of the case. Once a case file number is assigned to a complaint, all persons communicating with the board regarding that complaint are encouraged to include the case file number to facilitate accurate records and prompt response.

**193F—8.7(272C,543D,546) Confidentiality of complaint and investigative information.**

- **8.7(1)** All complaint and investigative information received or created by the board is privileged and confidential pursuant to Iowa Code subsection 272C.6(4). Such information shall not be released to any person except as provided in that section and in this rule.

- **8.7(2) Disclosure to the subject of the investigation.**
  - **a. Legal authority.** Pursuant to Iowa Code section 546.10(9), the board may, prior to the initiation of a disciplinary proceeding, supply to a licensee who is the subject of a disciplinary complaint or investigation all or such parts of a disciplinary complaint, disciplinary or investigatory file, report, or other information as the board in its sole discretion believes would aid the investigation or resolution of the matter.
  - **b. General rule.** As a matter of general policy, the board shall not disclose confidential complaint and investigative information to a licensee except as permitted by Iowa Code section 272C.6(4). Disclosure of a complainant’s identity in advance of the filing of formal disciplinary charges, for instance, may adversely affect a complainant’s willingness to file a complaint with the board.
  - **c. Exceptions to general rule.** The board may exercise its discretion to release to a licensee information that would otherwise be confidential under Iowa Code section 272C.6(4) under narrow circumstances, including but not limited to the following:
    - **(1)** Following a board determination that probable cause exists to file disciplinary charges against a licensee but prior to the issuance of the notice of hearing, the board may provide the licensee with a
peer review report or investigative report or with expert opinions, as reasonably needed for the licensee to assess the merits of a settlement proposal.

(2) The board may release to a licensee who is the subject of a board-initiated investigation, including investigations initiated following the board’s receipt of an anonymous complaint, such records or information as may aid the investigation or resolution of the matter.

(3) The board may disclose information from a peer review report or consultant’s report when soliciting the licensee’s position will aid in making the probable cause determination or when providing the information would be educational to the licensee, and such disclosure can be made to the licensee without revealing identifying information regarding the complainant, peer reviewer or consultant. [ARC 0412C, IAB 10/31/12, effective 12/5/12]

193F—8.8(17A,272C,543D) Investigation procedures.

8.8(1) Disciplinary committee. The board chairperson shall annually appoint two to three members of the board to serve on the board’s disciplinary committee. The disciplinary committee is a purely advisory body which shall review complaint files referred by the board’s executive officer, generally supervise the investigation of complaints, and make recommendations to the full board on the disposition of complaints. Members of the committee shall not personally investigate complaints, but they may review the investigative work product of others in formulating recommendations to the board.

8.8(2) Screening of complaints. All complaints presented to the board shall be screened, evaluated and, where appropriate, investigated. If the committee concludes that the complaint does not present facts which suggest such a violation or that the complaint does not otherwise constitute an appropriate basis for disciplinary action, the committee shall refer the complaint to the full board with the recommendation that the complaint be closed with no further action. If the committee determines that the complaint does present a credible basis for disciplinary action, the committee may either immediately refer the complaint to the full board recommending that a disciplinary proceeding be commenced or initiate a disciplinary investigation.

8.8(3) Committee procedures. An expert investigator, or expert consultant, may be assigned to evaluate the merits of a complaint. In addition, the licensee may be afforded an opportunity to appear before the disciplinary committee for an informal discussion as described in rule 193F—8.9(17A,272C,543D). Upon completion of an investigation, the investigator, expert consultant, peer review committee or board staff shall present a report to the committee. The committee shall review the report and determine what further action is necessary. The committee may:

a. Request further investigation.

b. Determine there is not probable cause to believe a disciplinary violation has occurred, and refer the case to the full board with the recommendation of closure.

c. Determine there is probable cause to believe that a law or rule enforced by the board has been violated, but that disciplinary action is unwarranted on other grounds, and refer the case to the full board with the recommendation of closure. The committee may also recommend that the licensee be informally cautioned or educated about matters which could form the basis for disciplinary action in the future.

d. Determine there is probable cause to believe a disciplinary violation has occurred, and refer the case to the full board with the recommendation that the board initiate a disciplinary proceeding (contested case).

8.8(4) Subpoena authority. Pursuant to Iowa Code sections 17A.13(1) and 272C.6(3), the board is authorized in connection with a disciplinary investigation to issue subpoenas to compel witnesses to testify or persons to produce books, papers, records and any other real evidence, whether or not privileged or confidential under law, which the board deems necessary as evidence in connection with a disciplinary proceeding or relevant to the decision about whether to initiate a disciplinary proceeding. Board procedures concerning investigative subpoenas are set forth in 193F—Chapter 19. [ARC 4379C, IAB 3/27/19, effective 5/1/19; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—8.9(17A,272C,543D) Informal discussion. If the disciplinary committee considers it advisable, or if requested by the affected licensee, the committee may grant the licensee any opportunity to appear
before the committee for a voluntary informal discussion of the facts and circumstances of an alleged violation, subject to the provisions of this rule.

8.9(1) An informal discussion is intended to provide a licensee an opportunity to share in an informal setting the licensee’s side of a complaint before the board determines whether probable cause exists to initiate a disciplinary proceeding. Licensees are not required to attend an informal discussion. Because disciplinary investigations are confidential, licensees may not bring other persons with them to an informal discussion, but licensees may be represented by legal counsel.

8.9(2) Unless disqualification is waived by the licensee, board members or staff who personally investigate a disciplinary complaint are disqualified from making decisions or assisting the decision makers at a later formal hearing. Because board members generally rely upon investigators, peer review committees, or expert consultants to conduct investigations, the issue rarely arises. An informal discussion, however, is a form of investigation because it is conducted in a question and answer format. In order to preserve the ability of all board members to participate in board decision making and to receive the advice of staff, licensees who desire to attend an informal discussion must therefore waive their right to seek disqualification of a board member or staff based solely on the board member’s or staff’s participation in an informal discussion. Licensees would not be waiving their right to seek disqualification on any other ground. By electing to attend an informal discussion, a licensee accordingly agrees that participating board members or staff are not disqualified from acting as a presiding officer in a later contested case proceeding or from advising the decision maker.

8.9(3) Because an informal discussion constitutes a part of the board’s investigation of a pending disciplinary case, the facts discussed at the informal discussion may be considered by the board in the event the matter proceeds to a contested case hearing and those facts are independently introduced into evidence.

8.9(4) The disciplinary committee, subject to board approval, may propose a consent order at the time of the informal discussion. If the licensee agrees to a consent order, a statement of charges shall be filed simultaneously with the consent order, as provided in rule 193F—20.4(17A,272C).

[ARC 4379C, IAB 3/27/19, effective 5/1/19]

193F—8.10(272C,543D) Peer review committee (PRC). A peer review committee may be appointed by the board to investigate a complaint. The committee may consist of one or more certified general or certified residential real property appraisers. The board may appoint a single peer review consultant to perform the functions of a PRC when, in the board’s opinion, appointing a committee with more members would be impractical, unnecessary or undesirable given the nature of the expertise required, the need for prompt action or the circumstances of the complaint. An individual shall be ineligible as a PRC member in accordance with the standard for disqualification found in rule 193F—20.14(17A).

8.10(1) Authority. The PRC investigation may include activities such as interviewing the complainant, the respondent, and individuals with knowledge of the respondent’s practice in the community; gathering documents; and performing independent analyses as deemed necessary. The board may give specific instructions to the PRC regarding the scope of the investigation. In the course of the investigation, PRC members shall refrain from advising the complainant or respondent on actions that the board might take.

8.10(2) Term of service. The PRC serves at the pleasure of the board. The board may dismiss any or all members of a PRC or add new members at any time.

8.10(3) Compensation. PRC members may receive compensation as the board may provide by contract. Within established budget limitations, PRC members may be reimbursed for reasonable and necessary expenses that are incurred for travel, meals and lodging while performing committee duties. The PRC shall not hire legal counsel, investigators, secretarial help or any other assistance without written authorization from the board.

8.10(4) Review. Each PRC shall submit a written review to the board within a reasonable period of time.

8.10(5) Components of the review. The review shall include a summary of the PRC’s findings, including the PRC’s opinion as to whether a violation occurred, citation of the specific USPAP
violation(s), citation of the Iowa Code section(s) and Iowa Administrative Code rule(s) violated, and
the PRC’s opinion of the seriousness of the violation and a recommendation to the board.

8.10(6) Recommendation. The PRC report shall recommend one of the following:
   a. Dismissal of the complaint;
   b. Further investigation;
   c. Disciplinary proceedings;
   d. Allowing the appraiser who is the subject of the complaint an opportunity to appear before the
      board for an informal discussion regarding the circumstances of the alleged violation.

If the PRC recommends further investigation or disciplinary proceedings, supporting information
must be submitted to the board including citation of the specific USPAP violation(s), Iowa Code
section(s) and Iowa Administrative Code rule(s) violated.

8.10(7) Disciplinary recommendations. When recommending disciplinary proceedings, a PRC shall
refrain from suggesting a particular form of discipline, but may provide guidance on the severity of the
violations that prompted the recommendation and may identify professional areas in which the appraiser
needs additional education or supervision in order to safely practice.

8.10(8) Confidentiality. The PRC shall not discuss its findings and conclusions with any party to the
complaint other than the board (through its report to the board) or board staff. PRC findings including
the name of the complainant shall be kept confidential at all times. PRC findings shall be used only
for the purposes of the board’s possible disciplinary action and not for any other court case, lawsuit, or
investigation.

8.10(9) Testimony. In the event of formal disciplinary proceedings, PRC members may be required
to testify.

[ARC 4379C, IAB 3/27/19, effective 5/1/19; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—8.11(17A,272C,543D) Closing complaint files.

8.11(1) Grounds for closing. Upon the recommendation of the executive officer, the
recommendation of the disciplinary committee, or on its own motion, the board may close a complaint
file, with or without prior investigation. Given the broad scope of matters about which members of
the public may complain, it is not possible to catalog all possible reasons why the board may close a
complaint file. The following nonexclusive list is, however, illustrative of the grounds upon which
the board may close a complaint file:
   a. The complaint alleges matters outside the board’s jurisdiction.
   b. The complaint does not allege a reasonable or credible basis to believe that the subject of the
      complaint violated a law or rule enforced by the board.
   c. The complaint is frivolous or trivial.
   d. The complaint alleges matters more appropriately resolved in a different forum, such as civil
      litigation to resolve a contract dispute, or more appropriately addressed by alternative procedures, such
      as outreach education or rule making.
   e. The matters raised in the complaint are situational, isolated, or unrepresentative of a licensee’s
      typical practice, and the licensee has taken appropriate steps to ensure future compliance and prevent
      public injury.
   f. Resources are unavailable or better directed to other complaints or board initiatives in light of
      the board’s overall budget and mission.
   g. While the evidence may reveal one or more appraisal standards about which the appraiser
      should be more vigilant in the future, the issues appear correctable, are not likely to recur with proper
diligence in the development and reporting of future appraisals, and do not reveal impediments to
      competent practice in the future.
   h. Other extenuating factors exist which weigh against the imposition of public discipline when
      considered in the context of the board’s purpose and mission.

8.11(2) Closing orders. The board’s executive officer may enter an order stating the basis for the
board’s decision to close a complaint file. If entered, the order shall not contain the identity of the
complainant or the respondent and shall not disclose confidential complaint or investigative information.
If entered, a closing order will be indexed by case number and shall be a public record pursuant to Iowa Code subsection 17.3(1) “d.” A copy of the order may be mailed to the complainant, if any, and to the respondent. The board’s decision whether or not to pursue an investigation, to institute disciplinary proceedings, or to close a file is not subject to judicial review.

8.11(3) Cautionary letters. The board may issue a confidential letter of caution to a licensee when a complaint file is closed which informally cautions or educates the licensee about matters which could form the basis for disciplinary action in the future if corrective action is not taken by the licensee. Informal cautionary letters do not constitute disciplinary action, but the board may take such letters into consideration in the future if a licensee continues a practice about which the licensee has been cautioned.

8.11(4) Reopening closed complaint files. The board may reopen a closed complaint file if additional information arises after closure which provides a basis to reassess the merits of the initial complaint.

193F—8.12(17A,272C,543D) Initiation of disciplinary proceedings. Disciplinary proceedings may only be initiated by the affirmative vote of a majority of a quorum of the board at a public meeting. Board members who are disqualified shall not be included in determining whether a quorum exists. If, for example, two members of the board are disqualified, three members of the board shall constitute a quorum of the remaining five board members for purposes of voting on the case in which the two members are disqualified. When three or more members of the board are disqualified or otherwise unavailable for any reason, the executive officer may request the special appointment of one or more substitute board members pursuant to Iowa Code section 17A.11, subsection 5. Discipline may only be imposed against a licensee by the affirmative vote of a majority of the members of the board who are not disqualified.

193F—8.13(17A,272C,543D) Disciplinary contested case procedures. Unless in conflict with a provision of board rules in this chapter, all of the procedures set forth in 193F—Chapter 20 shall apply to disciplinary contested cases initiated by the board.

[ARC 4379C, IAB 3/27/19, effective 5/1/19]

193F—8.14(543D) Decisions. The board shall make findings of fact and conclusions of law, and set forth the board’s decision, order, or both in the case. The board’s decision may include, without limitation, any of the following outcomes, either individually or in combination:

1. Dismiss the charges;
2. Suspend or revoke the appraiser’s certification or associate’s registration as authorized by law;
3. Impose civil penalties, the amount which shall be set at the discretion of the board, but which shall not exceed $1000 per violation. Civil penalties may be imposed for any of the disciplinary violations specified in Iowa Code section 543D.17 and chapter 272C or for any repeat offenses;
4. Impose a period of probation, either with or without conditions;
5. Require reexamination;
6. Require additional professional education, reeducation, or continuing education;
7. Issue a citation and a warning;
8. Require desk review of the appraiser’s work product;
9. Issue a consent order either with or without conditions;
10. Require consultation with one or more peer reviewers;
11. Revoke an appraiser’s eligibility to supervise;
12. Require submission of monthly logs;
13. Prohibit a licensee from acting as an instructor;
14. Impose any other form of discipline authorized by a provision of law that the board, in its discretion, believes is warranted under the circumstances of the case.

[ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—8.15(272C,543D) Mitigating and aggravating factors. Factors the board may consider when determining whether to impose discipline and what type of discipline to impose include but are not limited to:
8.15(1) History and background of respondent.
   a. Whether the respondent was a registered associate appraiser or a certified appraiser at the time of the violation.
   b. Prior disciplinary history or cautionary letters.
   c. Length of certification or registration at the time of the violation.
   d. Disciplinary history of current or prior supervisor.
   e. Degree of cooperation with investigation.
   f. Extent of self-initiated reform or remedial action after the date of the violation.
   g. Whether the volume or geographic range of the respondent’s practice is, or was at the time of the violation, reasonable under the circumstances.
   h. Whether the respondent practiced with a lapsed, inactive, retired, suspended, revoked, or surrendered certificate or registration.

8.15(2) Nature of violations, not limited to:
   a. Length of time since the date of the violation.
   b. Whether the violation is isolated or recurring.
   c. Whether there are multiple violations or appraisals involved.
   d. Whether the violation is in the nature of an error or situational carelessness or neglect, or reflects a more fundamental lack of familiarity with applicable appraisal methodology or standards.
   e. Indicia of bad faith, false statements, deceptive practices, or willful and intentional acts, whether within the circumstances of the violation or in the course of the board’s investigation or disciplinary proceeding.
   f. Evidence of improper advocacy or other violation of the USPAP ethics rule or of Iowa Code section 543D.18 or 543D.18A(1).
   g. The clarity of the issue or standard involved.
   h. Whether the respondent practiced outside the scope of practice authorized by respondent’s certification or registration.
   i. Whether the violation relates to the respondent’s supervisory role, the respondent’s individual appraisal practice, or both.

8.15(3) Interest of the public, not limited to:
   a. Degree of financial or other harm to a client, consumer, lending institution, or others.
   b. Risk of harm, whether or not the violation caused actual harm.
   c. Economic or other benefit gained by respondent or by others as a result of the violation.
   d. Deterrent impact of discipline.
   e. Whether the respondent issued a corrected appraisal report when warranted.

[ARC 0412C, IAB 10/31/12, effective 12/5/12; ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—8.16(272C,543D) Voluntary surrender. The board may accept the voluntary surrender of a license to resolve a pending disciplinary contested case or pending disciplinary investigation. The board shall not accept a voluntary surrender of a license to resolve a pending disciplinary investigation unless a statement of charges is filed along with the order accepting the voluntary surrender. Such voluntary surrender is considered disciplinary action and shall be published in the same manner as is applicable to any other form of disciplinary order.

193F—8.17(272C,543D) Reinstatement. In addition to the provisions of rule 193F—20.38(17A,272C), the following provisions shall apply to license reinstatement proceedings:

8.17(1) The board may grant an applicant’s request to appear informally before the board prior to the issuance of a notice of hearing on an application to reinstate if the applicant requests an informal appearance in the application and agrees not to seek to disqualify, on the ground of personal investigation, board members or staff before whom the applicant appears.

8.17(2) An order granting an application for reinstatement may impose such terms and conditions as the board deems desirable, which may include one or more of the types of disciplinary sanctions described in rule 193F—8.14(543D).
8.17(3) The board shall not grant an application for reinstatement when the initial order which revoked, suspended or restricted the license, denied license renewal, or accepted a voluntary surrender was based on a criminal conviction and the applicant cannot demonstrate to the board’s satisfaction that:
   a. All terms of the sentencing or other criminal order have been fully satisfied;
   b. The applicant has been released from confinement and any applicable probation or parole; and
   c. Restitution has been made or is reasonably in the process of being made to any victims of the crime.

8.17(4) A state and national criminal history check may be performed on any applicant applying to reinstate registration or credential consistent with Iowa Code section 543D.22.

These rules are intended to implement Iowa Code sections 543D.5, 543D.17 and 543D.18 and chapters 17A and 272C.
CHAPTER 9
RENEWAL, EXPIRATION AND REINSTATEMENT OF CERTIFICATES AND REGISTRATIONS, RETIRED STATUS, AND INACTIVE STATUS

9.1(1) Certificates and associate registrations must be renewed on a biennial basis or they shall lapse.  
9.1(2) Persons whose last names begin with A to K shall renew in even-numbered years. Persons whose last names begin with L to Z shall renew in odd-numbered years. Certificates and registrations shall expire biennially on June 30.  
9.1(3) An application to renew a certificate or registration shall be submitted on forms prescribed by the board.  
9.1(4) With the exception of continuing education obtained during the 30-day grace period authorized by and subject to and in accordance with subrule 9.4(2), all continuing education claimed on a biennial renewal must have been acquired during the renewal period. In addition, all continuing education claimed on a biennial renewal must have been actually taken and completed prior to the renewal application being submitted to the board.  
[ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 6170C, IAB 2/9/22, effective 3/16/22]

9.2(272C,543D) Notices.

9.2(1) It is the policy of the board to mail or send electronic renewal notices to certified and associate appraisers at the last address or email address on file with the board in the May preceding certificate or registration expiration. Neither the failure of the board to send such a notice nor the licensee’s failure to receive such a notice shall excuse the requirement to timely renew and pay the renewal fee.  
9.2(2) Certified and associate appraisers must ensure that their contact information on file with the board office is current and that the board is notified within 30 days of any address change, and report to the board all other addresses at which the appraiser engages in the business of preparing real estate appraisal reports, or any change in such information, within 30 calendar days of any addition or change thereto.  
[ARC 1732C, IAB 11/12/14, effective 12/17/14; ARC 5237C, IAB 10/21/20, effective 11/25/20]

9.3(272C,543D) Renewal procedures.

9.3(1) Date of filing. Certified and associate appraisers shall file a timely and sufficient renewal application with the board by the June 30 deadline in the biennial renewal year. An application shall be deemed filed on the date received by the board, the date of electronic submission or, if mailed, the date postmarked, but not the date metered. Applications to renew that are not timely received by the board shall be treated as applications to reinstate, as provided in rule 193F—9.4(272C,543D).  
9.3(2) Continuing education. An applicant for renewal shall report the applicant’s compliance with the continuing education requirements provided in 193F—Chapter 11. Full compliance with applicable continuing education requirements is a condition of renewal in active status. Applications to renew certificates or registrations in active status that do not, on their face, demonstrate full compliance with all applicable continuing education requirements shall be rejected as insufficient, as provided in subrule 9.3(4).  
9.3(3) Background disclosures. An applicant for renewal shall disclose such background and character information as the board requests, which may include disciplinary action taken by any jurisdiction regarding a professional license of any type, the denial of an application for a professional license of any type by any jurisdiction, and the conviction of any crime.  
9.3(4) Insufficient applications. The board shall reject applications that are insufficient. A sufficient application within the meaning of Iowa Code section 17A.18(2) must:  
a. Be on a form prescribed by the board or, in the event there are no paper forms, be submitted through the state’s database;  
b. Be signed by the applicant, be certified as accurate, or display an electronic signature by the applicant if submitted electronically;
c. Be fully completed;

d. Reflect, on its face, full compliance with all applicable continuing education requirements; and

e. Be accompanied by the proper fee. The fee shall be deemed improper if, for instance, the amount is incorrect, the fee was not included with the application, the credit card number provided by the applicant is incorrect, the date of expiration of a credit card is omitted or incorrect, the attempted credit card transaction is rejected, or the applicant’s check is returned for insufficient funds or written on a closed account.

9.3(5) Resubmission of rejected applications. The board shall promptly notify an applicant of the basis for rejecting an insufficient renewal application. In the event the renewal application is not resubmitted, with the deficiencies corrected, the board may return any fees received. Applicants for certificate or registration renewal may remedy the insufficiency and resubmit applications that were rejected as insufficient. Resubmitted applications shall be deemed received when personally delivered to the board office, on the date of electronic submission or, if mailed, the date postmarked, but not the date metered. Resubmitted applications to renew that are not timely received by the board shall be treated as applications to reinstate, as provided in rule 193F—9.4(272C,543D).

9.3(6) Administrative processing not determinative. The administrative processing of an application to renew a certificate or registration shall not prevent the board from subsequently commencing a contested case to challenge the applicant’s qualifications for continued licensure or to assert disciplinary charges if grounds exist to do so. The board may take such an action, for example, if an application to renew reflects full compliance with continuing education, but the licensee is unable to document compliance in a subsequent audit.

9.3(7) Denial of timely and sufficient application to renew. If grounds exist to deny a timely and sufficient application to renew, the board shall send written notification to the applicant stating the grounds for denial. The procedures described in rule 193F—20.40(546,543D,272C) shall apply.

[ARC 4379C, IAB 3/27/19, effective 5/1/19; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—9.4(272C,543D) Failure to renew.

9.4(1) The certificate or registration of a certified or associate appraiser shall lapse unless the appraiser submits a timely and sufficient renewal application by the expiration date.

9.4(2) A certified or associate appraiser may renew a certificate or registration after the expiration date by submitting a sufficient renewal application and biennial renewal fee, accompanied by the late renewal fee as provided in 193F—Chapter 12, within 30 calendar days of the expiration date. The board will allow the reinstatement of a lapsed certificate or registration during the 30-day period following expiration for an appraiser who did not complete all required continuing education during the prior biennium but who will have sufficient continuing education if courses completed during the 30-day period following lapse are included. The continuing education completed between July 1 and July 30 that fulfills a shortage of continuing education in the prior biennium shall not be counted toward the continuing education required in a subsequent renewal.

9.4(3) If a certified or associate appraiser fails to renew within the 30-day grace period provided for in subrule 9.4(2), the appraiser shall be required to reinstate in accordance with subrule 9.4(5).

9.4(4) Certified and associate appraisers are not authorized to practice or to hold themselves out to the public as certified or registered appraisers during the period of time that the certificate or registration is lapsed, including during the 30-day grace period following the lapse. Any violation of this subrule shall be grounds for discipline.

9.4(5) Reinstatement. The board may reinstate a lapsed certificate or registration upon the applicant’s submission of an application to reinstate and completion of all of the following:

a. Paying a penalty as provided in rule 193F—12.1(543D); and

b. Paying the current renewal fee as provided in rule 193F—12.1(543D); and

c. Paying the ASC National Registry fee as provided in rule 193F—12.1(543D); and

d. Completing a state and national criminal history check consistent with Iowa Code section 543D.22.
e. Providing evidence of completed continuing education outlined in rule 193F—11.2(272C,543D), as modified for associate appraisers in subrule 9.4(6), if the licensee wishes to reinstate to active status; and

f. Providing a written statement outlining the professional activities of the applicant in the state of Iowa during the period in which the applicant’s certificate or registration was lapsed. The statement shall describe all appraisal services performed, with or without the use of the titles described in Iowa Code section 543D.15, for all appraisal assignments that are required by federal or state law, rule, or policy to be performed by a certified real estate appraiser.

9.4(6) Special continuing education requirements for reinstating associate appraisers. The board seeks to ensure that associate appraisers make progress toward full completion of all qualifying education required for eventual certification, as provided in rules 193F—5.2(543D) and 193F—6.2(543D). As a result, an associate appraiser applying to reinstate a registration that has been lapsed for 12 months or longer shall apply, in addition to the most recent 7-hour USPAP course, only qualifying education toward the continuing education required for reinstatement, until all qualifying education has been completed. All qualifying education taken as continuing education may also be applied as qualifying education toward certification. If the applicant has already completed all qualifying education or is required to have continuing education hours beyond those needed to fully complete all qualifying education, the applicant may use any approved continuing education course in addition to the mandatory 7-hour USPAP course.

[ARC 1732C, IAB 11/12/14, effective 12/17/14; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—9.5(272C,543D) Inactive status.

9.5(1) General purpose. This rule establishes a procedure under which a person issued a certificate or associate registration may apply to the board to register in inactive status. Registration under this rule is available to a certificate holder or associate registrant residing within or outside the state of Iowa who is not engaged in Iowa in any practice for which a certificate or associate registration is required. A person eligible to register as inactive may, as an alternative to such registration, allow a certificate or associate registration to lapse. The board will continue to maintain a data base on persons registered as inactive, including information which may not routinely be maintained after a certificate or associate registration has lapsed through failure to renew. A person who registers as inactive will accordingly receive renewal applications, board newsletters and other mass communications from the board. Because a person registered in inactive status may not practice in Iowa or hold oneself out to the public as authorized to practice as a certified appraiser or registered associate appraiser, such person is not required to complete continuing education.

9.5(2) Eligibility. A person holding a lapsed or active certificate as a real property appraiser, or a lapsed or active registration as a registered associate, which has not been revoked or suspended may apply on forms provided by the board to register as inactive if the person is not engaged in the state of Iowa in any practice for which a certificate or associate registration is required. Such a person may be actively engaged in the practice of real estate appraising in another jurisdiction. Such a person may also engage in such appraisal practices as may be performed in Iowa by persons who do not hold a certificate as a real property appraiser or associate registration as long as the person does not hold oneself out to the public as a certified or associate real estate appraiser.

9.5(3) Affirmation. The application form shall contain a statement in which the applicant affirms that the applicant will not engage in any practice prohibited by subrule 9.5(2) in Iowa without first complying with all rules governing reactivation to active status. A person in inactive status may reactivate to active status at any time pursuant to subrule 9.5(6).

9.5(4) Renewal. A person registered as inactive may renew the person’s certificate or associate registration to inactive status on the biennial schedule described in 193F—9.1(272C,543D). Such person is exempt from the continuing education requirements for renewal and will be charged a reduced rate, as provided in 193F—Chapter 12. An inactive certificate or associate registration shall lapse if not timely renewed. An active certificate holder or associate registrant may renew as inactive if such person
has not completed all continuing education requirements and may thereafter apply for active status, through the reactivation process as provided in subrule 9.6(6), when the deficiency has been remedied.

9.5(5) Grounds for discipline. Certified and associate appraisers are not authorized to practice or to hold themselves out to the public as certified or registered appraisers during the period of time that the certificate or registration is in retired or inactive status. Any violation of this subrule shall be grounds for discipline.

9.5(6) Reactivation. A person registered as inactive shall apply to reactivate to active status prior to engaging in any practice in Iowa that requires certification or associate registration. An application to reactivate to active status shall be on a form provided by the board, shall demonstrate full compliance with all applicable continuing education requirements, and shall be accompanied by a fee to reactivate an inactive license and the biennial fee for active status as provided in rule 193F—12.1(543D). Prior to reactivation to active status, the applicant must complete all education that would have been required had the applicant been on active status, including the most recent seven-hour USPAP update course. All such continuing education must be verified whether or not the applicant has been in active practice in another jurisdiction. Additionally, the special continuing education requirements that apply to associate appraisers reinstating a lapsed registration, as provided in subrule 9.4(6), shall apply to associate appraisers reactivating to active status following a period of inactive status of 12 months or longer. Such an applicant shall be given credit for the most recent renewal fees previously paid if the applicant applies to reactivate in the same biennium at other than the applicant’s regular renewal date. An applicant changing from active to inactive status during a biennial renewal period shall not, however, be entitled to a refund of any of the fees previously paid to attain active status.

[ARC 1732C, IAB 11/12/14, effective 12/17/14; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21]

193F—9.6(272C,543D) Retired status. An associate or certified appraiser may place the associate or certified appraiser’s registration or certification in retired status. For purposes of this rule, the term “retired” means the person has retired from working as an associate or certified appraiser in all jurisdictions and has requested to be placed in retired status on forms provided by the board. An associate or certified appraiser in retired status may request that the registration or certification be placed into active status so long as the associate or certified appraiser has not renewed the registration or certification in inactive status or allowed the registration or certification to lapse prior to the request to return to active status. The board will not provide a refund of biennial registration and certification fees when an application for retired status is granted in a biennium in which the applicant has previously paid the biennial fees for either active or inactive status. Associate and certified appraisers in retired status are exempt from the renewal requirement. While in retired status, appraisers may not hold themselves out to the public as being registered or certified appraisers during the period of time that the registration or certification is in retired status. For all intents and purposes, retired status is similar to lapsed status with the exceptions that:

9.6(1) The associate or certified appraiser may place the associate or certified appraiser’s registration or certification in retired status at any point;

9.6(2) Until such time as the registration or certification expires, the applicant will not be subject to the reactivation or reinstatement criteria;

9.6(3) If the associate or certified appraiser places the registration or certification into inactive status at the time of renewal, or the applicant lets the registration or certification lapse, the applicant will be required to reactivate or reinstate pursuant to rule 193F—4.6(272C,543D), or subrule 9.4(5) or 9.5(6) as applicable.

[ARC 5785C, IAB 7/28/21, effective 9/1/21]

193F—9.7(272C,543D) Property of the board. Every certificate or associate registration issued by the board shall, while it remains in the possession of the holder, be preserved by the holder but shall, nevertheless, always remain the property of the board. The board shall generally not request return of a certificate or associate registration if it has not been revoked, suspended or voluntarily surrendered in a disciplinary action, but may do so if the board reasonably determines that grounds exist to believe that a
person holding a lapsed, retired, or inactive certificate or associate registration has engaged in a practice for which active certification or registration is required.

These rules are intended to implement Iowa Code section 543D.5.

[ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

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CHAPTER 10
RECIROCITY
[Prior to 2/20/02, see 193F—Chapter 5]

193F—10.1(543D) Nonresident certification by reciprocity.

10.1(1) A nonresident of Iowa seeking certification in this state shall apply on forms provided by the board and pay the appropriate fee required in rule 193F—12.1(543D).

10.1(2) The board may issue a reciprocal certificate to a nonresident individual who is certified and demonstrates good standing in another state. An appraiser who is listed in good standing on the National Registry of the Appraisal Subcommittee satisfies the requirement that good standing be demonstrated and does not need to submit additional documentation. An appraiser who is not listed in good standing on the National Registry of the Appraisal Subcommittee must supply an official letter of good standing issued by the licensing board of the appraiser’s resident state and bearing its seal. An appraiser may verify the appraiser’s status on the National Registry of the Appraisal Subcommittee by accessing the ASC’s website.

10.1(3) A reciprocal certified appraiser shall comply with all provisions of Iowa law and rules.

10.1(4) Reciprocal certified appraisers shall be required to pay the federal registry fee as required in rule 193F—12.3(543D).

[ARC 1197C, IAB 11/27/13, effective 1/1/14; ARC 5785C, IAB 7/28/21, effective 9/1/21]

193F—10.2(543D) Temporary practice permit.

10.2(1) The board will recognize, on a temporary basis, the certification of an appraiser issued by another state for a period of six months, unless the applicant requests, and is approved for, a one-time extension. An extension request must be received prior to the expiration date of the issuance of the temporary practice permit. An extension may be granted for up to six months past the original expiration date so long as the applicant is still eligible for a temporary practice permit.

10.2(2) The appraiser must register with the board and identify the property(ies) to be appraised and the name and address of the client. The appraiser must demonstrate good standing to be considered for a temporary practice permit. An appraiser who is listed in good standing on the National Registry of the Appraisal Subcommittee generally satisfies the requirement that good standing be demonstrated and may not need to submit additional documentation. An appraiser who is not listed in good standing on the National Registry of the Appraisal Subcommittee must supply an official letter of good standing issued by the licensing board of the appraiser’s resident state and bearing its seal. An appraiser may verify the appraiser’s status on the National Registry of the Appraisal Subcommittee by accessing the ASC’s website. Registration shall be on a form provided by the board and submitted to the board office prior to the performance of the appraisal. The appraiser shall pay the appropriate fee as required in rule 193F—12.1(543D).

10.2(3) An appraiser holding an inactive, retired, or lapsed certificate as a real estate appraiser in Iowa may apply for a temporary practice permit if the appraiser holds an active, unexpired certificate as a real estate appraiser in good standing in another jurisdiction and is otherwise eligible for a temporary practice permit.

10.2(4) An appraiser who was previously a registered associate or certified appraiser in Iowa whose Iowa registration or certificate has been revoked or surrendered in connection with a disciplinary investigation or proceeding is ineligible to apply for a temporary practice permit in Iowa.

10.2(5) The board may deny an application for a temporary practice permit if the applicant has been disciplined in Iowa or another jurisdiction, a disciplinary investigation or proceeding is pending in Iowa or another jurisdiction, the person has been convicted of a crime that is a ground for discipline in Iowa or another jurisdiction, or it appears the applicant is applying for a temporary permit because the applicant would not qualify to renew or reinstate in active status in Iowa or another jurisdiction and the application for a temporary permit is made primarily to compromise compliance with Iowa laws and rules.

10.2(6) An appraiser holding an inactive, retired, or lapsed Iowa certificate who applies to reinstate to active status in Iowa shall not be given credit for any fees paid during the biennial period for one or more temporary practice permits.
10.2(7) An appraiser holding a license to practice as a real estate appraiser in another jurisdiction may practice in Iowa without applying for a temporary practice permit or paying any fees as long as the appraiser does not perform appraisal services in Iowa for federally regulated transactions or for which certification is required by state or federal law, rule or policy.

10.2(8) The board must receive and approve an application for a temporary practice permit before the applicant is eligible to practice in Iowa under a temporary practice permit. Applicants shall use the form prescribed by the board. The board shall grant or deny all applications for temporary practice permits as quickly as reasonably feasible and no later than five days of receipt of a completed application. Applicants shall use the form prescribed by the board. Applicants disclosing discipline or criminal convictions shall attach documentation from which the board can determine if the discipline or criminal history would be a ground to deny the application. Falsification of information or failure to disclose material information shall be a ground to deny the application and may form the basis to deny any subsequent application or an application to reinstate a lapsed or inactive Iowa certificate.

These rules are intended to implement Iowa Code sections 543D.10 and 543D.11.

[ARC 9865B, IAB 11/30/11, effective 1/4/12; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6007C, IAB 11/3/21, effective 12/8/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

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CHAPTER 11
CONTINUING EDUCATION
[Prior to 2/20/02, see 193F—Chapter 6]

193F—11.1(272C,543D) Definitions. For the purpose of these rules, the following definitions shall apply:

“Approved program” means a continuing education program, course, or activity that satisfies the standards set forth in these rules and has received advance approval of the board pursuant to these rules.

“Approved provider” means a person or an organization that has been approved by the board to conduct continuing education programs pursuant to these rules.

“Board” means the Iowa real estate appraiser examining board.

“Continuing education” means education which is obtained by a person certified to practice real estate appraising in order to maintain, improve, or expand skills and knowledge obtained prior to initial certification or registration, or to develop new and relevant skills and knowledge, all as a condition of renewal.

“Credit hour” means the value assigned by the board, or the AQB, to a continuing or qualifying education program.

“Distance education” means any education process based on the geographical separation of student and instructor. “Distance education” includes computer-generated programs and webinars.

“Guest speaker” means an individual who teaches an appraisal education program on a one-time-only or very limited basis and who possesses a unique depth of knowledge and experience in the subject matter.

“Hour” means 50 minutes of instruction.

“Live instruction” means an educational program delivered in a classroom setting where both the student and the instructor are present in the same room.

“Qualifying education” means education that is obtained by a person seeking certification as a real property appraiser prior to initial certification or registration where the minimum length of the education offering is at least 15 hours and the individual successfully completes a proctored, closed-book final examination pertinent to that educational offering.

[ARC 9865B, IAB 11/30/11, effective 1/4/12; ARC 1732C, IAB 11/12/14, effective 12/17/14; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—11.2(272C,543D) Continuing education requirements.

11.2(1) Certified residential, certified general and associate appraisers must demonstrate compliance with the following continuing education requirements as a condition of biennial renewal:

a. A minimum of 28 credit hours in approved continuing education programs must be acquired during the two-year renewal period. Carryover hours from a previous renewal period are not allowed.

b. The purpose of continuing education is to ensure that the appraiser participates in a program that maintains and increases the appraiser’s skill, knowledge and competency in real estate appraising. Credit may be granted for educational offerings that are consistent with the purpose of continuing education. A minimum of 21 of the required 28 credit hours must involve courses that address one or more of the subject areas listed in subrule 11.4(2).

c. Appraisers must successfully complete the seven-hour National USPAP Update Course, or its equivalent, each two-year renewal cycle. Equivalency shall be determined through the AQB Course Approval Program or by an alternate method established by the AQB. USPAP continuing education credit shall be awarded only when the class is instructed by an AQB-certified instructor(s) and when the class is instructed by at least one state-certified residential or state-certified general appraiser. Individuals who are credentialed in more than one jurisdiction shall not have to take more than one seven-hour National USPAP Update Course within a two-calendar-year period for the purposes of meeting AQB criteria.

d. With the exception of continuing education obtained during the 30-day grace period authorized by and subject to and in accordance with 193F—subrule 9.4(2), all continuing education claimed on a biennial renewal must have been acquired during the renewal period. In addition, all continuing...
education claimed on a biennial renewal must have been actually taken and completed prior to the renewal application being submitted to the board.

11.2(2) All continuing education credit hours may be acquired in approved classroom or distance education programs.

11.2(3) A maximum of 14 of the required 28 credit hours may be claimed by an instructor for teaching one or more approved continuing education programs in an amount equal to the credit hours approved for attendees. Instructors claiming such credit must teach the appraisal course during the renewal cycle in which credit is claimed and may not claim the course more than once in the renewal cycle. The board may request supportive documentation to ascertain course content and to verify the date(s), time, place and hours taught.

11.2(4) An applicant seeking to renew an initial certificate or registration issued less than 185 days prior to renewal is not required to report any continuing education. An applicant seeking to renew an initial certificate or registration issued for 185 days to 365 days prior to renewal must demonstrate completion of at least 14 credit hours which must include the National USPAP Update course or its AQB equivalent. An applicant seeking to renew an initial certificate or registration issued 365 days prior to renewal or more must demonstrate completion of at least 28 credit hours, including 7 credit hours of the most recent National USPAP Update.

11.2(5) Prior to reinstatement or reactivation of a certified general registration or a certified residential registration, a certified credential holder in inactive, retired, or lapsed status must complete all required continuing education hours that would have been required if the certified credential holder was in active status. The required hours must also include the most recent edition of a seven-hour National USPAP Update Course. Waivers may not be granted to credential holders who have failed to meet the continuing education requirements.

11.2(6) During each two-year renewal period, a continuing education program may be taken for credit only once, except USPAP courses as long as it is not the same USPAP course (e.g., an appraiser may take the 2018-2019 USPAP and the 2020-2021 USPAP update course but may not take two 2018-2019 USPAP update courses).

11.2(7) Successful completion of a continuing education program requires that at least 50 minutes of every class hour be attended by the student. Continuing education credits shall not be granted to attendees who are present for less than 50 minutes of every class hour.

11.2(8) An applicant may claim continuing education credits that have been approved by another jurisdiction that has a continuing education requirement for renewal of a real estate appraisal certificate if the applicable program was approved by the other jurisdiction’s appraisal regulatory body or the AQB for continuing education purposes at the time the applicant completed the course. The burden of proof is on the applicant to demonstrate that a claimed course was approved by either the other jurisdiction or the AQB for continuing education purposes at the time the applicant completed the course. All other programs must be approved upon application to the board pursuant to rules 193F—11.4(272C,543D), 193F—11.5(272C,543D) and 193F—11.6(272C,543D).

11.2(9) A person certified or registered to practice real estate appraising in Iowa shall be deemed to have complied with Iowa’s continuing education requirements for periods in which the person is a resident of another state or district having continuing education requirements for real estate appraising and meets all requirements of that state or district. Waivers may not be granted to credential holders who have failed to meet the continuing education requirements. Deferrals may not be granted to credential holders, except in the case of persons returning from active military duty. Credential holders returning from active military duty may be placed in active status for a period of up to 90 days pending completion of all continuing education requirements. To qualify, the credential holder must submit a request in writing and provide a copy of the military orders.

11.2(10) A person certified or registered to practice real estate appraising in Iowa who completes an education course approved by both the board and another appraiser regulatory body, for which the approved hours vary, will only be allowed to claim the hours approved by the board to meet the requirements of renewal of the person’s associate registration or certified credential in Iowa. A person certified or registered to practice real estate appraising in Iowa who completes an educational course
not approved in Iowa, but approved by either the AQB or by another appraiser regulatory body, may claim the hours awarded by either the AQB or the appraiser regulatory body of the other jurisdiction.

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 9865B, IAB 11/30/11, effective 1/4/12; ARC 0412C, IAB 10/31/12, effective 12/5/12; ARC 0635C, IAB 3/6/13, effective 4/10/13; ARC 1732C, IAB 11/12/14, effective 12/17/14; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—11.3 Reserved.


11.4(1) Continuing education programs, as a condition of board approval, must provide a formal program of learning that contributes to the growth in the professional knowledge and professional competence of real estate appraisers.

11.4(2) Continuing education programs dealing with the following subject areas that are integrally related to appraisal topics and that will generally be acceptable include, but are not limited to:

a. Ad valorem taxation;
b. Agriculture production and economics;
c. Agronomy/soil;
d. Approaches to value;
e. Arbitrations, dispute resolution;
f. Courses related to the practice of real estate appraisal or consulting;
g. Construction cost or development cost estimating;
h. Ethics and standards of professional practice, USPAP;
i. Land use planning or zoning;
j. Management, leasing, time sharing;
k. Property development, partial interests;
l. Real estate appraisal law and rules;
m. Real estate appraisal (valuations/evaluations);
n. Real estate law, easements, and legal interests;
o. Real estate litigation, damages, condemnation;
p. Real estate financing and investment;
q. Real estate appraisal-related computer applications;
r. Real estate securities and syndication;
s. Developing opinions of real property value in appraisals that also include personal property or business value, or both;
t. Seller concessions and impact on value;
u. Energy efficient items and “green building” appraisals; and
v. Real estate appraisal technology (e.g., drones).

11.4(3) The following programs will not be acceptable:

a. Sales promotion meetings held in conjunction with the appraiser’s general business;
b. Time devoted to breakfast, lunch or dinner;
c. A program certified by the use of a challenge examination. The required number of hours must be completed to receive credit hours;
d. Programs that do not provide at least two credit hours.

11.4(4) Continuing education credit will be granted only for whole hours, with a minimum of 50 minutes constituting one hour. For example, 150 minutes of continuous instruction would count as three credit hours; however, more than 100 minutes but less than 150 minutes of continuous instruction would only count as two hours.

11.4(5) Continuing education credit may be approved for university or college courses, when an official transcript is provided, in qualifying topics according to the following formula: Each semester hour of credit shall equal 1.5 credit hours and each quarter hour of credit shall equal 10 credit hours.

[ARC 9865B, IAB 11/30/11, effective 1/4/12; ARC 1732C, IAB 11/12/14, effective 12/17/14; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 6170C, IAB 2/9/22, effective 3/16/22]
193F—11.5(272C,543D) Standards for provider and program approval. Providers and programs must satisfy the following minimum standards in order to be preapproved in accordance with the procedures established in rule 193F—11.4(272C,543D) and in order to maintain approved status.

11.5(1) The program must be taught or developed by individuals who have the education, training and experience to be considered experts in the subject matter of the program and competent in the use of teaching methods appropriate to the program.

11.5(2) Rescinded IAB 2/9/22, effective 3/16/22.

11.5(3) In determining whether an instructor is qualified to teach a particular program, the board will consider whether the instructor has an ability to teach and an in-depth knowledge of the subject matter.

11.5(4) An instructor may demonstrate the ability to teach by meeting one or more of the following criteria:

a. Hold a bachelor’s degree or higher in education from an accredited college (attach a copy of transcripts);

b. Hold a current teaching credential or certificate in any real estate or real estate-related fields (attach copy);

c. Hold a certificate of completion in the area of instruction from an instructor institute, workshop or school that is sponsored by a member of the Appraisal Foundation (detail specific teaching experiences);

d. Hold a full-time current appointment to the faculty of an accredited college;

e. Other, as the board may determine.

11.5(5) An instructor may demonstrate in-depth knowledge of the program’s subject matter by meeting one or more of the following criteria:

a. Hold a bachelor’s degree or higher from an accredited college with a major in a field of study directly related to the subject matter of the course the instructor proposes to teach, such as business, economics, accounting, real estate or finance (attach copy of transcript);

b. Hold a bachelor’s degree or higher from an accredited college and have five years of appraisal experience related to the subject matter of the course the instructor proposes to teach (attach copy of transcript and document how the instructor’s experience is related to the subject matter the instructor proposes to teach);

c. Hold a generally recognized professional real property appraisal designation or be a sponsor member of the Appraisal Foundation;

d. Other, as the board may determine.

11.5(6) Only AQB-certified USPAP instructors, listed on the website of the Appraisal Foundation may teach the national USPAP courses, or its AQB-approved equivalent.

11.5(7) Course content and materials must be accurate, consistent with currently accepted standards relating to the program’s subject matter and updated no later than 30 days after the effective date of a change in standards, laws or rules.

11.5(8) Programs must have an appropriate means of written evaluation by participants. Evaluations shall include the relevance of the materials, effectiveness of presentation, content, facilities, and such additional features as are appropriate to the nature of the program.

11.5(9) No part of any course shall be used to solicit memberships in organizations, recruit appraisers for affiliation with any organization or advertise the merits of any organization or sell any product or service.

11.5(10) Providers must clearly inform prospective participants of the number of credit hours preapproved by the board for each program and all applicable policies concerning registration, payment, refunds, attendance requirements and examination grading.

11.5(11) Procedures must be in place to monitor whether the person receiving credit hours is the person who attended or completed the program.

11.5(12) Providers must be accessible to students during normal business hours to answer questions and provide assistance as necessary.

11.5(13) Providers must comply with or demonstrate exemption from the provisions of Iowa Code sections 714.14 to 714.25.
11.5(14) Providers must designate a coordinator in charge of each program who will act as the board’s contact on all compliance issues.

11.5(15) Programs shall not offer more than eight credit hours in a single day.

11.5(16) Providers shall not provide any information to the board, the public or prospective students which is misleading in nature. For example, providers may not refer to themselves as a “college” or “university” unless qualified as such under Iowa law.

11.5(17) Providers must establish and maintain for a period of five years complete and detailed records on the programs successfully attended by each Iowa participant.

11.5(18) Providers must issue an individual certificate of attendance to each participant upon successful completion of the program. The certificate must be no larger than 8½” x 11” and must include the provider name and number, program name and number, name of attendee, date program was completed, number of approved credit hours, and the signature of the coordinator or other person authorized by the board.

11.5(19) Program providers and instructors are solely responsible for the accuracy of all program materials, instruction and examinations. Board approval of a provider or program is not an assurance or warranty of accuracy and shall not be explicitly or implicitly marketed or advertised as such.

11.5(20) Providers must apply for approval using forms prescribed by the board.

11.5(21) Providers must notify the board within 30 days when there is a change in the provider’s primary contact, name, business address, or any other change which may affect the provider’s tax identification number or bond requirements with the Iowa college aid commission.

[ARC 1732C, IAB 11/12/14, effective 12/17/14; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—11.6(272C,543D) Acceptable distance education courses. Distance education is an education process based on the geographical separation of student and instructor. A distance education course is acceptable to meet class hour requirements if:

11.6(1) The course provides interaction. Interaction is a reciprocal environment in which the student has verbal or written communication with the instructor; and

11.6(2) Content approval is obtained from the AQB, a state licensing jurisdiction, or an accredited college, community college, or university that offers distance education programs and is approved or accredited by the Commission on Colleges, a regional or national accreditation association, or by an accrediting agency that is recognized by the U.S. Secretary of Education. Nonacademic credit college courses provided by a college shall be approved by the AQB or the state licensing jurisdiction; and

11.6(3) Course delivery mechanism approval is obtained from one of the following sources:

a. AQB-approved organizations providing approval of course design and delivery; or

b. A college or university that qualifies for content approval pursuant to subrule 11.6(2) that awards academic credit for the distance education course; or

c. A qualifying college or university for content approval with a distance education delivery program that approves the course design and delivery that incorporate interactivity.

11.6(4) Distance education courses must include at least one of the following:

a. A written examination proctored by an official approved by the college or university, or by the sponsoring organization. The term “written” in this subrule refers to an examination that may be written on paper or administered electronically on a computer or other device. Oral examinations are not acceptable.

b. Successful completion of prescribed course mechanisms required to demonstrate knowledge of the subject matter.

[ARC 1732C, IAB 11/12/14, effective 12/17/14]

193F—11.7(272C,543D) Applications for approval of programs. Applications for approval of programs must be submitted on forms prescribed by the board. All non-AQB courses are approved for 24 months, including the month of approval. Programs approved for distance education or by the AQB may be approved by the board. Board approval of a program will only be valid for the shortest period of time such program is approved by either organization.

11.7(1) Approval must be obtained for each program separately.
11.7(2) A nonrefundable fee of $50 must be submitted for each program except for programs that are submitted for approval by the primary provider and that have been approved by the Appraiser Qualifications Board through the Course Approval Program (CAP).

11.7(3) All required forms and attachments must be submitted for approval at least 30 days prior to the first offering of each program or, if renewing, within 30 days of the course expiration date. The board will approve or deny each program, in whole or part, within 15 days of the date the board receives a fully completed application. Upon approval of an application for course offering, the board will specify the number of credit hours allowed. Payments for course program applications must be made within 30 calendar days of the date the application is approved by the board or the application approval may be reversed.

11.7(4) Application forms for non-AQB CAP courses will request information including, but not limited to, the following:
   a. Program description;
   b. Program purpose;
   c. Learning objectives that specify the level of knowledge or competency the student should demonstrate upon completing the program;
   d. Description of the instructional methods utilized to accomplish the learning objective;
   e. Identifying information for all guest speakers or instructors and such documentation as is necessary to verify compliance with the instructor qualifications described in subrule 11.5(5);
   f. Copies of all instructor and student program materials or, in the case of a one-time course offering, a statement that attests all instructor and student materials will be submitted to the board within ten calendar days of the course offering;
   g. Copies of all examinations and a description of all grading procedures;
   h. A description of the diagnostic assessment method(s) used when examinations are not given;
   i. Such information as needed to verify compliance with board rules;
   j. The name, address, telephone number, and email address for the program’s coordinator;
   k. Such other information as the board deems reasonably needed for informed decision making.

11.7(5) Application forms for courses that are AQB CAP-approved shall include information as deemed necessary for accurate documentation but may be more limited than information required in subrule 11.7(4).

11.7(6) The board shall assign each provider and program a number. This number shall be placed on all correspondence with the board, all subsequent applications by the same provider, and all certificates of attendance issued to participants.

193F—11.8(272C,543D) Waiver of application fees. Application fees may be waived for approved programs sponsored by a federal, state, or local governmental agency when the program is offered at no cost or at a nominal cost to participants. A request for waiver of application fees should be made by the provider or certificate holder at the time the application is filed with the board.

193F—11.9(272C,543D) Authority to approve education. The executive officer has the authority to approve or deny education applications subject to the applicant’s right to a hearing as provided for in rule 193F—11.13(272C,543D).

193F—11.10(272C,543D) Appraiser request for preapproval of continuing education programs. An appraiser seeking credit for attendance and participation in a program which is to be conducted by a provider not accredited or otherwise approved by the board shall apply for approval to the board at least 15 days in advance of the commencement of the activity. The board shall approve or deny the application in writing. Application for prior approval of a continuing education activity shall include the following fee and information:
   1. Application fee of $25;
2. School, firm, organization or person conducting the program;
3. Location of the program;
4. Title and hour-by-hour outline of the program, course or activity;
5. Credit hours requested for approval;
6. Date of program; and
7. Principal instructor(s).

193F—11.11(272C,543D) Appraiser request for postapproval of continuing education program. An appraiser seeking credit for attendance and participation in a program that was not conducted by an approved provider or approved by the licensing authority in another state or otherwise approved by the board shall submit to the board a request for credit for the program. Within 15 days after receipt of the request, the board shall advise the requester in writing whether the program is approved and the number of hours allowed. Appraisers not complying with the requirement of this rule may be denied credit for the program. Application for postapproval of a continuing education program shall include the following fee and information:
   1. Application fee of $25;
   2. School, firm, organization or person conducting the program;
   3. Location of the program;
   4. Title of program and description of program;
   5. Credit hours requested for approval;
   6. Date(s) of program;
   7. Student and instructor materials;
   8. Principal instructor(s); and
   9. Verification of attendance.
[ARC 6170C; IAB 2/9/22, effective 3/16/22]

193F—11.12(272C,543D) Review of provider or program. The board on its own motion or upon receipt of a complaint or negative evaluation may monitor or review any approved program or provider and, upon evidence of significant variation in the program presented from the program approved, a violation of board rules, or material misstatement or omission in the application form, may withdraw approval of the provider or program and disallow all or any part of the approved hours granted to the provider. The provider, as a condition of approval, agrees to allow the board or its authorized representatives to monitor ongoing compliance with board rules through means including, but not limited to, unannounced attendance at programs.

193F—11.13(272C,543D) Hearings. In the event of denial, in whole or in part, of any application for approval of a continuing education program or provider, or credit for a continuing education program, or withdrawal of approval of a continuing education program or provider, the provider or appraiser may, within 30 days of the date of mailing of the notice of denial or withdrawal, request a contested case hearing before the board, as provided in rule 193F—20.8(17A).
[ARC 1732C; IAB 11/12/14, effective 12/17/14; ARC 4379C, IAB 3/27/19, effective 5/1/19]

These rules are intended to implement Iowa Code sections 543D.5, 543D.9 and 543D.16 and chapter 272C.

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[Filed ARC 6170C (Notice ARC 6017C, IAB 11/3/21), IAB 2/9/22, effective 3/16/22]
## CHAPTER 12
### FEES

[Prior to 2/20/02, see 193F—Chapter 10]

### 193F—12.1(543D) Required fees.
The following fee schedule applies to certified general, certified residential and associate appraisers.

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial examination application fee</td>
<td>$150</td>
</tr>
<tr>
<td>Examination fee (and reexamination fee) (to be paid to the examination provider)</td>
<td>Current provider rate</td>
</tr>
<tr>
<td>Biennial registration fee for active status (initial, reciprocal, renewal):</td>
<td></td>
</tr>
<tr>
<td>Certified real property appraiser &gt; one year</td>
<td>$200</td>
</tr>
<tr>
<td>Certified real property appraiser &lt; one year</td>
<td>$100</td>
</tr>
<tr>
<td>Associate real property appraiser &gt; one year</td>
<td>$200</td>
</tr>
<tr>
<td>Associate real property appraiser &lt; one year</td>
<td>$100</td>
</tr>
<tr>
<td>Biennial registration fee for inactive status (initial, reciprocal, renewal):</td>
<td></td>
</tr>
<tr>
<td>Certified real property appraiser</td>
<td>$100</td>
</tr>
<tr>
<td>Associate real property appraiser</td>
<td>$50</td>
</tr>
<tr>
<td>Temporary practice permit fee (each request)</td>
<td>$100</td>
</tr>
<tr>
<td>Fee to reinstate a lapsed or retired license (lapsed or retired to active status)</td>
<td>$150 (plus the registration fee)</td>
</tr>
<tr>
<td>Fee to reactivate an inactive or retired license (inactive or retired to active status)</td>
<td>$50 (plus the registration fee)</td>
</tr>
<tr>
<td>Formal wall certificate</td>
<td>$25</td>
</tr>
<tr>
<td>Work product review fees:</td>
<td></td>
</tr>
<tr>
<td>Original submission, certified residential</td>
<td>$300</td>
</tr>
<tr>
<td>Original submission, certified general</td>
<td>$650</td>
</tr>
<tr>
<td>Additional residential reports as requested by the board</td>
<td>$150 per report</td>
</tr>
<tr>
<td>Additional nonresidential reports as requested by the board</td>
<td>$250 per report</td>
</tr>
<tr>
<td>Voluntary submission of residential reports for review</td>
<td>$150 per report</td>
</tr>
<tr>
<td>Voluntary submission of nonresidential reports for review</td>
<td>$250 per report</td>
</tr>
<tr>
<td>Course application fee (non-AQB-approved courses and secondary providers)</td>
<td>$50</td>
</tr>
<tr>
<td>Pre-/post-course application fee</td>
<td>$25</td>
</tr>
<tr>
<td>Background check</td>
<td>$51</td>
</tr>
</tbody>
</table>
ASC National Registry fee > one year, separate from registration fee  $80
ASC National Registry fee < one year, separate from registration fee  $40
Fee to add supervisory appraiser  $25
Fee to add course instructor  $10
Waiver to administrative rules  $25
Late renewal fee (associate, certified)  $50

[ARC 7774B, IAB 5/20/09, effective 6/24/09; ARC 9667B, IAB 8/10/11, effective 9/14/11; ARC 5237C, IAB 10/21/20, effective 11/25/20; ARC 5785C, IAB 7/28/21, effective 9/1/21; ARC 6170C, IAB 2/9/22, effective 3/16/22]

193F—12.2(543D) Prorating of registration fees. An applicant applying for initial or reciprocal registration or certification within 12 months from the applicant’s required renewal date, pursuant to rule 193F—9.1(543D), shall pay half the required fee. An applicant applying for initial or reciprocal registration or certification more than 12 months from the applicant’s required renewal date shall pay the full registration fee. An applicant applying to reactivate a lapsed registration or certification within 12 months from the applicant’s required renewal date, pursuant to rule 193F—9.1(543D), shall pay half the required renewal fee plus the applicable reactivation or reinstatement fee. An applicant applying to reactivate a lapsed registration or certification more than 12 months from the applicant’s required renewal date shall pay the full renewal fee plus the applicable reactivation or reinstatement fee.

[ARC 5237C, IAB 10/21/20, effective 11/25/20]

193F—12.3(543D) Federal registry fee. The board shall collect and transmit to the Appraisal Subcommittee of the Federal Financial Institutions Examination Council, on an annual basis, a roster of individuals who have received certification or registration as real property appraisers and a registry fee of $40 for each individual listed on the roster.

[ARC 9667B, IAB 8/10/11, effective 9/14/11; ARC 5785C, IAB 7/28/21, effective 9/1/21]

These rules are intended to implement Iowa Code section 543D.6.

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[Filed ARC 6170C (Notice ARC 6017C, IAB 11/3/21, IAB 2/9/22, effective 3/16/22]
ECONOMIC DEVELOPMENT AUTHORITY[261]

[Created by 1986 Iowa Acts, chapter 1245]
[Prior to 1/14/87, see Iowa Development Commission[520] and Planning and Programming[630]]
[Prior to 9/7/11, see Economic Development, Iowa Department of[261];
renamed Economic Development Authority by 2011 Iowa Acts, House File 590]

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68.1(2) Definitions.
“Annual base rent” means the business’s annual lease payment minus taxes, insurance and operating or maintenance expenses.

“Authority” means the economic development authority created in Iowa Code section 15.105.

“Award date” means the date the board approved an application for project completion assistance, other direct financial assistance, or tax incentives.

“Base employment level” means the number of full-time equivalent positions at a business, as established by the authority and a business using the business’s payroll records, as of the date a business applies for tax incentives or project completion assistance. The number of jobs the business has pledged to create shall be in addition to the base employment level. The number of jobs the business has pledged to retain are included as all or a part of the base employment level. If the project is a modernization project, the job obligations will not include created or retained jobs. The business will be required to maintain the base employment level.

“Benefits” means nonwage compensation provided to an employee. Benefits include medical and dental insurance plans; pension, retirement, and profit-sharing plans; child care services; and life insurance, vision insurance, and disability insurance coverage. Benefits may include other nonwage compensation as determined by the board.

“Board” means the members of the economic development authority appointed by the governor and in whom the powers of the authority are vested pursuant to Iowa Code section 15.105.

“Brownfield site” means the same as defined in Iowa Code section 15.291.

“Business” means a sole proprietorship, partnership, corporation, or other business entity organized for profit under the laws of the state of Iowa or another state, under federal statutes, or under the laws of another country.

“Community” means a city, county, or other entity established pursuant to Iowa Code chapter 28E.

“Contractor or subcontractor” means a person who contracts with the eligible business or subcontracts with a contractor for the provision of property, materials, or services for the construction or equipping of a facility of the eligible business.

“Created job” means a new, permanent, full-time equivalent (FTE) position added to a business’s payroll in excess of the base employment level.

“Department” means the Iowa department of revenue.

“Economically distressed area” means a county meeting the requirements of a distressed area pursuant to rule 261—174.6(15).

“Eligible business” means a business meeting the conditions of Iowa Code section 15.329.

“Employee” means:
1. An individual filling a full-time position that is part of the payroll of the business receiving financial assistance from any of the programs identified in rule 261—173.1(15).
2. A business’s leased or contract employee, provided all of the following elements are satisfied:
   • The business receiving the tax incentives or project completion assistance has a legally binding contract with a third-party provider to provide the leased or contract employee.
• The contract between the third-party provider and the business specifically requires the third-party provider to pay the wages and benefits at the levels required and for the time period required by the authority as conditions of the award to the business.

• The contract between the third-party provider and the business specifically requires the third-party provider to submit payroll records to the authority, in form and content and as frequently as required by the authority, for purposes of verifying that the business’s job creation/retention and benefit requirements are being met.

• The contract between the third-party provider and the business specifically authorizes the authority, or its authorized representatives, to access the third-party provider’s records related to the funded project.

• The business receiving the tax incentives or project completion assistance agrees to be contractually liable to the authority for the performance or nonperformance of the third-party provider.

“Financial assistance” means assistance provided only from the funds, rights, and assets legally available to the authority. Financial assistance includes assistance provided in the form of grants, loans, forgivable loans, float loans, equity-like assistance, and royalty payments and other forms of assistance deemed appropriate by the board, consistent with Iowa law.

“Fiscal impact ratio” or “FIR” means a ratio calculated by estimating the amount of taxes to be received by the state from a business and dividing the estimate by the estimated cost to the state of providing certain project completion assistance and tax incentives to the business, reflecting a ten-year period of taxation and incentives and expressed in terms of current dollars. “Fiscal impact ratio” does not include taxes received by political subdivisions.

“Full-time equivalent job” or “full-time” means the employment of one person:

1. For 8 hours per day for a five-day, 40-hour workweek for 52 weeks per year, including paid holidays, vacations and other paid leave; or

2. The number of hours or days per week, including paid holidays, vacations and other paid leave, currently established by schedule, custom, or otherwise, as constituting a week of full-time work for the kind of service an individual performs for an employing unit, provided that the number of hours per week is at least 32 hours per week for 52 weeks per year, including paid holidays, vacations, and other paid leave.

For purposes of this definition, “employment of one person” means the employment of one natural person and does not include “job sharing” or any other means of aggregation or combination of hours worked by more than one natural person.

“Grayfield site” means the same as defined in Iowa Code section 15.291.

“Greenfield site” means a site that does not meet the definition of a brownfield site or grayfield site. A project proposed at a site located on previously undeveloped or agricultural land shall be presumed to be a greenfield site.

“High quality jobs” means created or retained jobs that meet the wage requirements established in subrule 68.2(4) and subrules 68.2(7) and 68.2(8) when applicable.

“Laborshed area” means the geographic area surrounding an employment center from which the employment center draws its commuting workers. The Iowa department of workforce development (IWD) determines the employment centers and defines the boundaries of each laborshed area. IWD defines laborshed areas by surveying commuters within the various zip codes surrounding an employment center, combining the zip codes into as many as three zones, and determining how many people commute from a zip code to the employment center from each zone. The zones reflect the fact that as the distance from an employment center increases, the number of people willing to commute to the employment center decreases. The laborshed wage applicable to the project shall be the laborshed wage for the closest laborshed area, as determined by road distance between the employment center and the zip code of the project location.

“Laborshed wage” means the same as defined in Iowa Code section 15.327. The authority will calculate the laborshed wage as follows:

1. The most current covered wage and employment data available from IWD will be used.
2. The wage will be computed as a mean wage figure and represented in terms of an hourly wage rate.
3. Only the wages paid by employers for jobs performed within the first two zones of a laborshed area will be included.
4. The wages paid by employers in the following categories will be excluded from the calculation: government, retail trade, health care and social assistance, and accommodations and food service. The wages paid by employers in all other categories will be included in the calculation.
5. To the extent that a laborshed area includes zip codes from states other than Iowa, the wages paid by employers in those zip codes may be included if IWD has finalized a data-sharing agreement with the state in question and has received the required data.
6. Only those wages within two standard deviations from the mean wage will be included.

"Loan" means an award of assistance with the requirement that the award be repaid with term, interest rate, and other conditions specified as part of the conditions of the award. "Loan" includes deferred loans, forgivable loans, and float loans. A "deferred loan" is one for which the payment for principal, interest, or both is not required for some specified period. A "forgivable loan" is one for which repayment is eliminated in part or entirely if the borrower satisfies specified conditions. A "float loan" means a short-term loan (not to exceed 30 months) made from obligated but unexpended moneys.

"Maintenance period" means the period of time between the project completion date and the maintenance period completion date.

"Maintenance period completion date" means the date on which the maintenance period ends. The specific date on which the maintenance period ends will be established by contract between the authority and the business. The maintenance period completion date will be a date on or after the project completion date and will be used to establish the period of time during which the project, the created jobs, and the retained jobs must be maintained. Rule 261—187.3(15) provides standard durations for project completion and maintenance periods.

"Modernization project" means a project that will result in increased skills and wages for current employees and that does not involve created or retained jobs. The business must maintain the base employment level.

"Program" means the high quality jobs program created pursuant to Iowa Code chapter 15, part 13.

"Project" means an activity or set of activities directly related to the start-up, location, modernization, or expansion of a business, and proposed in an application by a business, that are consistent with the goals of the program.

"Project completion assistance" means financial assistance or technical assistance provided to an eligible business in order to facilitate the start-up, location, modernization, or expansion of the business in this state and provided in an expedient manner to ensure the successful completion of the start-up, location, modernization, or expansion project.

"Project completion date" means the date by which a recipient of incentives or assistance has agreed to meet all the terms and obligations contained in an agreement with the authority. The specific date on which the project completion period ends will be established by contract between the authority and the business. The project completion date will be a date on which the project must be completed, all incented jobs must be created or retained, and all other applicable requirements must be met. Rule 261—187.3(15) provides standard durations for project completion and maintenance periods.

"Project completion period" means the period of time between the award date and the project completion date.

"Qualifying wage threshold" means the laborshed wage for an eligible business.

"Retail business" means any business engaged in the business of selling tangible personal property or taxable services at retail in this state. Retail business includes a business obligated to collect sales or use tax under Iowa Code chapter 423. "Retail business" includes any business engaged in selling tangible personal property or taxable services online.

"Retained job" means a full-time equivalent permanent position that is included in the base employment level which remains continuously filled or authorized to be filled as soon as possible and which is at risk of elimination if the project for which the business is seeking assistance does not
proceed. The authority may require a business to verify that a job is at risk. Such verification may include the signed statement of an officer of the business, documentation that the business is actively exploring other sites for the project, or any other information the authority may reasonably require during the application review process to establish that a job is at risk.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 1801C, IAB 12/24/14, effective 1/28/15; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—68.2(15) Eligibility requirements.

68.2(1) Community approval. If the qualifying investment is $10 million or more, the community in which the business’s project is or will be located shall approve by ordinance or resolution the project for purposes of receiving tax incentives and assistance under this program.

68.2(2) Relocations and reductions in operations.
   a. The business shall not be solely relocating operations from one area of the state while seeking state or local incentives. A project that does not create new jobs or involve a substantial amount of new capital investment shall be presumed to be a relocation. In determining whether a business is solely relocating operations for purposes of this subrule, the authority will consider whether a letter of support for the move has been provided from the affected local community.
   b. The business shall not be in the process of reducing operations in one community while simultaneously applying for assistance under the program.
      (1) For purposes of this subrule, a reduction in operations within 12 months before or after an application for assistance is submitted to the authority will be presumed to be a reduction in operations while simultaneously applying for assistance under the program.
      (2) Pursuant to 2021 Iowa Acts, Senate File 619, the authority shall not presume that a reduction in operations is a reduction in operations while simultaneously applying for assistance as described in subparagraph 68.2(2)“b”(1) with regard to a business that submits an application on or before June 30, 2022, if the business demonstrates to the satisfaction of the authority that the reduction in operations occurred after March 1, 2020, and that the reduction in operations was due to the COVID-19 pandemic. The authority shall consider whether the benefit of the project proposed by a business described in this subparagraph outweighs any negative impact related to the business’s reduction in operations. A business described in this subparagraph shall remain subject to all other eligibility requirements of the program.
   c. This subrule will not be construed to prohibit the business from expanding its operations in a community if existing operations of a similar nature in this state are not closed or substantially reduced.

68.2(3) Retail or service businesses. The business shall not be a retail business. The business shall not be a service business unless a significant proportion of its sales, as determined by the authority, are outside this state.

68.2(4) Created and retained jobs. The business shall create or retain jobs as part of a project.
   a. The business shall pay the qualifying wage threshold for HQJP as established in 261—Chapter 174.
   b. If the business is creating jobs, the business shall demonstrate that the jobs will pay at least 100 percent of the qualifying wage threshold at the start of the project completion period, at least 120 percent of the qualifying wage threshold by the project completion date, and at least 120 percent of the qualifying wage threshold until the maintenance period completion date.
   c. If the business is retaining jobs, the business shall demonstrate that the jobs retained will pay at least 120 percent of the qualifying wage threshold throughout both the project completion period and the maintenance period.
   d. Notwithstanding paragraphs “b” and “c” of this subrule, a business located at a brownfield site or a grayfield site or in an economically distressed area may be awarded incentives for jobs that will pay less than 120 percent of the qualifying wage threshold if the conditions described in rule 261—174.6(15) apply.

68.2(5) Determination of sufficient benefits. The business shall offer a sufficient package of benefits to each full-time employee included in the business’s base employment level and to each full-time employee at the project location until the maintenance period completion date. The benefits package
provided shall meet the criteria established by the board. The board shall periodically approve such
criteria to reflect the most current benefits package typically offered by employers. The criteria
established by the board may include, but not be limited to, premium percentages to be paid by the
business, deductible requirements, and other such criteria as determined necessary to the evaluation of
benefits offered by a business.

68.2(6) **Sufficient fiscal impact.** The business shall demonstrate that the jobs created or retained will
have a sufficient impact on state and local government revenues as determined by the authority after
calculating the fiscal impact ratio of the project.

68.2(7) **Violations of law.** If the authority finds that a business has a record of violations of law over
a period of time that tends to show a consistent pattern as described in 261—Chapter 172, the business
shall not qualify for tax incentives and assistance under this program.

68.2(8) **Competition.** The authority shall consider the impact of the proposed project on other Iowa
businesses in competition with the business that is seeking tax incentives and assistance. The authority
shall make a good faith effort to identify existing Iowa businesses within an industry in competition with
the business that is seeking tax incentives and assistance. The authority shall make a good faith effort
to determine the probability that the proposed financial assistance will negatively impact other existing
Iowa businesses including but not limited to displacing employees of the existing business.

68.2(9) **Other benefits.** A business may seek benefits and assistance for its project from other
applicable federal, state, and local programs in addition to those provided in this program.

68.2(10) **Ineligibility—no high quality jobs created or retained.** If a project is creating or retaining
jobs, but none are high quality jobs, then the project is not eligible to receive benefits and assistance
under this program.

[ARC 7557B, IAB 2/11/09, effective 3/18/09; ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective
10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 1801C, IAB 12/24/14, effective 1/28/15; ARC 6188C, IAB 2/9/22,
effective 3/16/22]

261—68.3(15) **Application process and review.**

68.3(1) **Application.** The authority shall develop a standardized application and make it available to
a business applying for tax incentives and assistance. The application procedures are as follows:

a. The project shall not be initiated prior to application. The authority will accept applications
only for projects proposed to begin after application and board approval.

   (1) Any one of the following may indicate that a project has been initiated:
   1. The start of construction of new or expanded buildings;
   2. The start of rehabilitation of existing buildings;
   3. The purchase or leasing of existing buildings; or
   4. The installation of new machinery and equipment or new computers to be used in the operation
   of the business’s project.

   (2) The purchase of land or signing an option to purchase land or earthmoving or other site
development activities not involving actual building construction, expansion or rehabilitation shall not
constitute project initiation. The costs of any land purchase and site development work incurred prior
to the award are not eligible qualifying investment expenses.

b. A signature from an official authorized to represent the affected local community is required on
the application as an indication that the community is aware of and supports the project. For a project with
a qualifying investment of $10 million or more, the application shall include an ordinance or resolution
of the community’s governing body approving the project.

c. Each application will be reviewed by the authority. The authority may request additional
information from the business that is applying for tax incentives and assistance or may use other
resources to obtain the needed information.

d. If the business meets the eligibility requirements, the authority will prepare a report which
includes a summary of the project and a recommendation on the amount of tax incentives and assistance
to be offered to the business.

68.3(2) **Wage waiver.** Rescinded IAB 7/4/07, effective 6/15/07.

68.3(3) **Benefit values.** Rescinded IAB 7/4/07, effective 6/15/07.
68.3(4) Negotiations. The authority may negotiate with the business regarding the amount of tax incentives and assistance the business is to receive under the program. All forms of tax incentives and assistance available under the program are subject to negotiations. The authority shall consider all of the following factors in negotiating with the business:

a. Level of need. The following factors will determine the authority’s assessment of need:
   (1) Whether the business can raise only a portion of the debt and equity necessary to complete the project. The existence of a gap between the financing required and the financing on hand indicates that tax incentives or assistance may be needed to fill the gap.
   (2) Whether the likely returns of the project are inadequate to motivate a company decision maker to proceed with the project even if sufficient debt or equity can be raised to finance the project. The existence of such a condition indicates that the project’s risks may outweigh its rewards and that tax incentives or assistance may be needed to reduce the project’s risks.
   (3) Whether the business is deciding between a site in Iowa (“Iowa site”) and a site in another state (“out-of-state site”) for its project and the cost of completing the project at the out-of-state site is demonstrably lower. Such a condition indicates that tax incentives or assistance may be needed to equalize the cost differential between the two sites. The authority will attempt to quantify the cost differential between the sites.
   (4) Whether the project has already been initiated. Initiation of a project indicates that additional financing is not necessary to complete the project, and the authority will not provide incentives or assistance to a project that has been initiated prior to application.

b. Quality of the jobs. The authority shall place greater emphasis on projects involving created or retained jobs that:
   (1) Have a higher wage scale. Businesses that have wage scales substantially higher than those of existing Iowa businesses in that industry shall be considered as providing the highest quality of jobs.
   (2) Have a lower turnover rate.
   (3) Are full-time or career-type positions.
   c. Percentage of created jobs defined as high quality jobs. The authority will consider the number of high quality jobs to be created versus the total number of created jobs in determining what amount of tax incentives and assistance to offer the business.

d. Economic impact. In measuring the economic impact to this state, the authority shall place greater emphasis on projects which demonstrate the following:
   (1) A business with a greater percentage of sales out of state or of import substitution.
   (2) A business with a higher proportion of in-state suppliers.
   (3) A project which would provide greater diversification of the state economy.
   (4) A business with fewer in-state competitors.
   (5) A potential for future job growth.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—68.4(15) Tax incentives.

68.4(1) Sales and use tax refund. Pursuant to Iowa Code section 15.331A, the approved business may claim a refund of the sales and use taxes paid under Iowa Code chapter 423 for gas, electricity, water, or sewer utility services, tangible personal property, or on services rendered, furnished, or performed to or for a contractor or subcontractor and used in the fulfillment of a written contract relating to the construction or equipping of a facility of the approved business. Taxes attributable to intangible property and furniture and furnishings shall not be refunded.

a. Filing a claim. To receive the refund, the approved business shall file a claim with the department pursuant to the department’s applicable rules.

b. Racks, shelving, and conveyor equipment. If the project is the location, expansion, or modernization of a warehouse or distribution center, the approved business may be entitled to a refund of sales and use taxes attributable to racks, shelving, and conveyor equipment.
An approved business that receives a refund or a tax credit in one fiscal year shall not be considered in a succeeding fiscal year. No business shall receive more than $500,000 in refunds or credits pursuant to this paragraph.

68.4(2) *Third-party developer tax credit.* Pursuant to Iowa Code section 15.331C, the approved business may claim a tax credit up to an amount equal to the sales and use taxes paid by a third-party developer under Iowa Code chapter 423 for gas, electricity, water, or sewer utility services, tangible personal property, or on services rendered, furnished, or performed to or for a contractor or subcontractor and used in the fulfillment of a written contract relating to the construction or equipping of a facility of the approved business. Taxes attributable to intangible property and furniture and furnishings shall not be refunded.

a. *Filing a claim.* To receive the tax credit, the approved business shall file a claim with the department pursuant to the department’s applicable rules.

b. *Racks, shelving, and conveyor equipment.* If the project is the location, expansion, or modernization of a warehouse or distribution center, the approved business may claim a tax credit up to the amount of sales and use taxes paid by a third-party developer and attributable to racks, shelving, and conveyor equipment. An approved business that receives a refund or a tax credit in one fiscal year shall not be considered in a succeeding fiscal year. No business shall receive more than $500,000 in refunds or credits pursuant to this paragraph.

68.4(3) *Value-added property tax exemption.* Pursuant to Iowa Code section 15.332, the community may exempt from taxation all or a portion of the actual value added by improvements to real property directly related to jobs created or retained by the project and used in the operations of the approved business. The exemption may be allowed for a period not to exceed 20 years beginning the year the improvements are first assessed for taxation. For purposes of this subrule, improvements include new construction and rehabilitation of and additions to existing structures. The exemption shall apply to all taxing districts in which the real property is located. The community shall provide the authority and the local assessor with a copy of the resolution adopted by its governing body which indicates the estimated value and duration of the authorized exemption.

68.4(4) *Investment tax credit.*

a. *Claiming the investment tax credit.* Pursuant to Iowa Code section 15.333, the approved business may claim an investment tax credit equal to a percentage of the new investment. The tax credit can be claimed when the qualifying asset is placed in service. The tax credit shall be amortized over a five-year period. The annual amounts that may be claimed by the business during that period are subject to negotiations. The final five-year amortization period and the negotiated annual amounts will be specified in a contract entered into with the authority. The tax credit shall be allowed against taxes imposed under Iowa Code chapter 422, division II, III, or V and against the moneys and credits tax imposed in Iowa Code section 533.24. The approved business shall not claim a tax credit in excess of the amount specified in a contract entered into with the authority.

b. *Investment qualifying for the tax credit.* For purposes of this subrule, new investment means all of the following:

(1) The cost of machinery and equipment, as defined in Iowa Code section 427A.1(1) “e” and “j,” purchased for use in the operation of the approved business.

(2) The purchase price of real property and any buildings and structures located on the real property.

(3) The cost of improvements made to real property which is used in the operation of the approved business.

(4) The annual base rent paid to a third-party developer by an approved business for a period equal to the term of the lease agreement but not to exceed the maximum term specified in a contract entered into with the authority, provided the cumulative cost of the base rent payments for that period does not exceed the cost of the land and the third-party developer’s costs to build or renovate the building for the approved business. Annual base rent shall be considered only when the project includes the construction
of a new building or the major renovation of an existing building. The approved business shall enter into a lease agreement with the third-party developer for a minimum of five years.

68.4(5) Insurance premium tax credit. Pursuant to Iowa Code section 15.333A, the approved business may claim an insurance premium tax credit equal to a percentage of the new investment.

a. Claiming the tax credit. The tax credit can be claimed when the qualifying asset is placed in service. The tax credit shall be amortized equally over a five-year period which the authority will, in consultation with the eligible business, define. The five-year amortization period shall be specified in a contract entered into with the authority. The tax credit shall be allowed against taxes imposed under Iowa Code chapter 432. A tax credit in excess of the tax liability for the tax year may be credited to the tax liability for the following seven years or until depleted, whichever occurs first. The approved business shall not claim a tax credit in excess of the amount specified in a contract entered into with the authority.

b. Investment qualifying for the tax credit. For purposes of this subrule, new investment means all of the following:

(1) The cost of machinery and equipment, as defined in Iowa Code section 427A.1(1) “e” and “j,” purchased for use in the operation of the approved business.
(2) The purchase price of real property and any buildings and structures located on the real property.
(3) The cost of improvements made to real property which is used in the operation of the approved business.
(4) The annual base rent paid to a third-party developer by an approved business for a period equal to the term of the lease agreement but not to exceed the maximum term specified in a contract entered into with the authority, provided the cumulative cost of the base rent payments for that period does not exceed the cost of the land and the third-party developer’s costs to build or renovate the building for the approved business. Annual base rent shall be considered only when the project includes the construction of a new building or the major renovation of an existing building. The approved business shall enter into a lease agreement with the third-party developer for a minimum of five years.

68.4(6) Research activities credit. Pursuant to Iowa Code section 15.335, the approved business may claim a corporate tax credit for increasing research activities in Iowa during the period the approved business is participating in the program. For purposes of this subrule, “research activities” includes the development and deployment of innovative renewable energy generation components manufactured or assembled in Iowa. A renewable energy generation component will no longer be considered innovative when more than 200 megawatts of installed effective nameplate capacity has been achieved. Research activities credits awarded under this program for innovative renewable energy generation components shall not exceed the amount specified in Iowa Code section 15.335.

68.4(7) Maximum tax incentives available. Tax incentives awarded under this program are based upon the number of jobs created or retained that pay the qualifying wage threshold for HQJP as established in 261—Chapter 174 and the amount of qualifying investment. The maximum possible award is based on the following schedule:

a. The business is required to maintain the base employment level, but no high quality jobs are created or retained and economic activity is furthered by the qualifying investment. For purposes of this paragraph, “economic activity” means a modernization project which will result in increased skills and wages for the current employees.

(1) Less than $100,000 in qualifying investment.
   1. Investment tax credit or insurance premium tax credit of up to 1 percent.
   2. Reserved.
(2) $100,000 to $499,999 in qualifying investment.
   1. Investment tax credit or insurance premium tax credit of up to 1 percent.
   2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
(3) $500,000 or more in qualifying investment.
   1. Investment tax credit or insurance premium tax credit of up to 1 percent.
   2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
   3. Research activities credit.
b. 1 to 5 high quality jobs are created or retained.
   (1) Less than $100,000 in qualifying investment.
      1. Investment tax credit or insurance premium tax credit of up to 2 percent.
      2. Reserved.
   (2) $100,000 to $499,999 in qualifying investment.
      1. Investment tax credit or insurance premium tax credit of up to 2 percent.
      2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
   (3) $500,000 or more in qualifying investment.
      1. Investment tax credit or insurance premium tax credit of up to 2 percent.
      2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
      3. Research activities credit.
   c. 6 to 10 high quality jobs are created or retained.
      (1) Less than $100,000 in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 3 percent.
         2. Reserved.
      (2) $100,000 to $499,999 in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 3 percent.
         2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
      (3) $500,000 or more in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 3 percent.
         2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
         3. Research activities credit.
   d. 11 to 15 high quality jobs are created or retained.
      (1) Less than $100,000 in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 4 percent.
         2. Reserved.
      (2) $100,000 to $499,999 in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 4 percent.
         2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
      (3) $500,000 or more in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 4 percent.
         2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
         3. Research activities credit.
   e. 16 to 30 high quality jobs are created or retained.
      (1) Less than $100,000 in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 5 percent.
         2. Reserved.
      (2) $100,000 to $499,999 in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 5 percent.
         2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
      (3) $500,000 or more in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 5 percent.
         2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
         3. Research activities credit.
   f. 31 to 40 high quality jobs are created or retained.
      (1) $10 million or more in qualifying investment.
         1. Investment tax credit or insurance premium tax credit of up to 6 percent.
         2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
         3. Research activities credit.
         4. Value-added property tax exemption.
      (2) Reserved.
   g. 41 to 60 high quality jobs are created or retained.
(1) $10 million or more in qualifying investment.
   1. Investment tax credit or insurance premium tax credit of up to 7 percent.
   2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
   3. Research activities credit.
   4. Value-added property tax exemption.
(2) Reserved.
   h. 61 to 80 high quality jobs are created or retained.
(1) $10 million or more in qualifying investment.
   1. Investment tax credit or insurance premium tax credit of up to 8 percent.
   2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
   3. Research activities credit.
   4. Value-added property tax exemption.
(2) Reserved.
   i. 81 to 100 high quality jobs are created or retained.
(1) $10 million or more in qualifying investment.
   1. Investment tax credit or insurance premium tax credit of up to 9 percent.
   2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
   3. Research activities credit.
   4. Value-added property tax exemption.
(2) Reserved.
   j. 101 or more high quality jobs are created or retained.
(1) $10 million or more in qualifying investment.
   1. Investment tax credit or insurance premium tax credit of up to 10 percent.
   2. Sales and use tax refund or third-party developer tax credit, or both, if applicable.
   3. Research activities credit.
   4. Value-added property tax exemption.
(2) Reserved.

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261—68.5(15) Project completion assistance.

68.5(1) Awards and negotiations. The authority may award project completion assistance to a business that meets the eligibility requirements of the HQIP. All award determinations are subject to the requirements of Iowa Code section 15.335B(3). The board, with the assistance of authority staff, will attempt to determine the amount of project completion assistance that will ensure successful completion of a project, and the board will make a good-faith effort to provide only the amount of incentives and assistance necessary to facilitate the project’s successful completion. The amount, type, and terms of the assistance provided typically vary according to the needs of each project, and each award is subject to negotiation. The board and the authority will attempt to treat similarly situated applicants similarly; however, the amount, type, and terms of project completion assistance most appropriate for a given project are necessarily dependent on many factors, and awards of project completion assistance shall be entirely at the discretion of the board.

68.5(2) Factors affecting the amount, type, and terms of project completion assistance. When determining an award of project completion assistance, the board, with the assistance of authority staff, typically considers many factors, including the following:
   a. The fiscal impact ratio of the project.
   b. Whether the amount of assistance to be awarded is appropriate to the number of jobs that will be created.
   c. The availability of funding.
   d. Whether other forms of assistance, including tax incentives, are available.
   e. The project’s level of need, including whether the local community and the private sector are also contributing to the success of the project.
f. The total amount of funds from other sources that can be leveraged.
g. The quality of the project.

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[Filed ARC 1801C (Notice ARC 1628C, IAB 9/17/14), IAB 12/24/14, effective 1/28/15]
[Filed ARC 3385C (Notice ARC 2996C, IAB 3/29/17), IAB 10/11/17, effective 11/15/17]
[Filed ARC 6188C (Notice ARC 6046C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 76
AGGREGATE TAX CREDIT LIMIT FOR
CERTAIN ECONOMIC DEVELOPMENT PROGRAMS

261—76.1(15) Authority. The authority for establishing rules governing the aggregate tax credit limit for certain economic development programs under this chapter is Iowa Code sections 15.106A and 15.119.
[ARC 7954B, IAB 7/15/09, effective 7/1/09; ARC 8146B, IAB 9/23/09, effective 10/28/09; ARC 1573C, IAB 8/20/14, effective 9/24/14]

261—76.2(15) Purpose. The purpose of the aggregate tax credit limit for certain economic development programs is to limit the amount of tax credits awarded during a fiscal year.
[ARC 7954B, IAB 7/15/09, effective 7/1/09; ARC 8146B, IAB 9/23/09, effective 10/28/09; ARC 1573C, IAB 8/20/14, effective 9/24/14]

261—76.3(15) Definitions.
“Authority” means the economic development authority.
“Board” means the members of the board in whom the powers of the authority are vested pursuant to Iowa Code chapter 15.
[ARC 7954B, IAB 7/15/09, effective 7/1/09; ARC 8146B, IAB 9/23/09, effective 10/28/09; ARC 1573C, IAB 8/20/14, effective 9/24/14]

261—76.4(15) Tax credit cap—exceeding the cap—reallocation of declinations.
76.4(1) Maximum aggregate limit on tax credits. Except as provided in subrule 76.4(2), the authority shall not authorize for any one fiscal year an amount of tax credits that is in excess of $170 million.

76.4(2) Exceeding the cap. The authority may authorize an amount of tax credits during a fiscal year that is in excess of the amount specified in subrule 76.4(1), but the amount of such excess will not exceed 20 percent of the amount specified in subrule 76.4(1) and will be counted against the total amount of tax credits that may be authorized for the next fiscal year.

76.4(3) Reallocation of declinations. Any amount of tax credits authorized and awarded during a fiscal year for a program specified in Iowa Code section 15.119(2) which is irrevocably declined by the awarded business on or before June 30 of the next fiscal year may be reallocated, authorized, and awarded during the fiscal year in which the declination occurs. Tax credits authorized pursuant to this subrule will not be considered for purposes of subrule 76.4(2).
[ARC 7954B, IAB 7/15/09, effective 7/1/09; ARC 8146B, IAB 9/23/09, effective 10/28/09; ARC 1573C, IAB 8/20/14, effective 9/24/14; ARC 6189C, IAB 2/9/22, effective 3/16/22]

261—76.5(15) Allocating the tax credit cap.
76.5(1) Procedure for allocations. At a scheduled meeting of the board prior to the start of a fiscal year, the board will allocate a portion of the tax credits available under the cap to the applicable programs. The board is not required to allocate a portion of the cap to every program listed. The board may allocate a portion of the cap to be shared by programs with a common purpose. Throughout the fiscal year, the board may review the allocation as necessary but shall review the allocation at least one time during the fiscal year. Based on its review, the board may make adjustments to the allocation as deemed necessary.

76.5(2) Required suballocations. Iowa Code section 15.119 requires the authority to make certain suballocations to the programs subject to the cap. In some cases, there is a minimum required suballocation and in others a maximum suballocation. The authority will make the required suballocations and count them against the maximum aggregate cap before making any discretionary allocations.
[ARC 7954B, IAB 7/15/09, effective 7/1/09; ARC 8146B, IAB 9/23/09, effective 10/28/09; ARC 1573C, IAB 8/20/14, effective 9/24/14; ARC 6189C, IAB 2/9/22, effective 3/16/22]

261—76.6(15) Reporting to the department of revenue. The authority shall submit an initial report to the department of revenue by August 15 of each year, which shows the initial allocation of the maximum aggregate tax credit cap. At the start of each subsequent fiscal year, the authority shall prepare a report to
summarize the final allocation for the fiscal year that just ended, the total amount of awards made under each program subject to the cap during that fiscal year, and the initial allocation for the subsequent fiscal year. 

[ARC 7954B, IAB 7/15/09, effective 7/1/09; ARC 8146B, IAB 9/23/09, effective 10/28/09; ARC 1573C, IAB 8/20/14, effective 9/24/14; ARC 6189C, IAB 2/9/22, effective 3/16/22]

These rules are intended to implement Iowa Code section 15.119.

[Filed Emergency ARC 7954B, IAB 7/15/09, effective 7/1/09] 
[Filed ARC 8146B (Notice ARC 7953B, IAB 7/15/09), IAB 9/23/09, effective 10/28/09] 
[Filed ARC 1573C (Notice ARC 1430C, IAB 4/16/14), IAB 8/20/14, effective 9/24/14] 
[Filed ARC 6189C (Notice ARC 6047C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 173
STANDARD DEFINITIONS
[1AB 7/4/07, 261—Ch 173 renumbered as 261—Ch 199]
[Prior to 7/4/07, see 261—Ch 168, div V]

261—173.1(15) Applicability.

173.1(1) Current programs. This chapter shall apply as follows:
   a. EZ (enterprise zone) program (261—Chapter 59). Effective as of July 1, 2014, the EZ program was repealed. See 2014 Iowa Acts, House File 2448. The rules adopted in 261—Chapter 59 continue to apply to agreements entered into prior to that date. All amendments to this chapter made on or after July 1, 2014, shall not apply to agreements entered into under the EZ program prior to that date.
   b. HQJP (high quality jobs program) (261—Chapter 68). This chapter does not apply to the HQJP. Terms applicable to the HQJP are incorporated into 261—Chapter 68. Chapters referencing this subrule in 261—Part VII, additional application requirements and procedures, and 261—Part VIII, legal and compliance, apply to the HQJP as described in 261—subrule 68.1(1).

173.1(2) Prior programs—transition provision. The programs listed in paragraphs “a” to “f” were repealed by 2009 Iowa Acts, Senate File 344, effective July 1, 2009. The rules in effect on June 30, 2009, under this chapter shall apply to the following prior programs until such time as the contracts for these prior programs are closed by the authority:
   a. VAAPFAP (value-added agricultural products and processes financial assistance program) (261—Chapter 57).
   b. CEBA (community economic betterment account) program (261—Chapter 53).
   c. EVA (entrepreneurial ventures assistance) program (261—Chapter 60).
   d. TSBFAP (targeted small business financial assistance program) (261—Chapter 55).
   e. PIAP (physical infrastructure assistance program) (261—Chapter 61).
   f. LCG (loan and credit guarantee) program (261—Chapter 69).

173.1(3) Grow Iowa values fund (IVF(2009))—transition provision. The grow Iowa values fund and financial assistance program as amended by 2009 Iowa Acts, Senate File 344, was repealed by 2011 Iowa Acts, chapter 133. The repeal took effect on June 30, 2012. The rules pertaining to the grow Iowa values fund and financial assistance program that were in effect upon the repeal of the program shall apply to all awards made and all contracts entered into under the program after July 1, 2009, and on or before June 30, 2012, and shall continue to apply until such time as all such contracts, including all amendments to such contracts, reach the end of their effective contract periods and are closed by the authority.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 1801C, IAB 12/24/14, effective 1/28/15; ARC 2038C, IAB 6/24/15, effective 7/29/15; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—173.2(15) Definitions. As used in these rules unless the context otherwise requires:

“Authority” means the economic development authority created in Iowa Code section 15.105.

“Award date” means the date the board or the director approved an application for project completion assistance, other direct financial assistance, or tax incentives.

“Base employment level” means the number of full-time equivalent positions at a business, as established by the authority and a business using the business’s payroll records, as of the date a business applies for tax incentives or project completion assistance. The number of jobs the business has pledged to create and retain shall be in addition to the base employment level.

“Benefits” means nonwage compensation provided to an employee. Benefits include medical and dental insurance plans, pension, retirement, and profit-sharing plans, child care services, life insurance coverage, vision insurance coverage, and disability insurance coverage. Benefits may include other nonwage compensation as determined by the board.

“Board” means the members of the economic development authority appointed by the governor and in whom the powers of the authority are vested pursuant to Iowa Code section 15.105.

“Brownfield site” means the same as defined in Iowa Code section 15.291.
“Business” means a sole proprietorship, partnership, corporation, or other business entity organized for profit or not for profit under the laws of the state of Iowa or another state, under federal statutes, or under the laws of another country.

“Created job” means a new, permanent, full-time equivalent (FTE) position added to a business’s payroll in excess of the base employment level at the time of application for tax incentives or project completion assistance.

“Director” means the director of the authority.

“Due diligence committee” or “DDC” means the due diligence committee organized by the board pursuant to 261—Chapter 1.

“Employee” means:
1. An individual filling a full-time position that is part of the payroll of the business receiving financial assistance from any of the programs identified in rule 261—173.1(15).
2. A business’s leased or contract employee, provided all of the following elements are satisfied:
   ● The business receiving the tax incentives or project completion assistance has a legally binding contract with a third-party provider to provide the leased or contract employee.
   ● The contract between the third-party provider and the business specifically requires the third-party provider to pay the wages and benefits at the levels required and for the time period required by the authority as conditions of the award to the business.
   ● The contract between the third-party provider and the business specifically requires the third-party provider to submit payroll records to the authority, in form and content and at the frequency found acceptable to the authority, for purposes of verifying that the business’s job creation/retention and benefit requirements are being met.
   ● The contract between the third-party provider and the business specifically authorizes the authority, or its authorized representatives, to access records related to the funded project.
   ● The business receiving the tax incentives or project completion assistance agrees to be contractually liable to the authority for the performance or nonperformance of the third-party provider.

“Equity investment” means common or preferred corporate stock or warrants to acquire such stock, membership interests in limited liability companies, partnership interests in partnerships, or near equity. Equity is limited to securities or interests acquired only for cash and does not include securities or interests acquired at any time for services, contributions of property other than cash, or any other non-cash consideration.

“Equity-like assistance” means assistance provided in such a manner that the potential return on investment to the provider varies according to the profitability of the company assisted. Equity-like assistance includes but is not limited to: royalty arrangements; success payments; warrant arrangements; or other similar forms of investments. Equity-like assistance does not include equity investments.

“Financial assistance” means assistance provided only from the funds, rights, and assets legally available to the authority. Financial assistance includes assistance provided in the form of grants, loans, forgivable loans, float loans, equity-like assistance, and royalty payments and other forms of assistance deemed appropriate by the board, consistent with Iowa law.

“Fiscal impact ratio” or “FIR” means a ratio calculated by estimating the amount of taxes to be received by the state from a business and dividing the estimate by the estimated cost to the state of providing certain project completion assistance and tax incentives to the business, reflecting a ten-year period of taxation and incentives and expressed in terms of current dollars. “Fiscal impact ratio” does not include taxes received by political subdivisions.

“Full-time equivalent job” or “full-time” means the employment of one person:
1. For 8 hours per day for a 5-day, 40-hour workweek for 52 weeks per year, including paid holidays, vacations and other paid leave; or
2. The number of hours or days per week, including paid holidays, vacations and other paid leave, currently established by schedule, custom, or otherwise, as constituting a week of full-time work for the kind of service an individual performs for an employing unit, provided that the number of hours per week is at least 32 hours per week for 52 weeks per year including paid holidays, vacations, and other paid leave.
For purposes of this definition, “employment of one person” means the employment of one natural person and does not include “job sharing” or any other means of aggregation or combination of hours worked by more than one natural person.

“Grant” means an award of assistance with the expectation that, with the fulfillment of the conditions, terms and obligations of the contract with the authority for the project, repayment of funds is not required.

“Grayfield site” means the same as defined in Iowa Code section 15.291.

“Greenfield site” means a site that does not meet the definition of a brownfield site or grayfield site. A project proposed at a site located on previously undeveloped or agricultural land shall be presumed to be a greenfield site.

“ICF” means the innovation and commercialization fund created in Iowa Code section 15.412.

“IVF(2009)” means the grow Iowa values fund and financial assistance program established by Iowa Code section 15G.111 as amended by 2009 Iowa Acts, Senate File 344, section 2, and as repealed by 2011 Iowa Code Supplement section 15G.107. IVF(2009) does not include programs funded under the grow Iowa values fund prior to 2009. Rule 261—173.1(15) applies in determining which rules apply to which programs.

“Laborshed area” means the geographic area surrounding an employment center from which the employment center draws its commuting workers. The Iowa department of workforce development (IWD) determines the employment centers and defines the boundaries of each laborshed area. IWD defines laborshed areas by surveying commuters within the various zip codes surrounding an employment center, combining the zip codes into as many as three zones, and determining how many people commute from a zip code to the employment center from each zone. The zones reflect the fact that as the distance from an employment center increases, the number of people willing to commute to the employment center decreases. When determining the applicable laborshed wage, the authority will use the closest laborshed area, as determined by road distance between the employment center and the zip code of the project location.

“Laborshed wage” means the same as defined in Iowa Code section 15.327. The authority will calculate the laborshed wage as follows:

1. The most current covered wage and employment data available from IWD will be used.
2. The wage will be computed as a mean wage figure and represented in terms of an hourly wage rate.
3. Only the wages paid by employers for jobs performed within the first two zones of a laborshed area will be included.
4. The wages paid by employers in the following categories will be excluded from the calculation: government, retail trade, health care and social assistance, and accommodations and food service. The wages paid by employers in all other categories will be included in the calculation.
5. To the extent that a laborshed area includes zip codes from states other than Iowa, the wages paid by employers in those zip codes may be included if IWD has finalized a data-sharing agreement with the state in question and has received the required data.
6. Only those wages within two standard deviations from the mean wage will be included.

“Loan” means an award of assistance with the requirement that the award be repaid with term, interest rate, and other conditions specified as part of the conditions of the award. “Loan” includes deferred loans, forgivable loans, and float loans. A “deferred loan” is one for which the payment for principal, interest, or both, is not required for some specified period. A “forgivable loan” is one for which repayment is eliminated in part or entirely if the borrower satisfies specified conditions. A “float loan” means a short-term loan (not to exceed 30 months) made from obligated but unexpended moneys.

“Maintenance period” means the period of time between the project completion date and the maintenance period completion date.

“Maintenance period completion date” means the date on which the maintenance period ends. The specific date on which the maintenance period ends will be established by contract between the authority and the business. The maintenance period completion date will be a date on or after the project completion date and will be used to establish the period of time during which the project, the created
jobs, and the retained jobs must be maintained. Rule 261—187.3(15) provides standard durations for project completion and maintenance periods.

“Project” means an activity or set of activities directly related to the start-up, location, modernization, or expansion of a business, and proposed in an application by a business, that will result in the accomplishment of the goals of the program.

“Project completion,” in the case of the EZ program and HQJP, for purposes of reporting to the Iowa department of revenue that a project has been completed, means:

1. For new manufacturing facilities, the first date upon which the average annualized production of finished product for the preceding 90-day period at the manufacturing facility is at least 50 percent of the initial design capacity of the facility.

2. For all other projects, the date of completion of all improvements necessary for the start-up, location, expansion or modernization of a business.

“Project completion assistance” means financial assistance or technical assistance provided to an eligible business in order to facilitate the start-up, location, modernization, or expansion of the business in this state and provided in an expedient manner to ensure the successful completion of the start-up, location, modernization, or expansion project.

“Project completion date” means the date by which a recipient of incentives or assistance has agreed to meet all the terms and obligations contained in an agreement with the authority. The specific date on which the project completion period ends will be established by contract between the authority and the business. The project completion date will be a date on which the project must be completed, all incented jobs must be created or retained, and all other applicable requirements must be met. Rule 261—187.3(15) provides standard durations for project completion and maintenance periods.

“Project completion period” means the period of time between the date financial assistance is awarded (the “award date”) and the project completion date.

“Project initiation” means, for all programs and funding sources except EDSA, any one of the following:

1. The start of construction of new or expanded buildings;
2. The start of rehabilitation of existing buildings;
3. The purchase or leasing of existing buildings; or
4. The installation of new machinery and equipment or new computers to be used in the operation of the business’s project.

The purchase of land or signing an option to purchase land or earth moving or other site development activities not involving actual building construction, expansion or rehabilitation shall not constitute project initiation. The costs of any land purchase and site development work incurred prior to the award are not eligible qualifying investment expenses.

“Qualifying wage threshold” means the laborshed wage for an eligible business. The qualifying wage thresholds for the authority’s programs are described in 261—Chapter 174.

“Retained job” means a full-time equivalent permanent position in existence at the time an employer applies for financial assistance which remains continuously filled or authorized to be filled as soon as possible and which is at risk of elimination if the project for which the employer is seeking assistance does not proceed. The authority may require a business to verify that a job is at risk. Such verification may include the signed statement of an officer of the business, documentation that the business is actively exploring other sites for the project, or any other information the authority may reasonably require during the application review process to establish that a job is at risk.

“Sufficient benefits” means that the employer applying for financial assistance offers to each full-time equivalent permanent position a benefits package that meets one of the following:

1. The employer pays 80 percent of the premium costs for a standard medical and dental plan for single employee coverage with a $750 maximum deductible; or
2. The employer pays 50 percent of the premium costs for a standard medical and dental plan for employee family coverage with a $1,500 maximum deductible; or
3. The employer provides medical coverage and pays the monetary equivalent of paragraph “1” or “2” above in supplemental employee benefits. Benefits counted toward monetary equivalent could
include medical coverage, dental coverage, vision insurance, life insurance, pension, retirement (401k), profit sharing, disability insurance, child care services, and other nonwage compensation approved by the board.

“Technology commercialization committee” means the committee organized by the board pursuant to 261—Chapter 1.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 1801C, IAB 12/24/14, effective 1/28/15]

These rules are intended to implement Iowa Code chapters 15 and 17A and 2011 Iowa Code Supplement chapter 15G, subchapter I.

[Filed emergency 6/15/07—published 7/4/07, effective 6/15/07]
[Filed 8/22/07, Notice 7/4/07—published 9/26/07, effective 10/31/07]
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[Filed ARC 8145B (Notice ARC 7971B, IAB 7/15/09), IAB 9/23/09, effective 10/28/09]
[Filed ARC 0442C (Notice ARC 0293C, IAB 8/22/12), IAB 11/14/12, effective 12/19/12]
[Filed ARC 1801C (Notice ARC 1628C, IAB 9/17/14), IAB 12/24/14, effective 1/28/15]
[Filed ARC 2038C (Notice ARC 1890C, IAB 3/4/15), IAB 6/24/15, effective 7/29/15]
[Filed ARC 6188C (Notice ARC 6046C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 174
WAGE, BENEFIT, AND INVESTMENT REQUIREMENTS
[Prior to 7/4/07, see 261—Ch 168, div IV]

261—174.1(15) Applicability. This chapter is applicable to the programs identified in 261—173.1(15).

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12]

261—174.2(15) Qualifying wage threshold calculations.

174.2(1) Annual updates. The authority will update the qualifying wage thresholds described in this chapter annually each fiscal year. The thresholds will take effect on September 1 of each fiscal year and remain in effect until August 31 of the following fiscal year.

174.2(2) Applicability to applications. The qualifying wage threshold applicable to a project is the threshold in effect on the date the fully completed project application for the applicable program is received by the authority. If such an application is received but not acted upon by the board before the qualifying wage thresholds are updated, the thresholds in effect on the date the application was received will remain in effect for a period of three months notwithstanding that the thresholds are subsequently updated. The authority shall have sole discretion in determining whether an application is fully completed.

174.2(3) Phase-in of large increases. Notwithstanding the definition of laborshed wage in 261—Chapter 173, if the authority updates qualifying wage thresholds pursuant to subrule 174.2(1) and determines that, after calculation by IWD, the laborshed wage of a laborshed area would increase by more than one dollar per hour, the authority will limit the amount of that laborshed area’s increase for that annual update to one dollar per hour. This subrule will be applied at each annual update pursuant to subrule 174.2(1) and will be applied by measuring the result of the calculation described in the definition of laborshed area against the most recent qualifying wage threshold published pursuant to subrule 174.2(1). Thus, this subrule will be applied in such a manner as to phase in the full amount of an earlier increase over more than one subsequent update. For example, if, at one annual update, a laborshed wage would increase by three dollars per hour over the current qualifying wage threshold, the authority will limit the amount of the increase in that first annual update to one dollar. But if, at the second annual update, the laborshed wage calculation performed pursuant to 261—Chapter 173 remains what it was at the time of the first annual update, then the authority will apply up to one additional dollar at the second annual update, and so on.

174.2(4) Effective date and applicability. The laborshed-based qualifying wage thresholds adopted in 2012 Iowa Acts, House File 2473, are effective beginning on July 1, 2012, and the authority will apply the provisions of this rule to all qualifying wage threshold calculations made or updated on or after that date.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—174.3(15) Qualifying wage threshold requirements—prior to July 1, 2009. 2009 Iowa Acts, Senate File 344, became effective on July 1, 2009. 2009 Iowa Acts, Senate File 344, repealed a number of programs administered by the department, established IVF(2009), and transferred moneys from prior programs to the IVF(2009). This resulted in a simplification of state financial assistance programs. The following subrules regarding qualifying wage thresholds apply to awards made on or before June 30, 2009. This rule shall apply to the prior programs and funding sources until such time as the contracts for these prior programs are closed by the department.

174.3(1) Qualifying wage threshold requirement—projects receiving IVF(FES) assistance. Awards funded during the time period beginning July 1, 2003, but before June 16, 2004, from IVF(FES) shall meet the wage requirements in effect at that time as reflected in the contract between the department and the business. Awards funded after June 16, 2004, using IVF(FES) moneys shall meet the qualifying wage thresholds for the programs through which funding is sought.

174.3(2) Qualifying wage threshold requirement—projects receiving IVF (2005) assistance. In order to receive financial assistance from the IVF (2005), applicants shall demonstrate that the annual wage,
including benefits, of project jobs is at least 130 percent of the average county wage. If an applicant is applying for IVF (2005) moneys, the department will first review the application to ensure that the IVF (2005) wage requirement is met. The department will then review the application for compliance with the requirements of the department program from which financial assistance is to be provided.

174.3(3) Qualifying wage threshold requirement—projects funded by program funds ("old money"). Prior to July 1, 2003, direct financial assistance programs administered by the department were funded through state appropriations. After the creation of IVF(FES) and IVF (2005), these programs no longer received separate state appropriations. These programs were funded with IVF(FES) and IVF (2005) moneys. Moneys remaining, recaptured or repaid to these program funds remain available for awarding to projects. The department will review an application for compliance with the requirements of the department program from which financial assistance is to be provided.

174.3(4) Qualifying wage threshold requirement—projects receiving EDSA funds. EDSA is the job creation component of the federal CDBG program. The department will review an application for compliance with the federal CDBG EDSA requirements.

174.3(5) Qualifying wage thresholds, by funding source and by program.

a. IVF (2005). Projects that are funded with IVF (2005) moneys through the following programs shall meet the qualifying wage threshold listed below:

<table>
<thead>
<tr>
<th>Funding Source: IVF (2005)</th>
<th>Qualifying Wage Threshold Requirement</th>
<th>Can benefits value be added to the hourly wage to meet the qualifying wage threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEBA: Small business gap financing component</td>
<td>130% of average county wage</td>
<td>Yes</td>
</tr>
<tr>
<td>New business opportunities and new product development components</td>
<td>130% of average county wage</td>
<td>Yes</td>
</tr>
<tr>
<td>Venture project component</td>
<td>130% of average county wage</td>
<td>Yes</td>
</tr>
<tr>
<td>Modernization project component</td>
<td>130% of average county wage</td>
<td>Yes</td>
</tr>
<tr>
<td>VAAP</td>
<td>130% of average county wage</td>
<td>Yes</td>
</tr>
<tr>
<td>PIAP</td>
<td>130% of average county wage, unless funded through special allocation of PIAP funds, up to $5 million, established in subrule 61.5(12)</td>
<td>Yes</td>
</tr>
<tr>
<td>EVA</td>
<td>130% of average county wage</td>
<td>Yes</td>
</tr>
</tbody>
</table>
b. **IVF(FES) and program funds.** Projects that are funded with IVF(FES) through the following programs or directly from available program fund moneys shall meet the qualifying wage thresholds listed below:

<table>
<thead>
<tr>
<th>Funding Source: IVF(FES) or Program Funds</th>
<th>Qualifying Wage Threshold Requirement</th>
<th>Can benefits value be added to the hourly wage to meet the qualifying wage threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEBA: Small business gap financing component</td>
<td>100% of average county wage or average regional wage, whichever is lower</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>130% for awards over $500,000</td>
<td></td>
</tr>
<tr>
<td>New business opportunities and new product development components</td>
<td>100% of average county wage or average regional wage, whichever is lower</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>130% for awards over $500,000</td>
<td></td>
</tr>
<tr>
<td>Venture project component</td>
<td>100% of average county wage or average regional wage, whichever is lower</td>
<td>No</td>
</tr>
<tr>
<td>Modernization project component</td>
<td>100% of average county wage or average regional wage, whichever is lower</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>130% for awards over $500,000</td>
<td></td>
</tr>
<tr>
<td>VAAPFAP</td>
<td>No statutory requirement</td>
<td>Not applicable</td>
</tr>
<tr>
<td>PIAP</td>
<td>No statutory requirement</td>
<td>Not applicable</td>
</tr>
<tr>
<td>EVA</td>
<td>No statutory requirement</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

d. **EZ and HQJC.** Tax credit program projects shall meet the following wage thresholds:

<table>
<thead>
<tr>
<th>Tax Credit Program</th>
<th>Wage Threshold Requirement</th>
<th>Can benefits value be added to the hourly wage to meet the qualifying wage threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ</td>
<td>90% of average county wage or average regional wage, whichever is lower</td>
<td>No</td>
</tr>
<tr>
<td>HQJC</td>
<td>130% of average county wage More benefits are available if the wage rate is 160% or higher</td>
<td>Yes</td>
</tr>
</tbody>
</table>

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 2038C, IAB 6/24/15, effective 7/29/15]

261—174.4(15) **IVF (2005) wage waivers; HQJC eligibility requirement waivers.** Rescinded IAB 11/5/08, effective 10/16/08.

261—174.5(15) **Qualifying wage threshold requirements—on or after July 1, 2009, and on or before June 30, 2012.**

174.5(1) Projects that are funded through one of the IVF(2009) financial assistance program components shall meet the following qualifying wage thresholds:
174.5(2) HQJP and EZ. Projects funded through the HQJP or EZ tax credit program shall meet the following qualifying wage thresholds:

<table>
<thead>
<tr>
<th>Tax Credit Program</th>
<th>Qualifying Wage Threshold Requirement</th>
<th>Credit for sufficient benefits?</th>
</tr>
</thead>
<tbody>
<tr>
<td>HQJP</td>
<td>130% of county wage or regional wage, whichever is lower</td>
<td>Yes</td>
</tr>
<tr>
<td>EZ</td>
<td>90% of county wage or regional wage, whichever is lower</td>
<td>No</td>
</tr>
</tbody>
</table>

174.5(3) EDSA. Rescinded IAB 6/24/15, effective 7/29/15.

174.5(4) Higher wage threshold applies if multiple programs are used in a project. Notwithstanding the qualifying wage threshold requirements for each program, if a business is a recipient of financial assistance from more than one program administered by the authority and the qualifying wage thresholds are not the same, the business shall be required to pay the higher qualifying wage for the project.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 2038C, IAB 6/24/15, effective 7/29/15]

261—174.6(15) Qualifying wage threshold requirements—effective on or after July 1, 2014. 2014 Iowa Acts, House File 2448, (“the Act”) became effective on July 1, 2014. Among other things, the Act changed the qualifying wage thresholds applicable to HQJP and repealed the EZ program. As of July 1, 2014, the qualifying wage thresholds described in this rule shall be in effect.

174.6(1) Enterprise zone (EZ) program. The qualifying wage threshold requirement applicable to the EZ program is 90 percent of the laborshed wage. The wage threshold described in this subrule continues to apply to agreements entered into before July 1, 2014. However, no new agreements may be entered into on or after July 1, 2014.

174.6(2) High quality jobs program (HQJP). The qualifying wage threshold requirement applicable to HQJP is 120 percent of the laborshed wage unless subrule 174.6(3) or 174.6(4) applies to a project.

174.6(3) HQJP projects in distressed areas.

a. Notwithstanding subrule 174.6(2), the qualifying wage threshold requirement applicable to an HQJP project may be lowered to 100 percent of the laborshed wage if the eligible business is located in an economically distressed area.

b. For purposes of this subrule, “economically distressed area” means a county that ranks among the bottom 33 of all Iowa counties, as measured by either the average monthly unemployment level for the most recent 12-month period or the average annualized unemployment level for the most recent five-year period.

c. The authority will update the list of economically distressed areas according to the same schedule as the qualifying wage thresholds are updated pursuant to subrule 174.2(1) and will apply the provisions of subrule 174.2(2) to the list of economically distressed areas in the same manner.

174.6(4) HQJP projects at brownfield or grayfield sites.

a. Notwithstanding subrule 174.6(2), the qualifying wage threshold requirement applicable to an HQJP project may be lowered to 90 percent of the laborshed wage if the eligible business is located...
at a brownfield site. The qualifying wage threshold for a brownfield site may be lowered to 90 percent regardless of where the project site is located as long as the project meets the requirements of a brownfield site.

b. Notwithstanding subrule 174.6(2), the qualifying wage threshold requirement applicable to an HQJP project may be lowered to 100 percent of the laborshed wage if the eligible business is located at a grayfield site. The qualifying wage threshold for a grayfield site may be lowered to 100 percent regardless of where the project site is located as long as the project meets the requirements of a grayfield site.

c. The authority may consult with the brownfield redevelopment advisory council established pursuant to Iowa Code section 15.294 in order to make a determination as to whether a project site meets the requirements of a brownfield site or grayfield site for purposes of this subrule. The determination as to whether a project site qualifies as a brownfield or grayfield site shall be within the discretion of the authority. In making such determinations, the authority will attempt to apply the same definition in substantially the same manner as similar definitions are applied by the brownfield redevelopment advisory council.

d. A project that does not meet the requirements of a brownfield site or grayfield site will be presumed to be a greenfield site.


[ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 1801C, IAB 12/24/14, effective 1/28/15; ARC 2038C, IAB 6/24/15, effective 7/29/15]

261—174.7(15) Job obligations. Jobs that will be created or retained as a result of a project’s receiving state or federal financial assistance, project completion assistance, or tax incentives from the authority shall meet the qualifying wage threshold requirements. Jobs that do not meet the qualifying wage threshold requirements will not be counted toward a business’s job creation or job retention obligations contained in the contract between the authority and the business. A business’s job obligations shall include the business’s base employment level and the number of new jobs required to be created above the base employment level.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12]
261—174.8(15) Benefit requirements—prior to July 1, 2009. This rule regarding benefit requirements applies to awards made on or before June 30, 2009. This rule shall apply to the prior programs and funding sources until such time as the contracts for these prior programs are closed by the department.

<table>
<thead>
<tr>
<th>Program</th>
<th>Benefit Requirement</th>
<th>Deductible Requirements</th>
<th>Is a monetary equivalent to benefits allowed?</th>
<th>Benefits Counted Toward Monetary Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ</td>
<td>80% medical and dental coverage, single coverage only OR the monetary equivalent</td>
<td>$750 maximum for single coverage/ $1500 maximum for family coverage</td>
<td>Yes</td>
<td>-Medical coverage (family portion)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Dental coverage (family portion)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Pension/401(k) (company’s average contribution)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Profit-sharing plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Life insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Short-/long-term disability insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Vision insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Child care</td>
</tr>
<tr>
<td>HQJC</td>
<td>No benefit requirement (If, however, the company does not provide 80% medical and</td>
<td>$750 maximum for single coverage/ $1500 maximum for family coverage</td>
<td>No (Providing 80% medical and dental coverage for a single employee is one of eight qualifying criteria</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>dental coverage for a single employee, the award will be reduced by 10%)</td>
<td></td>
<td>the company may use to qualify for the program. Monetary equivalent of other benefits is not considered.)</td>
<td></td>
</tr>
<tr>
<td>CEBA</td>
<td>80% medical and dental for single employees OR 50% medical and dental for family</td>
<td>$750 maximum for single coverage/ $1500 maximum for family coverage</td>
<td>Yes</td>
<td>-Medical coverage (family portion)</td>
</tr>
<tr>
<td></td>
<td>coverage OR the monetary equivalent</td>
<td></td>
<td></td>
<td>-Dental coverage (family portion)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Pension/401(k) (company’s average contribution)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Profit-sharing plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Life insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Short-/long-term disability insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Vision insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Child care</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Other documented benefits offered to all employees (i.e., uniforms, tuition reimbursement, etc.)</td>
</tr>
<tr>
<td>VAAPFAP</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>PIAP</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>EVA</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>TSBFAP</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 2038C, IAB 6/24/15, effective 7/29/15]

261—174.9(15) Sufficient benefits requirement—on or after July 1, 2009.

174.9(1) Requirement. To be eligible to receive state financial assistance, project completion assistance, or tax incentives, applicants shall offer sufficient benefits to each FTE permanent position. The term “sufficient benefits” is defined in rule 261—173.2(15). The board may consider alternative benefits packages or may adjust the requirement described in this rule to reflect the most current benefits package typically offered by employers.

174.9(2) Options. An employer meeting one of the following options will be found to meet the sufficient benefits requirement:
### Table: Option 1, Option 2, Option 3
<table>
<thead>
<tr>
<th>Option 1 80% Single Coverage</th>
<th>Option 2 50% Family Coverage</th>
<th>Option 3 Monetary Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay 80% of premium costs for a standard medical and dental plan, single coverage.</td>
<td>Pay 50% of premium costs for a standard medical and dental plan, family coverage.</td>
<td>Provide medical and pay the monetary equivalent of Option 1 or Option 2 in supplemental employee benefits.</td>
</tr>
<tr>
<td>$750 maximum deductible</td>
<td>$1,500 maximum deductible</td>
<td>Benefits Counted Toward Monetary Equivalent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Medical coverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Dental coverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Vision insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Life insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Pension</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 401(k) (company’s average contribution)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Short-/long-term disability insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Child care services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Other nonwage compensation</td>
</tr>
</tbody>
</table>

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12]

### 261—174.10(15) Capital investment, qualifying investment for tax credit programs, and investment qualifying for tax credits.

**174.10(1) Capital investment.** The authority reports on the amount of capital investment involved with funded projects. This rule lists the categories of expenditures that are included when the authority determines the amount of capital investment associated with a project.

**174.10(2) Qualifying investment for tax credit programs.** For the tax credit programs (EZ and HQJP), there are statutorily required minimum investment thresholds that must be met for the project to be considered to receive an award. Not all expenditures count toward meeting the investment threshold. This rule identifies the categories of expenditures that can be included when the amount of investment is calculated for purposes of meeting program eligibility threshold requirements.

**174.10(3) Investment qualifying for tax credits.** Not all of the expenditures categories used to calculate the investment amount needed to meet program threshold requirements qualify for purposes of claiming the tax credits. The following table identifies the expenditures that do not qualify for tax credits.

<table>
<thead>
<tr>
<th>Capital Investment¹</th>
<th>Qualifying Investment²</th>
<th>Investment Qualifying for Tax Credits³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land acquisition</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site preparation</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Building acquisition</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Building construction</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Building remodeling</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Mfg. machinery &amp; equip.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Other machinery &amp; equip.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Racking, shelving, etc.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Computer hardware</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Computer software</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Furniture &amp; fixtures</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Capital Investment</td>
<td>Qualifying Investment</td>
<td>Investment Qualifying for Tax Credits</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Working capital</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Research &amp; development</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Job training</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Capital or synthetic lease</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Rail improvements¹</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Public infrastructure²</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

¹ “Capital investment” is used to calculate project investment on depreciable assets.
² “Qualifying investment” is used to determine eligibility for EZ and HQJC programs.
³ “Investment qualifying for tax credits” is used to calculate the maximum available tax credit award for a project.
⁴ “Rail improvements” includes hard construction costs for rail improvements. (These costs are included as part of construction or site preparation costs.)
⁵ “Public infrastructure” includes any publicly owned utility service such as water, sewer, storm sewer or roadway construction and improvements. (These costs are included as part of construction costs.)

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12]

These rules are intended to implement Iowa Code chapters 15 and 15E and 2011 Iowa Code Supplement chapter 15G, subchapter I.

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[Filed 8/22/07, Notice 7/4/07—published 9/26/07, effective 10/31/07]
[Filed emergency 10/16/08—published 11/5/08, effective 10/16/08]
[Filed 9/18/08, Notice 8/13/08—published 10/8/08, effective 11/12/08]
[Filed emergency 10/16/08—published 11/5/08, effective 10/16/08]
[Filed ARC 7557B (Notice ARC 7315B, IAB 11/5/08), IAB 2/11/09, effective 3/18/09]
[Filed Emergency ARC 7970B, IAB 7/15/09, effective 7/1/09]
[Filed ARC 8145B (Notice ARC 7971B, IAB 7/15/09), IAB 9/23/09, effective 10/28/09]
[Filed ARC 0442C (Notice ARC 0293C, IAB 8/22/12), IAB 11/14/12, effective 12/19/12]
[Filed ARC 1801C (Notice ARC 1628C, IAB 9/17/14), IAB 12/24/14, effective 1/28/15]
[Filed ARC 2038C (Notice ARC 1890C, IAB 3/4/15), IAB 6/24/15, effective 7/29/15]
[Filed ARC 6188C (Notice ARC 6046C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
PART VIII
LEGAL AND COMPLIANCE

CHAPTER 187
CONTRACTING

[Prior to 7/4/07, see 261—Ch 168, div VI]

261—187.1(15) Applicability. This chapter is applicable to the programs identified in 261—173.1(15).

261—187.2(15) Contract required.

187.2(1) Notice of award. Successful applicants will be notified in writing of an award of assistance, including any conditions and terms of the approval.

187.2(2) Contract required. The authority shall prepare a contract that includes, but is not limited to, a description of the project to be completed by the business; the jobs to be created or retained; length of the project completion period and maintenance project completion period; the project completion date and maintenance period completion date; conditions to disbursement; a requirement for annual reporting to the authority; and the repayment requirements of the business or other penalties imposed on the business in the event the business does not fulfill its obligations described in the contract and other specific repayment provisions (“clawback provisions”) to be established on a project-by-project basis. The contract shall include the requirements that must be met to confirm eligibility pursuant to the program and the requirements that must be maintained throughout the period of the contract in order to retain the incentives or financial assistance received.

187.2(3) Contract-signing deadline. Successful applicants will be required to execute an agreement with the authority within 120 days of the authority’s or board’s approval of an award. Failure to do so may result in action by the entity that approved the award (the authority or the board) to rescind the award. The 120-day time limit may be extended by the final decision maker that approved the award (the authority or the board) for good cause shown.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 1573C, IAB 8/20/14, effective 9/24/14]

261—187.3(15) Project completion date and maintenance period completion date.

187.3(1) Projects shall be completed by the project completion date and maintained through the end of the maintenance date. The contract will establish the duration of the project period and maintenance period. Requests to change the project completion date and the maintenance period completion date shall follow the process for an amended award or contract as described in rule 261—187.4(15). A business that was in compliance with its maintenance obligations as of March 1, 2020, but not in compliance during the COVID-19 impacted period described below, may request, and the director may approve, a change to the maintenance period completion date if the business demonstrates to the authority’s satisfaction that it failed to comply because of the COVID-19 pandemic. The business shall describe the impact of the pandemic on its ability to comply in such form and content acceptable to the authority. For the purposes of this subrule, “COVID-19 impacted period” means the period between March 2, 2020, and June 30, 2021. The board shall have the authority to extend the COVID-19 impacted period beyond June 30, 2021, if the board determines such extension is justified by continued widespread impacts on the ability of businesses participating in the program to comply with maintenance obligations because of COVID-19.

187.3(2) Projects receiving assistance from programs covered by this chapter shall conform to the time periods established by this rule.

187.3(3) By the project completion date, a recipient shall have completed the project as required by the contract. The jobs and project shall be maintained through the end of the maintenance period completion date. The project completion date is calculated by the authority from the end of the month during which an award is made. For example, if an award is made on June 13, 2007, the three-year project completion date will be calculated from June 30, 2007. The project completion date for this award would be June 30, 2010. The maintenance period completion date would be June 30, 2012.
187.3(4) The following table describes, by program, the length of the project completion period and the maintenance period:

<table>
<thead>
<tr>
<th>Program</th>
<th>Project Completion Period</th>
<th>Maintenance Period</th>
<th>Total Contract Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grow Iowa Values Financial Assistance Program (all components)</td>
<td>3 years</td>
<td>2 more years</td>
<td>5 years</td>
</tr>
<tr>
<td>High Quality Jobs Program</td>
<td>3 years</td>
<td>2 more years</td>
<td>5 years</td>
</tr>
<tr>
<td>Enterprise Zone Program</td>
<td>3 years</td>
<td>2 more years</td>
<td>5 years</td>
</tr>
</tbody>
</table>

187.3(5) Notwithstanding the standard project completion period and maintenance period lengths described in subrule 187.3(4), the authority may vary the length of the periods provided that the project completion period will not be less than three years and the total contract length will not be less than five years.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 5624C, IAB 5/19/21, effective 6/23/21]

261—187.4(15) Contract and award amendment approval procedures.

187.4(1) General rule. Generally, the final decision maker that approved the initial award shall approve any amendments or changes to that award.

187.4(2) Contract amendments.

a. General. In general, the amendment process for both awards and contracts mirrors the application process. That is, the same entity that recommended the initial application will also recommend the amendment, and the same entity that had final approval of the initial application will have final approval of the amendment. As with awards, contract amendments must comply with the statutory requirements for each individual program or funding source and the applicable administrative rules. In general, the amendment process begins with review of an amendment request by authority staff. After review by staff, the amendment may be sent to a committee for further recommendation followed by final action on the amendment by the board or by the director, as the case may be. The director may take action on any amendment that is not specifically identified as requiring board action. The authority’s various programs and the amendment procedures are described in paragraph 187.4(2) “c,” which contains the applicable recommending and approving entities by funding source and program.

b. Key to table. ACE – The accelerated career education program job credits authorized under Iowa Code chapter 260G.

ASSISTIVE – The assistive device tax credits authorized in Iowa Code section 422.33.

BRN – The brownfield redevelopment advisory council established in Iowa Code section 15.294.

BROWN – Redevelopment tax credits for brownfield and grayfield sites and the brownfield redevelopment fund as established in Iowa Code chapter 15.

CDBG – Federal community development block grant funded programs.

DDC – Due diligence committee organized by the board pursuant to 261—Chapter 1.

EDSA – The economic development set aside component of the CDBG program established in 261—Chapter 23.

ETAP – The export trade assistance program established in 261—Chapter 72.

EZ – Enterprise zone program as established in Iowa Code chapter 15E, including both the business and housing development tax credits.

FILM – The film and video project promotion program tax credits available under the now repealed Iowa Code section 15.393.

GIVF – The grow Iowa values fund and financial assistance program established pursuant to the now repealed Iowa Code chapter 15G, including all prior versions and funding sources of the program.

HQJP – High quality jobs program, as established in Iowa Code chapter 15, including both tax incentives and project completion assistance.
INNOVATION – Programs related to innovation, commercialization, and targeted industries development, including the programs described in Iowa Code section 15.411 and the program rules in 261—Part V.

LCG – Loan and credit guarantee program as established in the now repealed Iowa Code chapter 15E, division XX.

NSP – Neighborhood stabilization program as established in 261—Chapter 27.

TCC – Technology commercialization committee organized by the board pursuant to 261—Chapter 1.

TJWTC – Targeted jobs withholding tax credit program for pilot project cities established in Iowa Code section 403.19A.

TSB – Targeted small business advisory council established in Iowa Code section 15.247(8).

TSB LOAN – The targeted small business financial assistance program established in Iowa Code section 15.247.

c. Recommendation and approval entities for state and federal programs. The contract amendment process for tax incentives, project completion assistance, other financial assistance, or other benefits under the authority’s various programs is as follows:

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>STATE/FEDERAL</th>
<th>RECOMMENDATION BY</th>
<th>FINAL DECISION BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>HQJP</td>
<td>State</td>
<td>DDC</td>
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<td>EZ (Business)</td>
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<td>EZ (Housing)</td>
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<tr>
<td>TJWTC</td>
<td>State</td>
<td></td>
<td>Director</td>
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</tbody>
</table>

d. Exceptions. Notwithstanding paragraph 187.4(2)“c.” the director may approve contract amendments for the targeted industries internship program consistent with Iowa Code section 15.106C, or a change to the maintenance period completion date for a business impacted by the COVID-19 pandemic as described in subrule 187.3(1), without board approval.

187.4(3) Amendments and other requests the authority is authorized to implement. The authority is authorized by the board to take action on nonsubstantive changes, including but not limited to the following:

a. Recipient name, address and similar changes.

b. Collateral changes that are the same or better security than originally approved by the board or director (e.g., securing a letter of credit to replace a UCC blanket filing) or collateral changes that do not materially and substantially impact the authority’s security.

c. Line item budget changes that do not reduce overall total project costs.
d. Loan repayment amounts or due dates that do not extend the final due date of a loan.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 8442C, IAB 11/14/12, effective 12/19/12; ARC 5624C, IAB 5/19/21, effective 6/28/21]

261—187.5(15) Default.

187.5(1) Events of default. The authority may, for cause, determine that a recipient is in default under the terms of the contract. The reasons for which the authority may determine that the recipient is in default of the contract include, but are not limited to, any of the following:

a. Any material representation or warranty made by the recipient in connection with the application that was incorrect in any material respect when made.

b. A material change in the business ownership or structure that occurs without prior written disclosure and the permission of the authority.

c. A relocation or abandonment of the business or jobs created or retained through the project.

d. Expenditure of funds for purposes not described in the application or authorized in the agreement.

e. Failure of the recipient to make timely payments under the terms of the agreement, note or other obligation.

f. Failure of the recipient to fulfill its job obligations.

g. Failure of the recipient to comply with wage or benefit packages.

h. Failure of the recipient to perform or comply with the terms and conditions of the contract.

i. Failure of the recipient to comply with any applicable state rules or regulations.

j. Failure of the recipient to file the required annual report.

k. Failure of the recipient to comply with any other provision of the agreement required pursuant to Iowa Code section 15.330 or 15.330A.

187.5(2) Layoffs or closures. If a recipient experiences a layoff within the state or closes any of its facilities within the state prior to receiving the incentives and assistance, the authority may reduce or eliminate all or a portion of the incentives and assistance. If a business experiences a layoff within the state or closes any of its facilities within the state after executing a contract to receive the incentives and assistance, the authority may consider this an event of default and the business may be subject to repayment of all or a portion of the incentives and assistance that it has received.

187.5(3) Authority actions upon default—direct financial assistance programs.

a. The authority will take prompt, appropriate, and aggressive debt collection action to recover any funds misspent by recipients.

b. If the authority determines that the recipient is in default, the authority may seek recovery of all program funds plus interest, assess penalties, negotiate alternative repayment schedules, suspend or discontinue collection efforts, and take other appropriate action as the board deems necessary.

c. Determination of appropriate repayment plan. Upon determination that the recipient has not met the contract obligations, the authority will notify the recipient of the amount to be repaid to the authority. If the enforcement of such penalties would endanger the viability of the recipient, the board may extend the term of the loan to ensure payback, stability, and survival of the recipient. In certain instances, additional flexibility in a repayment plan may be necessary to ensure payback, stability, and survival of the recipient. Flexibility in a repayment plan may include, but is not limited to, deferring principal payments or collecting monthly payments below the amortized amount. In these cases, review and approval by the board, committee or director, as applicable, are necessary before the authority may finalize the repayment plan with the recipient.

d. The authority shall attempt to collect the amount owed. Negotiated settlements, write-offs or discontinuance of collection efforts is subject to final review and approval by the board, committee or director, as applicable, and described in paragraph 187.5(3) ‘f.’

e. If the authority or board refers defaulted contracts to outside counsel for collection, then the terms of the agreement between the authority and the outside counsel regarding scope of counsel’s authorization to accept settlements shall apply. No additional approvals by the board, committee or director shall be required.
f. The table below describes the approval procedures that shall be followed for all negotiated settlements, write-offs or discontinuance of collection efforts for state direct financial assistance programs, federal programs, and other programs administered by the authority.

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>STATE/FEDERAL</th>
<th>RECOMMENDATION BY</th>
<th>FINAL DECISION BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>HQIP</td>
<td>State</td>
<td>DDC</td>
<td>Board</td>
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<tr>
<td>GIVF</td>
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<td>TJWTC</td>
<td>State</td>
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<td>Board</td>
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</tbody>
</table>

187.5(4) Authority actions upon default—tax credit programs. If the authority determines that an event of default has occurred under the contract and that state tax incentives are required to be repaid, the eligible business and the department of revenue will both be notified of the event of default and of the required repayment amount. If the contract provided for local tax incentives, the community where the project is located will also be notified of the default. In the case of state tax incentives, the department of revenue will undertake collection efforts. In the case of local tax incentives, the local community will undertake collection efforts.

a. Repayment. If an eligible business or eligible housing business has received incentives or assistance under the EZ program or the HQIP and fails to meet and maintain any one of the requirements of the program or applicable rules, the business is subject to repayment of all or a portion of the incentives and assistance that it has received. If the business is an entity that has elected pass-through taxation status for income tax purposes, the department of revenue may undertake collection efforts against members, individuals, or shareholders to whom the tax incentives were passed through.

b. Calculation of repayment due for a business. If the authority, in consultation with the city or county, determines that a business has failed in any year to meet any one of the requirements of the tax credit program, the business is subject to repayment of all or a portion of the amount of the incentives received.

(1) Job creation shortfall. If a business does not meet its job creation requirement or fails to maintain the required number of jobs, the repayment amount shall be the same proportion as the amount of the shortfall in created jobs. For example, if the business creates 50 percent of the jobs required, the business shall repay 50 percent of the incentives received.

(2) Capital investment shortfall. If a business does not meet the capital investment requirement, the repayment amount shall be the same proportion as the amount of the shortfall in required capital investment. For example, if the business meets 75 percent of the amount of required capital investment, the business shall repay 25 percent of the amount of the incentives received.

(3) Job creation and capital investment shortfalls. If a business has a shortfall in both capital investment and job creation requirements, the repayment amount shall be the same proportion as the
greater of the two shortfalls. For example, if a business creates 50 percent of the required jobs and meets 75 percent of the required capital investment, the business shall be required to repay 50 percent of the amount of the incentives received.

(4) Wages and benefits. Notwithstanding any other provision in this subrule, if a business fails to comply with the wage and benefit requirements of the contract, the business shall be required to repay all of the incentives received during the year in which the business was not in compliance with the wage and benefit requirements of the contract.

(5) Minimum eligibility. Notwithstanding any other provision in this subrule, if a program requires a minimum amount of job creation or capital investment in order to qualify for the program and a business fails to meet such minimum eligibility, the business shall repay all of the incentives received.

(6) Definitions. For purposes of this subrule, “incentives received” includes both amounts claimed from the department of revenue or the local community and any future incentives that remain unclaimed as of the date of default. “Capital investment” means the qualifying investment or investment qualifying for tax credits, as specified in the required contract.

c. Department of revenue: county/city recovery. Once it has been established, through the business’s annual certification, monitoring, audit or otherwise, that the business is required to repay all or a portion of the incentives received, the department of revenue and the city or county, as appropriate, shall collect the amount owed. The city or county, as applicable, shall have the authority to take action to recover the value of taxes not collected as a result of the exemption provided by the community to the business. The department of revenue shall have the authority to recover the value of state taxes or incentives provided under the program pursuant to Iowa Code section 15.330 or 15E.196. The value of state incentives provided under the program shall include all applicable interest and penalties.

d. Layoffs or closures. If an eligible business experiences a layoff within the state or closes any of its facilities within the state prior to receiving the incentives and assistance, the authority may reduce or eliminate all or a portion of the incentives and assistance. If a business experiences a layoff within the state or closes any of its facilities within the state after receiving the incentives and assistance, the business shall be subject to repayment of all or a portion of the incentives and assistance that it has received.

e. Extensions. If an eligible business or eligible housing business fails to meet its requirements under the Act, these rules, or the agreement described in rule 261—187.2(15), the authority, in consultation with the city or county, may elect to grant the business a one-year extension period to meet the requirements. Additional extensions may be granted at the board’s discretion.

[ARC 7970B, IAB 7/15/09, effective 7/1/09; ARC 8145B, IAB 9/23/09, effective 10/28/09; ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 1373C, IAB 3/19/14, effective 2/24/14; ARC 1573C, IAB 8/20/14, effective 9/24/14; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—187.6(15) Compliance cost fees. An eligible business that executes a contract required pursuant to this chapter is subject to the imposition of certain compliance cost fees as provided in this rule.

187.6(1) One-time fee for closing costs. After execution of the contract and prior to the issuance of a tax incentive certificate or the disbursement of financial assistance, an eligible business shall remit to the authority a one-time compliance cost fee in the amount of $500.

187.6(2) Ongoing fees based on claims. For each contract with an aggregate tax incentive value of $100,000 or greater, the business shall remit a compliance cost fee equal to one-half of 1 percent of the value of the tax incentives claimed pursuant to the agreement. The fee required pursuant to this subrule shall be due and payable upon the filing of the business’s annual tax return for each tax year in which the business claims incentives under the required contract. The authority will coordinate with the department of revenue to determine which businesses claim incentive benefits each year and will invoice each business accordingly. The requirement to pay the fee required under this subrule shall continue for the duration of the applicable carryforward period of the tax incentives notwithstanding the duration of the other contract requirements.
187.6(3) Applicability. This rule applies to contracts entered into under the high quality jobs program and the enterprise zone program.

[ARC 1573C, IAB 8/20/14, effective 9/24/14]
These rules are intended to implement Iowa Code chapters 15 and 15E.

[Filed emergency 6/15/07—published 7/4/07, effective 6/15/07]
[Filed 8/22/07, Notice 7/4/07—published 9/26/07, effective 10/31/07]
[Filed Emergency ARC 7970B, IAB 7/15/09, effective 7/1/09]

[Filed ARC 8145B (Notice ARC 7971B, IAB 7/15/09), IAB 9/23/09, effective 10/28/09]
[Filed ARC 0442C (Notice ARC 0293C, IAB 8/22/12), IAB 11/14/12, effective 12/19/12]
[Filed Emergency After Notice ARC 1373C (Notice ARC 1248C, IAB 12/25/13), IAB 3/19/14, effective 2/24/14]

[Filed ARC 1573C (Notice ARC 1430C, IAB 4/16/14), IAB 8/20/14, effective 9/24/14]
[Filed ARC 5624C (Notice ARC 5439C, IAB 2/24/21), IAB 5/19/21, effective 6/23/21]
[Filed ARC 6188C (Notice ARC 6046C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 188
CONTRACT COMPLIANCE AND JOB COUNTING

261—188.1(15) Applicability. This chapter is applicable to the programs identified in 261—173.1(15).

261—188.2(15) Contract compliance. The authority shall provide oversight and contract administration to ensure that funded projects are meeting contract requirements. On-site monitoring will be conducted at the project completion date. On-site or remote monitoring will be conducted at the end of the maintenance period.

[ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—188.3(15) Job counting and tracking. Projects awarded on or after July 1, 2003, shall follow the job counting and tracking procedures described in this chapter. Only jobs that meet or exceed the qualifying wage thresholds will count toward the business’s contract job obligations.

261—188.4(15) Business’s employment base. “Business’s employment base” means the number of jobs that the authority has established as the job base for a project based on payroll information provided by the business. The number of jobs the business has pledged to create and retain shall be in addition to the business’s employment base.

188.4(1) The business’s employment base will include the number of full-time employees employed at the project location. It may include the business’s full-time employees as identified by the authority who are employed in this state but are not employed at the project location.

188.4(2) There are projects where the funded activity occurs at more than one physical location. If this is the case, the total number of full-time employees working at the identified locations constitutes the business’s employment base.

188.4(3) If there are multiple awards made in different years to the same location, the business’s employment base will be calculated by using the payroll document from the oldest award that is open. Over time, the job obligations from each new award will be added to this base.

EXAMPLES:

Company X receives award 1 on 5/1/06. The authority has verified that the business’s employment base is 100 FTEs. Award 1 obligates company X to create 10 jobs and retain 30 jobs; there are 10 other jobs in the project (the 10 other jobs are created jobs that do not meet the qualifying wage). The qualifying wage for this award is $16.50/hr and the benefit value is $4.00/hr. The award is made from the IVF (2005) program.

Company X receives award 2 on 9/1/06. After the payroll is reviewed, the actual number of FTEs at the facility is 107, but 120 (original base + award 1 obligations) will be used as the business’s employment base for this award. Award 2 obligates company X to create an additional 25 jobs.

Company X receives award 3 on 3/1/07. After the payroll is reviewed, the actual number of FTEs at the facility is 140, but 145 (original base + award 1 obligations + award 2 obligations) will be used as the business’s employment base for this award.

188.4(4) The business’s employment base is calculated as part of the application process and is determined before an award is made. The following data points will be verified regarding a business’s employment base:

a. The total number of FTEs at the funded facility or at locations identified by the authority as indicated in subrule 188.4(1) (the business’s employment base).

b. The average wage of all FTEs.

c. The qualifying wage used in the award.

d. The benefit value used in the award.

e. The total number of FTEs at the funded facility that are currently at or above the qualifying wage.

f. The average wage of the FTEs identified in paragraph “e.”
g. The total number of FTEs at the funded facility or at locations identified by the authority as indicated in subrule 188.4(1) that are currently at or above the qualifying wage after the benefit value has been added.

h. The average wage of the FTEs identified in paragraph “g.”

188.4(5) Business’s employment base verification. Payroll documents must be collected to calculate and verify the business’s employment base used in each award. The payroll document must include an ID (name or employer ID number) and the hourly rate of pay for all FTEs. If the FTEs at the facility do not typically work 40 hours/week, documentation must be collected from the business outlining what the business considers a full-time workweek and how the business’s interpretation fits within the norms of its industry standards. This interpretation may or may not be accepted by the authority.

[ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—188.5(15) Job counting using base employment analysis. The authority will count jobs to be created or retained as part of a funded project using a base employment analysis. At the time of application, the business’s employment base will be established using payroll records pursuant to subrule 188.4(4). The authority will determine how many jobs at the project location already meet the qualifying wage thresholds (with and without the value of benefits added to the hourly wage). Changes in employment numbers as compared to the business’s employment base will be collected and analyzed by the authority as part of the annual reporting process.

188.5(1) A base employment analysis will be performed at the following stages of an award:
   a. At the time of application, before the award is made.
   b. Annually during the reporting cycle.
   c. At the project completion date.
   d. At the maintenance period completion date.

188.5(2) Payroll documents or lists run from payroll systems will be used to calculate and verify the base employment analysis. If a list run from a payroll system is used, the person who submits the documents must, under penalty of perjury, sign the list to verify that it is true and correct. The following items will be calculated and verified as part of the annual status report:
   a. The total number of FTEs at the funded facility or at other Iowa locations as identified at the time of application as of the date of the report.
   b. The average wage of all FTEs.
   c. The qualifying wage used in the award.
   d. The benefit value used in the award.
   e. The total number of FTEs at the funded facility or at other Iowa locations as identified at the time of application that are currently at or above the qualifying wage.
   f. The average wage of the FTEs identified in paragraph “e.”
   g. The total number of FTEs at the funded facility that are currently at or above the qualifying wage after the benefit value has been added.
   h. The average wage of the FTEs identified in paragraph “g.”

188.5(3) Following is an example of the format that the authority will use for job counting and tracking using the base employment method.
JOB OBLIGATIONS

<table>
<thead>
<tr>
<th>Project Completion Date:</th>
<th>Employment Base</th>
<th>Jobs to Be Created</th>
<th>Total Job Obligations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Maintenance Date:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total employment at project location</td>
<td>1</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Average wage of total employment at project location</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Qualifying wage (per hr) | 3 |

Number of jobs at or above qualifying wage | 4 | 7 | 9 |

Average wage of jobs at or above qualifying wage | 5 |

1. The number entered in this cell is the total number of FTEs working at the project location at the time of application. This number must be verified with payroll documents.
2. The number entered in this cell is the average wage of all the FTEs identified in Cell 1. This number must be verified with payroll documents.
3. The number entered in this cell is the applicable qualifying wage threshold used in the award. This data point must include the wage/hr and the percentage in parentheses. [ex: $15.34/hr (130%)]
4. The number entered in this cell is the number of jobs identified in Cell 1 that meets or exceeds the wage reflected in Cell 3. This number is calculated using the payroll documents. The number of “retained” jobs and retained “other” jobs must be included in this entry. Please note that the number of retained jobs and the number entered here may not match since all jobs existing at the project site may not be considered retained.
5. The number entered in this cell is the average wage of all FTEs identified in Cell 4. This number is calculated using the payroll documents.
6. The number entered in this cell includes the number of “created” jobs, as well as the number of created “other” jobs.
7. The number entered in this cell is the number of “created” jobs in the project.
8. The number entered in this cell is the sum of Cell 1 and Cell 6.
9. The number entered in this cell is the sum of Cell 4 and Cell 7.

[ARC 0442C, IAB 11/14/12, effective 12/19/12; ARC 6188C, IAB 2/9/22, effective 3/16/22]

261—188.6(15) Wage determination for contract compliance purposes.

188.6(1) Applicability. This rule shall apply for purposes of administering contracts that require a determination as to the wage-based compensation provided to employees.

188.6(2) Definition. As used in the authority’s contracts, unless the context otherwise requires, “wage” shall mean monetary compensation, represented in terms of an hourly rate, paid by an employer to an employee for work or services provided, typically on a weekly or biweekly basis.

188.6(3) Determination of wages for contract administration purposes. When determining wages for contract administration purposes, the wage will include only the regular hourly rate that serves as the base level of compensation. The wage will not include nonregular forms of compensation such as bonuses, unusual overtime pay, commissions, stock options, pensions, retirement or death benefits, unemployment benefits, life or other insurance, or other fringe benefits.

[ARC 0442C, IAB 11/14/12, effective 12/19/12]

These rules are intended to implement Iowa Code chapters 15 and 15E and 2011 Iowa Code Supplement chapter 15G, subchapter I.

[Filed emergency 6/15/07—published 7/4/07, effective 6/15/07]
[Filed 8/22/07, Notice 7/4/07—published 9/26/07, effective 10/31/07]
[Filed ARC 0442C (Notice ARC 0293C, IAB 8/22/12), IAB 11/14/12, effective 12/19/12]  
[Filed ARC 6188C (Notice ARC 6046C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 44
IOWA AGRICULTURAL DEVELOPMENT DIVISION

265—44.1(16) General.

44.1(1) Description of Iowa agricultural development (IAD) board. The IAD board consists of five members appointed by the governor. The executive director of the Iowa finance authority or the executive director’s designee shall serve as an ex officio nonvoting member. Members are appointed for staggered six-year terms. The appointed members shall elect a chairperson and vice chairperson annually, and other officers as the appointed members determine.

44.1(2) Division organization and personnel. The executive director of the authority may organize the division and employ necessary qualified personnel.

44.1(3) General course and method of operations. The IAD board generally meets on a monthly basis or at the call of the chairperson or whenever two appointed members so request. The purpose of the meetings shall be to review progress in implementation and administration of programs, to consider and act upon proposals for assistance, and take other actions as necessary and appropriate.

44.1(4) Location where public may submit requests for assistance or obtain information. Requests for assistance or information should be directed to the Iowa finance authority at the address set forth in rule 265—1.3(16); telephone (515)725-4900. Requests may be made personally, by telephone, U.S. mail or any other medium available, between the hours of 8 a.m. and 4:30 p.m., Monday through Friday. Special arrangements for accessibility to the authority at other times will be provided as needed.

[ARC 1112C, IAB 10/16/13, effective 9/26/13; ARC 1400C, IAB 4/2/14, effective 5/7/14; ARC 2009C, IAB 5/27/15, effective 7/1/15; ARC 4319C, IAB 2/7/19, effective 4/3/19; ARC 4902C, IAB 2/12/20, effective 3/18/20]

265—44.2(16) Definitions.

“Act” means Iowa Code chapter 16.

“Agricultural asset” means agricultural land located in this state, any agricultural improvements, depreciable agricultural property, machinery, equipment, crops, or livestock.

“Agricultural development board” or “IAD board” means the agricultural development board created in Iowa Code section 16.2C and described in rule 265—44.1(16).

“Agricultural improvement” means any improvements, including buildings, structures or fixtures suitable for use in farming if located on any size parcel of agricultural land.

“Agricultural land” means land located in Iowa suitable for use in farming, any portion of which may include an agricultural improvement, and which is or will be operated as a farm.

“Agricultural lease agreement” or “agreement” means an agreement for the transfer of agricultural assets from an eligible taxpayer to a qualified beginning farmer as provided in Iowa Code section 16.79A.

“Application” means a completed instrument on a form approved by IADD.

“Authority” means the Iowa finance authority created in Iowa Code section 16.1A.

“Beginning farmer” means an individual, partnership, family farm corporation, or family farm limited liability company, with a low or moderate net worth that engages in farming or wishes to engage in farming.

“BFLP” means beginning farmer loan program.

“BFLP beginning farmer” means a beginning farmer who also meets the requirements of a first-time farmer as defined in Section 147(c) of the Internal Revenue Code.

“BFTC” means beginning farmer tax credit program.

“Bond purchaser” means any lender or any person, as defined in Iowa Code section 4.1(20), who purchases an authority bond under the individual agricultural development bond program.

“Cash rent agreement” means an agreement whereby operation of the agricultural asset is transferred via a fixed cash payment per annum.

“Commodity share agreement” means an agreement whereby operation of the agricultural asset is transferred via a risk-sharing mechanism, whereby the agricultural asset owner receives a portion of the production as payment for use of the agricultural asset.

“Eligible taxpayer” means a taxpayer who is eligible to participate in the beginning farmer tax credit program, including by meeting all the criteria provided in paragraph 44.6(1) “a.”
“Farm” means a farming enterprise which is generally recognized as a farm rather than a rural residence.

“Farming” means the cultivation of land for the production of agricultural crops, the raising of poultry, the production of eggs, the production of milk, the production of fruit or other horticultural crops, grazing, the production of livestock, aquaculture, hydroponics, the production of forest products, or other activities designated by the authority.

“Flex lease agreement” means an agreement whereby operation of the agricultural asset is transferred via a combination of fixed cash payments and, at times, additional payment based on the production or other variables.

“IADD” means the Iowa agricultural development division of the Iowa finance authority.

“Lender” means any regulated bank, trust company, bank holding company, mortgage company, national banking association, savings and loan association, life insurance company, state or federal governmental agency or instrumentality, or other financial institution or entity authorized and able to make mortgage loans or secured loans in this state.

“Low or moderate net worth” means a net worth that does not exceed the maximum allowable net worth defined in this rule.

“LPP” means loan participation program.

“LPP loan” means the “last-in/last-out” loan participation requested by the lender from the authority.

“Maximum allowable net worth” means the maximum allowable net worth for each calendar year, which shall be increased or decreased from the previous year by an amount equal to the percentage increase or decrease (September to September) in the United States Department of Agriculture “Index of Prices Paid for Commodities and Services, Interest, Taxes, and Farm Wage Rates” reported as of October 1 of the immediately preceding calendar year. The maximum allowable net worth will be rounded to the nearest thousand dollars. The authority will post the maximum allowable net worth for each calendar year on its website at www.iowafinanceauthority.gov.

“Net worth” means total assets minus total liabilities as determined in accordance with generally accepted accounting principles with appropriate exceptions and exemptions reasonably related to an equitable determination of the net worth of the individual, partnership, limited liability company or corporation. Assets shall be valued at fair market value.

“Participated loan” means a loan or loans, any portion of which is participated to the authority by the lender.

“Qualified beginning farmer” means a beginning farmer who is eligible to participate in the beginning farmer tax credit program by meeting the criteria set forth in paragraph 44.6(1)“b.”

“Total assets” means all assets including but not limited to cash, crops or feed on hand, livestock held for sale, breeding stock, marketable bonds and securities, securities not readily marketable, accounts receivable, notes receivable, cash invested in growing crops, net cash value of life insurance, machinery, equipment, cars, trucks, farm and other real estate including life estates and personal residence, value of beneficial interest in a trust, government payments or grants, and any other assets.

“Total assets” shall not include items used for personal, family or household purposes by the applicant; but in no event shall any property be excluded, to the extent a deduction for depreciation is allowable for federal income tax purposes. All assets shall be valued at fair market value by the lender. The value shall be what a willing buyer would pay a willing seller in the locality. A deduction of 10 percent may be made from fair market value of farm and other real estate.

“Total liabilities” means all liabilities including but not limited to accounts payable, notes or other indebtedness owed, taxes, rent, amount owed on any real estate contract or real estate mortgage, judgments, accrued interest payable, and any other liabilities. Liabilities shall be determined on the basis of generally accepted accounting principles.

In only those cases where the liabilities include an amount for deferred tax liability that causes the applicant’s net worth to change from exceeding the maximum allowable net worth to an amount no greater than the maximum allowable net worth, the applicant is required to have a certified public accountant prepare the financial statement and provide supporting calculations and documentation acceptable to the board.
“USDA” means the United States Department of Agriculture.
“USDA-NASS” means the United States Department of Agriculture’s National Agricultural Statistics Service.

[ARC 1112C, IAB 10/16/13, effective 9/26/13; ARC 1400C, IAB 4/2/14, effective 5/7/14; ARC 2009C, IAB 5/27/15, effective 7/1/15; ARC 2226C, IAB 10/28/15, effective 12/2/15; ARC 4902C, IAB 2/12/20, effective 3/18/20; ARC 6167C, IAB 2/9/22, effective 1/7/22]

265—44.3(16) Beginning farmer loan program eligibility. A loan to or on behalf of a beginning farmer shall be provided only if the following criteria are satisfied:

1. The beginning farmer is an individual and a resident of Iowa.
2. The agricultural land and agricultural improvements or depreciable agricultural property the beginning farmer proposes to purchase will be located in the state.
3. The beginning farmer has sufficient education, training, or experience in the type of farming for which the beginning farmer requests the loan and must demonstrate that education, training, or experience to the satisfaction of the authority.
4. If the loan is for the acquisition of agricultural land, the beginning farmer has or will have access to adequate working capital, farm equipment, machinery, or livestock. If the loan is for the acquisition of depreciable agricultural property, the beginning farmer has or will have access to adequate working capital or agricultural land. In the loan application, the beginning farmer must demonstrate to the satisfaction of the authority that the beginning farmer has or will have access to adequate working capital, farm equipment, machinery, or livestock.
5. The beginning farmer shall materially and substantially participate in farming.
6. The agricultural land and agricultural improvements shall only be used for farming by the beginning farmer, the beginning farmer’s spouse, or the beginning farmer’s minor children.

[ARC 4902C, IAB 2/12/20, effective 3/18/20]

265—44.4(16) Beginning farmer loan program.

44.4(1) Individual agricultural development bond program description. This program is intended to allow BFLP beginning farmers to obtain lower interest rate loans for qualified purposes by obtaining loan funds from the proceeds of a tax-exempt bond issued by the authority and purchased by the bond purchaser. The authority will enter into a loan agreement with the BFLP beginning farmer and assign that BFLP loan to the bond purchaser. At the same time, the authority will issue a tax-exempt bond in the amount of the BFLP loan, and the bond purchaser will purchase that bond, which is used to fund the BFLP loan assigned to the bond purchaser. The bond which is issued by the authority and purchased by the bond purchaser is a nonrecourse obligation. The only security for the bond purchaser is the underlying security on the assigned BFLP loan.

44.4(2) Application procedures. The BFLP beginning farmer may apply for a BFLP loan with any bond purchaser. Any BFLP loan approved will be assigned to that bond purchaser. BFLP loan eligibility is determined by the requirements of the Act and the rules of the authority.

a. If a BFLP beginning farmer meets the BFLP loan eligibility requirements, the decision on whether to enter into the loan agreement is between the BFLP beginning farmer and the bond purchaser. The BFLP beginning farmer and bond purchaser must agree on the terms of the loan, such as interest rates, length of loan, down payment, service fees, origination charges and repayment schedule. The terms may not be more onerous than terms charged to similar customers for similar loans, taking into account the tax-exempt nature of interest on the BFLP loan.

b. Following completion of the BFLP loan application by the BFLP beginning farmer and approval by the bond purchaser, the BFLP loan application must be submitted to the authority for its review and approval.

c. The authority’s review will include, but not be limited to, whether:

1. The BFLP loan applicant is a BFLP beginning farmer;
2. The BFLP loan proceeds will be used for a qualified purpose under the Act, rules of the authority, and the Internal Revenue Code and IRS regulations relating to private activity bonds;
3. The terms of the BFLP loan comply with these rules; and
4. The bond purchaser meets the definition of a lender or bond purchaser.
d. The authority may require that the bond purchaser furnish any information which the authority deems necessary to determine whether the bond purchaser qualifies as either a lender or bond purchaser. If the authority determines that the bond purchaser does not qualify as either a lender or bond purchaser, it may deny the application.

e. The authority may charge fees as needed to defray its costs for processing the BFLP loan and bond.

44.4(3) Issuance of bond. All bonds issued by the authority will conform to all applicable requirements of the United States Internal Revenue Code of 1986 as amended, and its regulations.

a. Public hearings may be held by a staff member, board member of the IADD, an appointee or employee of the authority, or other qualified hearing officer.

b. Following approval of the BFLP loan by the authority, and upon completion of a public hearing and approval of the bond issuance by the governor or another elected state official designated by the governor, the authority will issue a bond, to be purchased by the bond purchaser, in the amount and fitting the terms of the BFLP loan to the BFLP beginning farmer. The principal and interest on the bond are a limited obligation payable solely out of the revenues derived from the BFLP loan to the BFLP beginning farmer and the underlying collateral or other security furnished by or on behalf of the BFLP beginning farmer. The bond purchaser shall have no other recourse against the authority. The principal and interest on the bond do not constitute an indebtedness of the authority or a charge against its general credit or general fund.

44.4(4) Priority of applications. Applications shall be processed by the authority on a first-come, first-served basis, based upon the receipt of all completed documents by the authority.

44.4(5) Procedures following bond issuance. No bond proceeds may be used for a nonqualified purpose or by a nonqualified user. Following disbursement of the bond proceeds, the bond purchaser and BFLP beginning farmer may be required to certify to the authority that the proceeds were used by the BFLP beginning farmer for a qualified purpose.

44.4(6) Assignment of BFLP loans by bond purchasers. A bond purchaser may assign a BFLP loan in whole or in part to any person, as defined in Iowa Code section 4.1(20). Servicing of the BFLP loan may also be assigned. The authority must be notified in writing prior to assignment of the BFLP loan.

44.4(7) Assumption of BFLP loans, substitution of collateral and transfer of property. BFLP loans may not be assumed without the prior approval of the authority, and then only if the purchaser of the property is a BFLP beginning farmer for a BFLP loan. Equipment and other depreciable property may be exchanged or traded for similar property, and other property such as breeding livestock may be added or substituted as collateral at the discretion of the bond purchaser without the prior approval of the authority.

44.4(8) Right to audit. The authority shall have at any time the right to audit the records of the bond purchaser and the BFLP beginning farmer relating to the BFLP loan and bond to ensure that bond proceeds were used for a qualified purpose by a qualified user.

[ARC 112C, IAB 10/16/13, effective 9/26/13; ARC 1400C, IAB 4/2/14, effective 5/7/14; ARC 2009C, IAB 5/27/15, effective 7/1/15; ARC 2226C, IAB 10/28/15, effective 12/2/15; ARC 4902C, IAB 2/12/20, effective 3/18/20]
d. **LPP loan in conjunction with BFLP loan.** The loan participation program may be used in conjunction with the authority’s beginning farmer loan program, provided the beginning farmer meets the criteria for both programs.

44.5(2) **Underwriting criteria.** Commercial underwriting criteria will be used as determined by the authority.
44.5(3) **Eligible projects and activities.**
   a. **Use of project.** LPP loans must be for new purchases or new construction. Assets purchased or constructed with LPP loan funds must be used for agricultural purposes.
   b. **Agricultural land.** The participated loan can be used for the purchase of agricultural land, which may include small acreages on which sufficient agricultural improvements are located to conduct a livestock operation. If a house is located on land for which an LPP loan is requested, an appraisal of the house will be made. If the appraised value of the house exceeds 50 percent of the appraised value of the property or total collateral, then the property will not be eligible for an LPP loan.
   c. **Agricultural improvements.** The participated loan can be used for the construction or purchase of improvements located on agricultural land (which is suitable for use in farming). Examples of such improvements include, but are not limited to, the following: confinement systems for swine, cattle, or poultry; barns or other outbuildings; and grain storage facilities and silos.
   d. **Livestock used for breeding purposes.** The participated loan can be used for the purchase of livestock for which an income tax deduction for depreciation is allowed in computing state and federal income taxes.
   e. **Machinery and equipment.** The participated loan can be used for the purchase of agricultural machinery and equipment for which an income tax deduction for depreciation is allowed in computing state and federal income taxes. This machinery and equipment must be used in the beginning farmer’s farming operation.
   f. **Interim financing by lender.** Interim financing by the lender is allowed.

44.5(4) **Ineligible projects and activities.** The following program activities are ineligible:
   a. **Refinancing of existing debt.** Refinancing of existing debt or new purchases which have been incurred by the borrower more than 60 days prior to approval of the LPP loan by the authority.
   b. **Financing personal expenses.** Financing personal or living expenses and working capital to purchase such items as feed, seed, fertilizer, fuel, and feeder livestock.
   c. **Down payment funds for contract sale.** Down payment for a contract sale, or in connection with a loan from a nonregulated lender.

44.5(5) **Program parameters.**
   a. **Purchase price impact.** Maximum LPP loan amount and loan terms will be determined by the IAD board.
   b. **LPP interest rate.** The IAD board will set the interest rate on the LPP loan.
   c. **LPP loans outstanding.** Loans under the program may be issued more than once, provided that the outstanding LPP loan totals do not exceed the maximum amount set by the IAD board.

44.5(6) **LPP loan application procedures.**
   a. **Financial statement.** Lenders may use their own form of financial statement. The authority may require other forms deemed necessary and appropriate to document the eligibility of the beginning farmer and the beginning farmer’s ability to make principal and interest payments.
      If the beginning farmer or the beginning farmer’s spouse is involved in a business, partnership, limited liability company, or corporation, either related or unrelated to the beginning farmer’s farming operation, a financial statement from this entity must also be submitted with the application.
   b. **Income statement.** A copy of the beginning farmer’s prior three years’ federal income tax returns (if available) shall be submitted.
   c. **Background letter.** The application will also include a background letter on the beginning farmer, documenting to the satisfaction of the authority sufficient training, experience and access to capital.
d. Credit evaluation. The lender will evaluate the beginning farmer’s net worth and ability to pay principal and interest and certify the sufficiency of security for the participated loan. The authority will review the application and make its own credit evaluation prior to issuance of an LPP loan.

e. Processing LPP loan applications. Applications for the program will be taken and processed by the authority on a first-come, first-served basis. The authority reserves the right to change the program or terminate the approval of LPP loans under the program at any time. Grounds for termination/suspension of the program would include, but not be limited to, reaching the maximum allowable limit for total outstanding LPP loans as established by the authority or changing the program by order of the Iowa general assembly or by rules promulgated by the authority.

f. Security for participated loans and use of security documents. The lender shall take any security, cosignatures, guarantees or sureties that are deemed necessary for any participated loan. Any guarantee of repayment or pledge of additional collateral required by the lender to secure the participated loan shall secure the entire participated loan.

g. Recording documents and fees. Any recording or filing fees or transfer taxes associated with the participated loan will be paid by the beginning farmer or lender and not the authority. Also, the authority will have no responsibility with respect to the preparation, execution, or filing of any declaration of value or groundwater hazard statements.

44.5(7) Loan administration procedures.

a. Lender’s responsibilities. The lender is responsible for servicing the participated loan following accepted standards of loan servicing and for transferring LPP loan payments to the authority.

(1) At the request of the authority, the lender shall:

1. On an annual basis, provide the authority with copies of a current financial statement or a current tax return, or both.

2. Provide copies of insurance to the authority with the lender named as loss payee. The lender will apply payments to the participated loan according to the IADD-approved amortization schedule(s) or on a pro-rata basis.

(2) The lender shall not, without prior consent of the authority:

1. Make or consent to any substantial alterations in the terms of any participated loan instrument;

2. Make or consent to releases of security or collateral unless replaced with collateral of equal value on the participated loan;

3. Accelerate the maturity of the participated loan;

4. Sue upon any participated loan instrument;

5. Waive any claim against any beginning farmer, cosigner, guarantor, obligor, or standby creditor arising out of any instruments.

b. Payment due dates. Payment due dates for the LPP loan will be the same as for the lender’s share of the loan.

c. Prepayment penalty. There is no penalty for early repayment of principal or interest.

d. Repayment proceeds and collateral. Without limitation, the repayment of proceeds and collateral shall include rights of setoff and counterclaim, which the lender or the authority jointly or severally may at any time recover on any participated loan.

e. Subsequent loans. Any loan or advance made by a lender to a beginning farmer subsequent to the beginning farmer’s obtaining an LPP loan under the program and secured by collateral or security pledged for the participated loan will be subordinate to the participated loan.

f. Events of loan default.

(1) Default will occur when the participated loan payment is 30 days past due. Notice to cure will be sent by the lender to the beginning farmer with a copy sent to the authority; and the lender will take appropriate steps to cure the default through mediation, liquidation, or foreclosure if needed.

(2) After a participated loan is in default for a period of 30 days, the lender shall file with the authority monthly reports regarding the status of the participated loan.

(3) The authority may, anytime a participated loan is in default, purchase the unpaid portion of the participated loan from the lender including the note, security agreements, additional guarantees, and other documents. The authority would become the servicer of the participated loan in such case.
g. **Applying principal and interest payments.** Lenders shall receive all payments of principal and interest. All payments made prior to liquidation or foreclosure shall be made according to the IADD-approved amortization schedule(s) or on a pro-rata basis. All accrued interest must be paid to zero at least annually on the anniversary date of the note.

h. **Application of proceeds of loan liquidation.** Application of proceeds of loan liquidation will be determined after a written liquidation plan is approved by the authority or the authority’s loan committee. All amounts recovered upon liquidation or foreclosure will be applied first to the unpaid balance of the lender’s portion and then to the unpaid portion of the LPP loan’s portion. All funds received from liquidation or foreclosure procedures shall be applied in the following order of priority:

First Priority: To the payment of the outstanding principal of and accrued interest on the lender’s portion of the participated loan;

Second Priority: To the payment of the outstanding principal of and accrued interest on the authority’s LPP loan;

Third Priority: To the payment on a pro-rata basis of all reasonable and necessary expenses incurred by the lender or the authority in connection with such liquidation or foreclosure procedures.

44.5(8) **Right to audit.** The authority shall have, at any time, the right to audit records of the lender and the beginning farmer relating to any participated loan made under the program.

[ARC 1112C, IAB 10/16/10, effective 9/26/13; ARC 1400C, IAB 4/2/14, effective 5/7/14; ARC 2009C, IAB 5/27/15, effective 7/1/15; ARC 2226C, IAB 10/28/15, effective 12/2/15; ARC 4902C, IAB 2/12/20, effective 3/18/20]

265—44.6(16) Beginning farmer tax credit program.

44.6(1) **Eligibility.**

a. **Eligible taxpayer.** A taxpayer is eligible to participate in the beginning farmer tax credit program if the taxpayer meets all of the following requirements:

(1) The taxpayer is a person who may acquire or otherwise obtain or lease agricultural land in this state pursuant to Iowa Code chapter 9H or 9I. However, the taxpayer must not be a person who may acquire or otherwise obtain or lease agricultural land exclusively because of an exception provided in one of those chapters or in a provision of another chapter of the Iowa Code, including but not limited to Iowa Code chapter 10, 10D, or 501 or section 15E.207.

(2) The taxpayer has entered into an agricultural lease agreement with a qualified beginning farmer to lease agricultural land as provided in 2019 Iowa Acts, House File 768, section 9.

(3) The taxpayer has not been at fault for terminating a prior agreement under the program or another agreement in which the taxpayer was allowed to claim a tax credit under Iowa Code section 175.37 as it existed prior to January 1, 2015, or Iowa Code section 16.80 as it existed prior to January 1, 2018.

(4) If the agreement includes the lease of a confinement feeding operation structure as defined in Iowa Code section 459.102, the taxpayer is not a party to a pending administrative or judicial action, including a contested case proceeding under Iowa Code chapter 17A, relating to an alleged violation involving an animal feeding operation as regulated by the department of natural resources, regardless of whether the pending action is brought by the department or the attorney general.

(5) The taxpayer is not a partner of a partnership, shareholder of a family farm corporation, or member of a family farm limited liability company that is the lessee of an agricultural asset that is part of an agricultural lease agreement. If a beginning farmer has an ownership interest in the agricultural asset that does not exceed 10 percent, the tax credit award is reduced by an amount equivalent to the beginning farmer’s ownership percentage. For example, if a beginning farmer owns 9 percent of an agricultural asset that is the subject of the agricultural lease agreement, the tax credit award is reduced by 9 percent.

b. **Qualified beginning farmer.** A beginning farmer must meet all of the following criteria to be eligible for participation in the beginning farmer tax credit program:

(1) Is a resident of the state. If the beginning farmer is a partnership, all partners must be residents of the state. If the beginning farmer is a family farm corporation, all shareholders must be residents of the state. If the beginning farmer is a family farm limited liability company, all members must be residents of the state.
(2) Has sufficient education, training, or experience in farming. If the beginning farmer is a partnership, at least one partner who is not a minor must have sufficient education, training, or experience in farming. If the beginning farmer is a family farm corporation, at least one shareholder who is not a minor must have sufficient education, training, or experience in farming. If the beginning farmer is a family farm limited liability company, at least one member who is not a minor must have sufficient education, training, or experience in farming.

(3) Has access to adequate working capital and production items.

(4) Will materially and substantially participate in farming. If the beginning farmer is a partnership, family farm corporation, or family farm limited liability company, at least one of the partners, shareholders, or members who is not a minor must materially and substantially participate in farming.

(5) Does not own more than 10 percent ownership interest in an agricultural asset included in the agreement.

44.6(2) General provisions.

a. A beginning farmer tax credit is allowed only for agricultural assets that are subject to an agricultural lease agreement entered into by an eligible taxpayer and a qualifying beginning farmer participating in the beginning farmer tax credit program established pursuant to Iowa Code section 16.78. The tax credit is allowed regardless of whether the principal agricultural asset is soil, pasture, or a building or other structure used in farming.

b. A tax credit in excess of the eligible taxpayer’s tax liability for the tax year is not refundable but may be credited to the tax liability for a period set forth in Iowa Code section 16.82, if unused in the tax year the credits are earned. A tax credit shall not be carried back to a tax year prior to the tax year in which the eligible taxpayer redeems the tax credit. The term of the credit shall begin in the crop year in which the IAD board approves the award. The maximum term of the credit shall not exceed the term of the agricultural lease agreement.

44.6(3) Application.

a. The authority shall prepare and make available appropriate forms to be used in making application for the tax credit, including forms for both the taxpayer and the qualified beginning farmer.

b. Each application shall include, but not be limited to, the following:

(1) Taxpayer information: name, address, and social security number or tax identification number. The taxpayer shall also indicate the length of the lease, the type of lease, and the location of the agricultural asset to be leased.

(2) Qualified beginning farmer information: name and address. In addition, the application shall have attached to it a copy of the qualified beginning farmer’s current financial statement (generally prepared one month preceding application submission). The application will also include a background letter on the qualified beginning farmer documenting to the satisfaction of the authority that the beginning farmer has sufficient education, training, or experience in farming and has access to adequate working capital and production items. This letter may be submitted by one or more of the following: the qualified beginning farmer, the taxpayer or another third party.

(3) A copy of the agricultural lease agreement that conforms to the requirements set forth in subrule 44.6(4).

c. Complete applications shall be processed in the order they are received by the authority.

d. Authority staff will review applications for completeness and eligibility and make recommendations to the IAD board. The IAD board will review applications and recommendations from authority staff and make recommendations to the authority. Upon review of the recommendations of the IAD board, the authority will approve, defer, or deny each application.

e. Any applicant wishing to appeal a decision of the IAD board can appeal directly to the IAD board.

f. Upon submission of the application or a request to amend an agricultural lease agreement, the authority shall collect the application fee. The authority shall collect fees in the amounts based upon the
acreage of the land that is the subject of the agreement and the length of the lease, as indicated in the chart below.

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<thead>
<tr>
<th>Leased Acres</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tr>
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Application Fees Chart

Length of Lease in Years

g. For any amendment to a previously approved agricultural lease agreement, an amendment fee of $100 shall be paid at the time the amendment is submitted.

44.6(4) Requirements of an agricultural lease agreement.

a. The agricultural lease agreement must meet the following requirements:

1. The agreement must include the lease of agricultural land located in this state or agricultural improvements located in this state and may provide for the rental of agricultural equipment as defined in Iowa Code section 322F.1.

2. The agreement must include provisions which describe the consideration paid for the agreement in a manner that allows the authority to calculate the value of the lease in order to determine the tax credit amount as provided in Iowa Code section 16.82.

3. The agreement must be in writing and signed by all parties.

4. The agreement must be for at least two years, but not more than five years. The agreement may be renewed any number of times by the eligible taxpayer and qualified beginning farmer for a term of at least two years, but not more than five years. At the end of the approved agricultural lease agreement term, a new application must be submitted to the authority. However, an eligible taxpayer shall not participate in the program for more than 15 years. For the purposes of this subparagraph, an eligible taxpayer first participating in the beginning farmer tax credit program on or after January 1, 2019, as provided in 2019 Iowa Acts, chapter 161, for a tax year beginning on or after that date, may also participate in the program for not more than 15 years.

5. The agreement shall not include a lease or rental of equipment intended as a security.

b. An eligible taxpayer may apply and be approved to enter into agreements with different qualified beginning farmers.

c. The agreement cannot be assigned, and the agricultural land subject to the agreement shall not be subleased.

d. The agricultural assets shall not be leased or rented at a rate that is substantially higher than the market rate for similar agricultural assets leased or rented within the same community. As used in this paragraph, when referring to an agricultural asset that is cropland, “substantially higher” means not more than 30 percent above the average cash rent paid for cropland rented in the same county according to the most recent cash rent survey for cropland published by a unit of Iowa State University of Science and Technology recognized by the authority.

44.6(5) Changes to an agricultural lease agreement.

a. The underlying lease for agricultural land may only be amended without submitting a new application if any of the following apply:

1. The terms of the amended lease are more favorable to the qualified beginning farmer, including but not limited to the rent payment being reduced.

2. A party has changed their name.

3. The owner of an agricultural asset is changed to the owner’s estate or trust upon the eligible taxpayer’s death.

b. If the eligible taxpayer and the qualified beginning farmer are amending an agricultural lease agreement but none of the conditions of paragraph 44.6(5)“a” apply, then the eligible taxpayer must submit a new application for a tax credit.
c. If an amendment to an agreement changes the total amount that will be paid to the eligible taxpayer under the agreement, the eligible taxpayer shall notify the authority in a manner and form prescribed by the authority within 30 days of the date the amendment is executed by the parties.

(1) If the amendment will reduce the total amount paid to the eligible taxpayer under the agreement, the authority shall recalculate and reduce the eligible taxpayer’s tax credit award under 2019 Iowa Acts, House File 768, section 12.

(2) If the amendment will increase the total amount paid to the eligible taxpayer under the agreement, the tax credit award shall not be increased unless the eligible taxpayer submits an amended application to the authority on the relevant form available on the authority’s website and that meets the requirements of 2019 Iowa Acts, House File 768, section 10. If the amended application is approved under 2019 Iowa Acts, House File 768, section 10, the authority may increase the amount of the tax credit award. The increased amount of the tax credit award shall be subject to the aggregate award limitation in 2019 Iowa Acts, House File 768, section 12, for the calendar year in which the increased award is made.

d. Paragraph 44.6(5)“c” does not apply to an amendment to an agreement that requires a new application under paragraph 44.6(5)“b” in order to be valid.

e. An eligible taxpayer or qualified beginning farmer may terminate an agreement as provided in the agreement or by law. The eligible taxpayer must notify the authority of the termination within 30 days of the date of termination in the manner and form prescribed by the authority.

f. Expiration of lease. Prior to the expiration of the lease, the qualified beginning farmer will continue to be eligible for the term of the lease. Upon expiration of the lease, both the taxpayer and qualified beginning farmer must reapply to continue the tax credit.

44.6(6) Procedure for calculating tax credit awards.

a. The amount of the tax credit for a cash rent agreement equals 5 percent of the amount of rent received for each year.

b. For a commodity share agreement, the amount of the tax credit shall equal 15 percent of the gross amount that the eligible taxpayer would receive as a rent payment from the sale of the eligible taxpayer’s share of the crop in each harvest year.

c. To calculate the credit for a commodity share agreement, the authority will use the following assumptions:

(1) Fifty percent of the leased land is allocated to corn and 50 percent of the leased land is allocated to soybeans, unless the lease specifies a different allocation of corn and soybeans. If the lease specifies a different allocation of corn and soybeans, then the leased land will be allocated proportionally, in accordance with the terms of the lease.

(2) For all years of the lease, the prices used for corn and soybeans will be the average prices for the last five years excluding the highest and lowest prices based on the USDA-NASS statewide data calculated at the time the application is approved.

(3) For all years of the lease, the commodity yields used for corn and soybeans will be the past ten-year average per-bushel yields for the same county where the leased land is located excluding the years of highest and lowest per-bushel yields based on the USDA-NASS data calculated at the time the application is approved.

(4) If the lease specifies a crop other than corn and soybeans, the relevant price and yield data from USDA-NASS for that crop will be used.

d. To calculate the credit for a commodity share agreement, the authority will use the following formula: \( \frac{1}{2} \) acres leased multiplied by corn yield multiplied by corn price multiplied by percentage of owner’s share multiplied by .15 plus \( \frac{1}{2} \) acres leased multiplied by soybean yield multiplied by soybean price multiplied by owner’s share multiplied by .15 = the amount of the tax credit. If the lease specifies a different allocation of corn and soybeans, then the leased acres will be in accordance with the terms of the lease.

e. The amount of the tax credit for a flex lease agreement equals the sum of the following amounts:

(1) The portion of the lease that is based on rent will be calculated as a cash rent agreement.
(2) The portion of the lease that is based on crop yield will be calculated as a commodity share agreement.

(3) If the flexible or bonus portion of the lease is based on crop production, the annual yield used to calculate the bonus will be the yield defined in subparagraph 44.6(6) “c”(3). If the annual yield is above the yield needed to trigger the bonus, the taxpayer will be awarded additional tax credits. The formula for calculating the tax credit will be yield above lease bonus trigger multiplied by price multiplied by percentage of owner’s share multiplied by 0.15.

(4) For other factors used in a flex lease agreement, the relevant data used will be the past ten-year average per-bushel yield for the same county where the leased land is located excluding the highest and lowest years based on the USDA-NASS data.

f. The amount of the tax credit shall be reduced by the percent ownership interest of the qualifying beginning farmer in the agricultural asset.

[ARC 1112C, IAB 10/16/13, effective 9/26/13; ARC 1400C, IAB 4/2/14, effective 5/7/14; ARC 2009C, IAB 5/27/15, effective 7/1/15; ARC 2226C, IAB 10/28/15, effective 12/2/15; ARC 4902C, IAB 2/12/20, effective 3/18/20; ARC 6167C, IAB 2/9/22, effective 1/7/22]

265—44.7(16) Beginning farmer custom farming tax credit program. Rescinded ARC 4902C, IAB 2/12/20, effective 3/18/20.

These rules are intended to implement Iowa Code sections 16.4A, 16.4B, 16.5D, and 16.75 to 16.84.

[Filed Emergency ARC 1112C, IAB 10/16/13, effective 9/26/13]
[Filed ARC 1400C (Notice ARC 1113C, IAB 10/16/13), IAB 4/2/14, effective 5/7/14]
[Filed ARC 2226C (Notice ARC 2127C, IAB 9/2/15), IAB 10/28/15, effective 12/2/15]
[Filed ARC 4319C (Notice ARC 4196C, IAB 1/2/19), IAB 2/27/19, effective 4/3/19]
[Filed ARC 4902C (Notice ARC 4729C, IAB 10/23/19), IAB 2/12/20, effective 3/18/20]
[Filed Emergency After Notice ARC 6167C (Notice ARC 6067C, IAB 12/1/21), IAB 2/9/22, effective 1/7/22]
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CHAPTER 25
DISABILITY SERVICES MANAGEMENT

PREAMBLE

This chapter provides for definitions of regional core services; access standards; implementation dates; practice standards; reporting of regional expenditures; development and submission of regional management plans; data collection; applications for funding as they relate to regional service systems for adults with mental illness, intellectual disabilities, developmental disabilities, or brain injury and children with a serious emotional disturbance.

[ARC 0576C, IAB 2/6/13, effective 1/8/13; ARC 0735C, IAB 5/15/13, effective 8/1/13; ARC 1096C, IAB 10/16/13, effective 11/20/13; ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 1671C, IAB 10/15/14, effective 9/25/14; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

DIVISION I
REGIONAL SERVICES

441—25.1(331) Definitions.

“Access center” means the coordinated provision of intake assessment, screening for multi-occurring conditions, care coordination, crisis stabilization residential services, subacute mental health services, and substance abuse treatment for individuals experiencing a mental health or substance use crisis who do not need inpatient psychiatric hospital treatment, but who do need significant amounts of supports and services not available in other home- and community-based settings.

“Adult” means the same as defined in 441—subrule 78.27(1).

“Assertive community treatment” or “ACT” means a program of comprehensive outpatient services consistent with evidence-based practice standards published by the Substance Abuse and Mental Health Services Administration, provided in the community and directed toward the amelioration of symptoms and the rehabilitation of behavioral, functional, and social deficits of individuals with severe and persistent mental illness and individuals with complex symptomology who require multiple mental health and supportive services to live in the community.

“Assessment and evaluation” means the clinical review by a mental health professional of the current functioning of the individual using the service in regard to the individual’s situation, needs, strengths, abilities, desires and goals to determine the appropriate level of care.

“Behavioral health inpatient treatment” or “mental health inpatient treatment” means inpatient psychiatric services to treat an acute psychiatric condition provided in a licensed hospital with a psychiatric unit or a licensed freestanding psychiatric hospital.

“Behavioral health outpatient therapy” means the same as “outpatient services” described in Iowa Code section 230A.106(2) “a.”

“Brain injury” means the same as defined in rule 441—83.81(249A).

“Care coordination” means facilitating communication and ensuring provision of services among multiple professionals and service providers, the individual, and family members or other natural supports when designated by the individual, and ensuring the individual has the information necessary to actively participate in service and discharge or transition planning.

“Case management” means service provided by a case manager who assists individuals in gaining access to needed medical, social, educational, and other services through assessment, development of a care plan, referral, monitoring and follow-up using a strengths-based service approach that helps individuals achieve specific desired outcomes leading to a healthy self-reliance and interdependence with their community.

“Case manager” means a person who has completed specified and required training to provide case management through the medical assistance program.

“Child” or “children” means a person or persons under 18 years of age.

“Children’s behavioral health services” means behavioral health services for children who have a diagnosis of serious emotional disturbance.
“Children’s behavioral health system” or “children’s system” means the behavioral health system for children implemented pursuant to Iowa Code chapter 225C.

“Community-based crisis intervention service” means a program designed to stabilize an acute crisis episode and to restore an individual and family to their pre-crisis level of functioning. Crisis services are available 24 hours a day, 365 days a year, including telephone and walk-in crisis service and crisis care coordination.

“Comprehensive assessment” means the same as “crisis assessment” defined in rule 441—24.20(225C) for individuals being referred to crisis stabilization residential services and means the same as “assessment” defined in rule 481—71.2(135G) for individuals being referred to subacute mental health services.

“Crisis assessment” means the same as defined in rule 441—24.20(225C).

“Crisis care coordination” means a service provided during an acute crisis episode that facilitates working together to organize a plan and service transition programing, including working agreements with inpatient behavioral health units and other community programs. The service shall include referrals to mental health services and other supports necessary to maintain community-based living capacity, including case management as defined herein.

“Crisis evaluation” means the process used with an individual to collect information related to the individual’s history and needs, strengths, and abilities in order to determine appropriate services or referral during an acute crisis episode.

“Crisis intervention plan” means the same as defined in rule 441—24.1(225C).

“Crisis screening” means a brief assessment to make a determination of the presenting problem and referral to the appropriate level of care.

“Crisis stabilization community-based services” or “CSCBS” means the same as defined in rule 441—24.20(225C).

“Crisis stabilization residential services” or “CSRS” means the same as defined in rule 441—24.20(225C).

“Day habilitation” means services that assist or support the individual in developing or maintaining life skills and community integration. Services shall enable or enhance the individual’s functioning, physical and emotional health and development, language and communication development, cognitive functioning, socialization and community integration, functional skill development, behavior management, responsibility and self-direction, daily living activities, self-advocacy skills, or mobility.

“Early identification” means the process of detecting developmental delays, mental illness, or untreated conditions that may indicate the need for further evaluation.

“Early intervention” means services designed to address the social, emotional, and developmental needs of children at their earliest stages to decrease long-term effects and provide support in meeting developmental milestones.

“Education services” means activities that increase awareness and understanding of the causes and nature of conditions or factors which affect an individual’s development and functioning.

“Emergency care” means the same as defined in rule 441—88.21(249A).

“Emergency detention” means the same as “immediately detained” as described in Iowa Code section 229.22(1).

“Evidence-based services” means using interventions that have been rigorously tested, have yielded consistent, replicable results, and have proven safe, beneficial and effective and have established standards for fidelity of the practice.

“Face-to-face” means the same as defined in rule 441—24.20(225C).

“Family psychoeducation” means services including the provision of emotional support, education, resources during periods of crisis, and problem-solving skills consistent with evidence-based practice standards published by the Substance Abuse and Mental Health Services Administration.

“Family support” means services provided by a family support peer specialist that assist the family of an individual to live successfully in the family or community including, but not limited to, education and information, individual advocacy, family support groups, and crisis response.
“Family support peer specialist” means a parent, primary caregiver, foster parent or family member of an individual who has successfully completed standardized training to provide family support through the medical assistance program or the Iowa Behavioral Health Care Plan.

“Group supported employment” means the job and training activities in business and industry settings for groups of no more than eight workers with disabilities. Group settings include enclaves, mobile crews, and other business-based workgroups employing small groups of workers with disabilities in integrated, sustained, paid employment.

“HCBS” means home- and community-based services as defined in rule 441—78.27(249A).

“Health homes” means a service model that facilitates access to an interdisciplinary array of medical care, behavioral health care, and community-based social services and supports for both children and adults with chronic conditions. Services may include comprehensive care management; care coordination and health promotion; comprehensive transitional care from inpatient to other settings, including appropriate follow-up; individual and family support, which includes authorized representatives; referral to community and social support services, if relevant; and the use of health information technology to link services, as feasible and appropriate.

“Home and vehicle modification” means a service that provides physical modifications to the home or vehicle that directly address the medical health or remedial needs of the individual and that are necessary to provide for the health, welfare, and safety of the individual and to increase or maintain independence.

“Home health aide services” means unskilled medical services which provide direct personal care. This service may include assistance with activities of daily living, such as helping the recipient to bathe, get in and out of bed, care for hair and teeth, exercise, and take medications specifically ordered by the physician.

“Homeless” means the same as “homeless person” defined in rule 441—25.11(331).

“Illness management and recovery” means a broad set of strategies designed to help individuals with serious mental illness collaborate with professionals, reduce the individuals’ susceptibility to the illness, and cope effectively with the individuals’ symptoms consistent with evidence-based practice standards published by the Substance Abuse and Mental Health Services Administration.

“Individual” means any person seeking or receiving services in a regional service system.

“Individual supported employment” means services including ongoing supports needed by an individual to acquire and maintain a job in the integrated workforce at or above the state’s minimum wage. The outcome of this service is sustained paid employment that meets personal and career goals.

“Intake assessment” means the process used with an individual to collect information related to the individual’s history, needs, strengths, and abilities for the purpose of determining the individual’s need for comprehensive assessment, appropriate services or referral.

“Integrated treatment for co-occurring substance abuse and mental health disorders” means effective dual diagnosis programs that combine mental health and substance abuse interventions tailored for the complex needs of individuals with co-morbid disorders. Critical components of effective programs include a comprehensive, long-term, staged approach to recovery; assertive outreach; motivational interviews; provision of help to individuals in acquiring skills and supports to manage both illnesses and pursue functional goals with cultural sensitivity and competence consistent with evidence-based practice standards published by the Substance Abuse and Mental Health Services Administration.

“Intensive residential service homes” or “intensive residential services” means intensive, community-based services provided 24 hours a day, 7 days a week, 365 days a year to individuals with a severe and persistent mental illness who have functional impairments and may also have multi-occurring conditions. Providers of intensive residential service homes are enrolled with Medicaid as providers of HCBS habilitation or HCBS intellectual disability waiver supported community living and meet additional criteria specified in subrule 25.6(8).

“Job development” means services that assist individuals in preparing for, securing and maintaining gainful, competitive employment. Employment shall be integrated into normalized work settings, shall provide pay of at least minimum wage, and shall be based on the individual’s skills, preferences,
abilities, and talents. Services assist individuals seeking employment to develop or re-establish skills, attitudes, personal characteristics, interpersonal skills, work behaviors, and functional capacities to achieve positive employment outcomes.

“Medical assistance program” means the same as defined in Iowa Code section 249A.2.

“Medication management” means services provided directly to or on behalf of the individual by a licensed professional as authorized by Iowa law including, but not limited to, monitoring effectiveness of and compliance with a medication regimen; coordination with care providers; investigating potentially negative or unintended psychopharmacologic or medical interactions; reviewing laboratory reports; and activities pursuant to licensed prescriber orders.

“Medication prescribing” means services with the individual present provided by an appropriately licensed professional as authorized by Iowa law including, but not limited to, determining how the medication is affecting the individual; determining any drug interactions or adverse drug effects on the individual; determining the proper dosage level; and prescribing medication for the individual for the period of time before the individual is seen again.

“Mental health inpatient treatment” or “behavioral health inpatient treatment” means inpatient psychiatric services to treat an acute psychiatric condition that are provided in a licensed hospital with a psychiatric unit or a licensed freestanding psychiatric hospital.

“Mental health outpatient therapy” means the same as defined in Iowa Code section 230A.106(2)”a.”

“Mental health professional” means the same as defined in Iowa Code section 228.1(6).

“Mobile response” means the same as defined in rule 441—24.20(225C).

“Multi-occurring conditions” means a diagnosis of a severe and persistent mental illness occurring along with one or more of the following: a physical health condition, a substance use disorder, an intellectual or developmental disability, or a brain injury.

“No reject, no eject” means that an individual who otherwise meets the eligibility criteria for a service shall not be denied access to that service or discharged from that service based on the severity or complexity of that individual’s mental health and multi-occurring needs.

“Peer support services” means a program provided by a peer support specialist including but not limited to education and information, individual advocacy, family support groups, crisis response, and respite to assist individuals in achieving stability in the community.

“Peer support specialist” means an individual who has experienced a severe and persistent mental illness and who has successfully completed standardized training to provide peer support services through the medical assistance program or the Iowa Behavioral Health Care Plan.

“Permanent supportive housing” means voluntary, flexible supports to help individuals with psychiatric disabilities choose, get, and keep housing that is decent, safe, affordable, and integrated into the community. Tenants have access to an array of services that help them keep their housing, such as case management, assistance with daily activities, conflict resolution, and crisis response consistent with evidence-based practice standards published by the Substance Abuse and Mental Health Services Administration.

“Personal emergency response system” means an electronic device connected to a 24-hour staffed system which allows the individual to access assistance in the event of an emergency.

“Precariously housed” means that a person does not have a permanent household and is living day-to-day in a motel, in a vehicle, with family or friends, or in some other temporary location.

“Prescreening assessment” means a face-to-face clinical interview to ascertain an individual’s current and previous level of functioning, potential for dangerousness, physical health, and psychiatric and medical condition.

“Prevention” means efforts to increase awareness and understanding of the causes and nature of conditions or situations which affect an individual’s functioning in society. Prevention activities are designed to convey information about the cause of conditions, situations, or problems that interfere with an individual’s functioning or ways in which that information can be used to prevent their occurrence or reduce their effect and may include, but are not limited to, training events, webinars, presentations, and public meetings.
“Prevocational services” means services that focus on developing generalized skills that prepare an individual for employment. Prevocational training topics include but are not limited to attendance, safety skills, following directions, and staying on task.

“Reasonably close proximity” means a distance of 100 miles or less or a driving distance of two hours or less from the county seat or county seats of the region.

“Region” means a mental health and disability service region that operates as the “regional administrator” or “regional administrative entity” as defined in rule 441—25.11(331).

“Respite services” means a temporary period of relief and support for individuals and their families provided in a variety of settings. The intent is to provide a safe environment with staff assistance for individuals who lack an adequate support system to address current issues related to a disability. Respite may be provided for a defined period of time; respite is either planned or provided in response to a crisis.

“Routine care” means the same as defined in rule 441—88.21(249A).

“Rural” means any area that is not defined as urban.

“Serious emotional disturbance” means the same as defined in Iowa Code section 225C.2.

“Severe and persistent mental illness” or “SPMI” means a documented primary mental health disorder diagnosed by a mental health professional that causes symptoms and impairments in basic mental and behavioral processes that produce distress and major functional disability in adult role functioning inclusive of social, personal, family, educational or vocational roles. The individual has a degree of impairment arising from a psychiatric disorder such that: (1) the individual does not have the resources or skills necessary to maintain function in the home or community environment without assistance or support; (2) the individual’s judgment, impulse control, or cognitive perceptual abilities are compromised; (3) the individual exhibits significant impairment in social, interpersonal, or familial functioning; and (4) the individual has a documented mental health diagnosis. For this purpose, a “mental health diagnosis” means a disorder, dysfunction, or dysphoria diagnosed pursuant to the current version of the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association, excluding neurodevelopmental disorders, substance use disorders, personality disorders, medication-induced movement disorders and other adverse effects of medication, and other conditions that may be a focus of clinical attention as defined in the current version of the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association.

“State board” means the children’s behavioral health system state board created in Iowa Code section 225C.51.

“Strengths-based case management” means a service that focuses on possibilities rather than problems and strives to identify and develop strengths to assist individuals reach their goals leading to a healthy self-reliance and interdependence with their community. Identifiable strengths and resources include family, cultural, spiritual, and other types of social and community-based assets and networks.

“Subacute mental health services” means the same as defined in Iowa Code section 225C.6(4)“c” and includes both subacute facility-based services and subacute community-based services.

“Substance use disorder” means the same as defined in rule 641—155.1(125,135).

“Supported community living services” means services as defined in Iowa Code section 225C.21(1).

“Supported employment” means an approach to helping individuals participate as much as possible in competitive work in integrated work settings that are consistent with the strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice of the individuals. Services are targeted for individuals with significant disabilities for whom competitive employment has not traditionally occurred; or for whom competitive employment has been interrupted or intermittent as a result of a significant disability including either individual or group supported employment, or both, consistent with evidence-based practice standards published by the Substance Abuse and Mental Health Services Administration.

“Telephone crisis service” means a program that operates a crisis hotline either directly or through a contract. The service shall be available 24 hours a day and seven days a week including, but not limited to, relief of distress in pre-crisis and crisis situations, reduction of the risk of escalation, arrangements for emergency on-site responses when necessary, and referral of callers to appropriate services.
"Trauma-focused services" means services provided by caregivers and professionals that recognize when an individual who has been exposed to violence is in need of help to recover from adverse impacts; recognize and understand the impact that exposure to violence has on victims’ physical, psychological, and psychosocial development and well-being; and respond by helping in ways that reflect awareness of adverse impacts and consistently support the individual’s recovery.

"Trauma-informed care" means services that are based on an understanding of the vulnerabilities or triggers of those who have experienced violence, that recognize the role violence has played in the lives of those individuals, that are supportive of recovery, and that avoid retraumatization including trauma-focused services and trauma-specific treatment.

"Trauma-specific treatment" means services provided by a mental health professional using therapies that are free from the use of coercion, restraints, seclusion and isolation; and designed specifically to promote recovery from the adverse impacts of violence exposure on physical, psychological, psychosocial development, health and well-being.

"Twenty-four-hour crisis response" means the same as defined in rule 441—24.20(225C).

"Twenty-three-hour observation and holding" means the same as defined in rule 441—24.20(225C).

"Urban" means a county that has a total population of 50,000 or more residents or includes a city with a population of 20,000 or more.

"Urgent nonemergency need" means the same as defined in rule 441—88.21(249A).

"Walk-in crisis service" means a program that provides unscheduled face-to-face support and intervention at an identified location or locations. The service may be provided directly by the program or through a contract with another mental health provider.

"Warm handoff" means an approach to care transitions in which a health care provider uses face-to-face or telephone contact to directly link individuals being treated to other providers or specialists.

[ARC 1096C, IAB 10/16/13, effective 11/20/13; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.2(331) Core service domains.

25.2(1) The region shall ensure that core service domains are available in regions as determined in Iowa Code sections 331.397 and 331.397A.

25.2(2) The region shall include and respect the recommendation of the individual and the individual’s care team in the process of transition to new services.

25.2(3) The region shall ensure that the following services are available for adults in the region:

a. Access centers.


c. Assessment and evaluation.

d. Case management.

e. Crisis evaluation.

f. Crisis stabilization community-based services.

g. Crisis stabilization residential services.

h. Day habilitation.

i. Family support.

j. Health homes.

k. Home and vehicle modification.

l. Home health aide.

m. Intensive residential service homes.

n. Job development.

o. Medication prescribing and management.


q. Mental health outpatient treatment.

r. Mobile response.

s. Peer support.
t. Personal emergency response system.
u. Prevocational services.
v. Respite.
w. Subacute mental health services.
x. Supported employment.
y. Supportive community living.
z. Twenty-four-hour access to crisis response.

aa. Twenty-three-hour crisis observation and holding.

Regions may fund or provide other services in addition to the required core services consistent with requirements set forth in subrules 25.2(5) and 25.2(6).

25.2(4) The region shall ensure that the following services are available for children in the region:

a. Assessment and evaluation relating to eligibility for services.
c. Behavioral health outpatient therapy.
d. Crisis stabilization community-based services.
e. Crisis stabilization residential services.
f. Early identification.
g. Early intervention.
h. Education services.
i. Medication prescribing and management.
j. Mobile response.
k. Prevention.

25.2(5) A regional service system shall consider the scope of services included in addition to the required core services. Each service included shall be described and projection of need and the funding necessary to meet the need shall be included.

25.2(6) A regional service system may provide funding for other appropriate services or support. In considering whether to provide such funding, a region may consider the following criteria:

a. Applying a person-centered planning process to identify the need for the services or other support.
b. The efficacy of the services or other support is recognized as an evidence-based practice, is deemed to be an emerging and promising practice, or providing the services is part of a demonstration and will supply evidence as to the effectiveness of the services.
c. A determination that the services or other support provides an effective alternative to existing services that have been shown by the evidence base to be ineffective, to not yield the desired outcome, or to not support the principles outlined in Olmstead v. L.C., 527 U.S. 581.

[ARC 1096C, IAB 10/16/13, effective 11/20/13; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.3(331) Implementation dates.

25.3(1) Regions shall implement the following core services effective July 1, 2014:

a. Assessment and evaluation.
b. Case management.
c. Crisis evaluation.
d. Day habilitation.
e. Family support.
f. Health homes.
g. Home and vehicle modification.
h. Home health aide.
i. Job development.
j. Medication prescribing and management.
k. Mental health inpatient therapy.
l. Mental health outpatient therapy.
m. Peer support.

n. Personal emergency response system.

o. Prevocational services.

p. Respite.

q. Supported employment.

r. Supportive community living.

s. Twenty-four-hour access to crisis response.

25.3(2) Regions shall implement the following intensive mental health core services on or before July 1, 2021, provided that federal matching funds are available under the Iowa health and wellness plan pursuant to Iowa Code chapter 249N:

a. Access centers.


c. Crisis stabilization community-based services.

d. Crisis stabilization residential services.

e. Intensive residential service homes.

f. Mobile response.

g. Subacute mental health services provided in facility and community-based settings.

h. Twenty-three-hour crisis observation and holding.

25.3(3) Regions shall implement the following children’s behavioral health core services on or before July 1, 2020, and meet applicable access standards on or before July 1, 2021:

a. Assessment and evaluation relating to eligibility for services.

b. Behavioral health outpatient therapy.

c. Education services.

d. Medication prescribing and management.

e. Prevention.

25.3(4) Regions shall implement the following children’s behavioral health core services on or before July 1, 2021, and meet applicable access standards on or before July 1, 2021:


b. Crisis stabilization community-based services.

c. Crisis stabilization residential services.

d. Early identification.

e. Early intervention.

f. Mobile response.

[ARC 1096C, IAB 10/16/13, effective 11/20/13; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.4(331) Access standards. Regions shall meet the following access standards:

25.4(1) A sufficient provider network which shall include:

a. A community mental health center or federally qualified health center that provides psychiatric and outpatient mental health services to individuals in the region.

b. A hospital with an inpatient psychiatric unit or state mental health institute located in or within reasonably close proximity that has the capacity to provide inpatient services.

25.4(2) Crisis services shall be available 24 hours per day, 7 days per week, 365 days per year for individuals experiencing mental health and disability-related emergencies. A region may make arrangements with one or more other regions to meet the required access standards.

a. Basic crisis response.

(1) Twenty-four-hour crisis response. An individual shall have immediate access to crisis response services by means of telephone, electronic, or face-to-face communication.

(2) Crisis evaluation. An individual shall have immediate access to a crisis screening and will have a crisis assessment by a licensed mental health professional within 24 hours of referral.
b. *Crisis stabilization community-based services.* An individual who has been determined to need CSCBS shall receive face-to-face contact from the CSCBS provider within 120 minutes from the time of referral.

c. *Crisis stabilization residential services.* An individual who has been determined to need CSRS shall receive CSRS within 120 minutes of referral. The service shall be located within 120 miles from the residence of the individual.

d. *Mobile response.* An individual in need of mobile response services shall have face-to-face contact with mobile crisis staff within 60 minutes of dispatch.

e. *Twenty-three-hour observation and holding.* An adult who has been determined to need 23-hour observation and holding shall receive 23-hour observation and holding within 120 minutes of referral. The service shall be located within 120 miles from the residence of the individual.

25.4(3) The region shall provide the following treatment services:

a. *Outpatient.*

(1) Emergency: During an emergency, outpatient services shall be initiated to an individual within 15 minutes of telephone contact.

(2) Urgent: Outpatient services shall be provided to an individual within one hour of presentation or 24 hours of telephone contact.

(3) Routine: Outpatient services shall be provided to an individual within four weeks of request for appointment.

(4) Distance: Outpatient services shall be offered within 30 miles for an individual residing in an urban community and 45 miles for an individual residing in a rural community.

b. *Inpatient.*

(1) An individual in need of emergency inpatient services shall receive treatment within 24 hours.

(2) Inpatient services shall be available within reasonably close proximity to the region.

c. *Assessment and evaluation.* An individual who has received inpatient services shall be assessed and evaluated within four weeks.

25.4(4) Subacute facility-based mental health services. An adult shall receive subacute facility-based mental health services within 24 hours of referral. The service shall be located within 120 miles of the residence of the individual.

25.4(5) Support for community living for adults. The first appointment shall occur within four weeks of the individual’s request of support for community living.

25.4(6) Support for employment for adults. The initial referral shall take place within 60 days of the individual’s request of support for employment.

25.4(7) Recovery services for adults. An individual receiving recovery services shall not have to travel more than 30 miles if residing in an urban area or 45 miles if residing in a rural area to receive services.

25.4(8) Service coordination.

a. An adult receiving service coordination shall not have to travel more than 30 miles if residing in an urban area or 45 miles if residing in a rural area to receive services.

b. An adult shall receive service coordination within ten days of the initial request for such service or being discharged from an inpatient facility.

25.4(9) The region shall make the following intensive mental health services available for adults. A region may make arrangements with one or more other regions to meet the required access standards.

a. *Assertive community treatment.*

(1) A minimum of 22 ACT teams shall be operational statewide.

(2) A sufficient number of ACT teams shall be available to serve the number of individuals in the region who are eligible for ACT services. As a guideline for planning purposes, the ACT-eligible population is estimated to be about 0.06 percent of the adult population of the region. The region may identify multiple geographic areas within the region for ACT team coverage. Regions may work with one or more other regions to identify geographic areas for ACT team coverage.

b. *Access centers.*

(1) A minimum of six access centers shall be operational statewide.
(2) An access center shall be located within 120 miles of the residence of the individual or be available within 120 minutes from the time of the determination that the individual needs access center services.

c. **Intensive residential services.**
   (1) A minimum of 120 intensive residential service beds shall be available statewide.
   (2) An individual receiving intensive residential services shall have the service available within two hours of the individual’s residence.
   (3) An individual shall be admitted to intensive residential services within four weeks from referral.

25.4(10) The following limitations apply to home and vehicle modification for an individual receiving mental health and disability services:
   a. A lifetime limit equal to that established for the home- and community-based services waiver for individuals with intellectual disabilities in the medical assistance program.
   b. A provider reimbursement payment will be no lower than that provided through the home- and community-based services waiver for individuals with intellectual disabilities in the medical assistance program.

25.4(11) The region shall make the following efforts and activities related to children’s behavioral health available to the residents of the region:
   a. **Prevention.** Prevention activities shall be carried out at least four times a year.
   b. **Education services.** Education activities shall be carried out at least four times a year.

25.4(12) The region shall ensure that the following behavioral health services are available to children in the region:
   a. **Early identification.** A child shall receive early identification services within four weeks of the time the request for such services is made.
   b. **Early intervention.** A child shall receive early intervention services within four weeks of the time the request for such services is made.

[ARC 1096C, IAB 10/16/13, effective 11/20/13; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.5(331) **Practices.** A region shall ensure that access is available to providers of core services that demonstrate the following competencies:

25.5(1) Regions shall have service providers that are trained to provide effective services to individuals with multi-occurring conditions. Training for serving individuals with multi-occurring conditions provided by the region shall be training identified by the Substance Abuse and Mental Health Services Administration, the Dartmouth Psychiatric Research Center or other generally recognized professional organization specified in the regional service system management plan.

25.5(2) Regions shall have service providers that are trained to provide effective trauma-informed care. Trauma-informed care training provided by the region shall be recognized by the National Center for Trauma-Informed Care or other generally recognized professional organization specified in the regional service system management plan.

25.5(3) Regions must have evidence-based practices that the region has independently verified as meeting established fidelity to evidence-based service models including, but not limited to, assertive community treatment or strengths-based case management; integrated treatment of co-occurring substance use and mental health disorders; supported employment; family psychoeducation; illness management and recovery; and permanent supportive housing.

[ARC 4207C, IAB 1/2/19, effective 3/1/19]

441—25.6(331) **Intensive mental health services.** The purpose of intensive mental health services is to provide a continuum of services and supports to adults with complex mental health and multi-occurring conditions who need a high level of intensive and specialized support to attain stability in health, housing, and employment and to work toward recovery.

25.6(1) **Access centers.** The purpose of an access center is to serve adults experiencing a mental health or substance use crisis who are not in need of an inpatient psychiatric level of care and who do not have alternative, safe, effective services immediately available.
a. **Regional coordination.** Each region shall designate at least one access center provider and ensure that access center services are available to the residents of the region consistent with subrule 25.4(9).
   (1) Regions shall work collaboratively to develop a minimum of six access centers strategically located throughout the state, with the support of the medical assistance program.
   (2) Access centers may be shared by two or more regions.
   (3) Each region shall establish methods to provide for reimbursement of a region when a non-Medicaid-eligible resident of another region utilizes an access center or other non-Medicaid-covered services located in that region.

b. **Access center standards.** A designated access center shall meet all of the following criteria:
   (1) An access center shall have no residential facility-based setting with more than 16 beds.
   (2) An access center provider shall be accredited to provide crisis stabilization residential services pursuant to 441—Chapter 24.
   (3) An access center provider shall be licensed to provide subacute mental health services as described in rule 441—77.56(249A).
   (4) An access center provider shall be licensed as a substance abuse treatment program pursuant to Iowa Code chapter 125 or have a cooperative agreement with and immediate access to licensed substance abuse treatment services or medical care that incorporates withdrawal management.
   (5) An access center shall provide services on a no reject, no eject basis to individuals who meet service eligibility criteria.
   (6) An access center shall accept and serve eligible individuals who are court-ordered to participate in mental health or substance use disorder treatment.
   (7) An access center shall provide all required services listed in 25.6(1)“d” in a coordinated manner. An access center may provide coordinated services in one or more locations.

c. **Eligibility for access center services.** To be eligible to receive access center services, an individual shall meet all of the following criteria:
   (1) The individual is an adult in need of screening, assessment, services or treatment related to a mental health or substance use crisis.
   (2) The individual shows no obvious signs of illness or injury indicating a need for immediate medical attention.
   (3) The individual has been determined not to need an inpatient psychiatric hospital level of care.
   (4) The individual does not have immediate access to alternative, safe, and effective services.

d. **Access center services.** An access center shall provide or arrange for the provision of all of the following:
   (1) Immediate intake assessment and screening that includes but is not limited to mental and physical health conditions, suicide risk, brain injury, and substance use. A crisis evaluation that includes all required screenings may serve as an intake assessment.
   (2) Comprehensive person-centered mental health assessments by appropriately licensed or credentialed professionals, as indicated by the intake assessment.
   (3) Comprehensive person-centered substance use disorder assessments by appropriately licensed or credentialed professionals, as indicated by the intake assessment.
   (4) Peer support services, as indicated by a comprehensive assessment.
   (5) Mental health treatment, as indicated by a comprehensive assessment.
   (6) Substance use treatment, as indicated by a comprehensive assessment.
   (7) Physical health care services as indicated by a health screening.
   (8) Care coordination.
   (9) Service navigation and linkage to needed services including housing, employment, shelter services, intellectual and developmental disability services, and brain injury services, with warm handoffs to other service providers.

25.6(2) **Assertive community treatment (ACT) services.** The purpose of assertive community treatment is to serve adults with the most severe and persistent mental illness conditions and functional impairments. ACT services provide a set of comprehensive, integrated, intensive outpatient services
delivered by a multidisciplinary team under the supervision of a psychiatrist, an advanced registered nurse practitioner, or a physician assistant under the supervision of a psychiatrist. An ACT program shall designate a staff member to be responsible for administration of the program and with the authority to sign documents and receive payments on behalf of the program.

a. **Regional coordination.** Each region shall designate at least one ACT provider and ensure that ACT services are available to the residents of the region consistent with subrule 25.4(9). Regions may work collaboratively with other regions when an ACT team is serving more than one region.

1. Each region shall determine the number and size of ACT teams needed to serve the ACT-eligible population in that region.

2. Each region shall verify that all ACT programs operating in the region have periodic fidelity reviews consistent with evidence-based practice standards published by the Substance Abuse and Mental Health Services Administration (SAMHSA). Each ACT program shall have a fidelity review, including a peer review, on the following schedule:
   1. Within the first 12 months of operation.
   2. Annually during each of the second and third years of operation.
   3. Biennially thereafter for teams with satisfactory fidelity reviews. Teams with unsatisfactory reviews shall be reviewed again after one year.

   Results of the ACT team fidelity reviews shall be included in the region’s annual report.

b. **ACT team composition.** Each ACT team shall include a minimum of six members and must include a member qualified to fill each of the eight following roles. One team member may fill more than one role if all other qualifications are met.

1. A psychiatrist, an advanced registered nurse practitioner, or a physician assistant under the supervision of a psychiatrist who is board-certified or eligible for board certification.

2. A team leader.

3. A registered nurse.

4. A mental health professional.

5. A substance abuse treatment provider.

6. A community support specialist.

7. A peer support specialist.

8. An employment specialist.

c. **Staff qualifications.** ACT team members shall meet the following qualifications:

   1. Psychiatrist. A psychiatrist on the team shall be a person who meets all of the following criteria:
      1. Is a doctor of medicine (M.D.) or a doctor of osteopathy (D.O.).
      2. Is licensed in Iowa pursuant to 653—Chapter 9.
      3. Is certified or is eligible to be certified as a psychiatrist by the American Board of Medical Specialties’ Board of Psychiatry and Neurology or by the American Osteopathic Board of Neurology and Psychiatry.
      4. Has experience working with persons with severe and persistent mental illness.
      5. Provides a minimum of 16 hours per week of psychiatrist time for every 50 ACT clients.

   2. Advanced registered nurse practitioner. An advanced registered nurse practitioner on the team shall be a person who meets all of the following criteria:
      1. Is licensed pursuant to 655—Chapter 7.
      2. Has a mental health certification.
      3. Has experience working with persons with severe and persistent mental illness.
      4. Provides a minimum of 16 hours per week of advanced registered nurse practitioner time for every 50 ACT clients.

   3. Physician assistant. A physician assistant on the team shall be a person who meets all of the following criteria:
      1. Is licensed pursuant to 645—Chapter 326.
      2. Has experience working with persons with severe and persistent mental illness.
      3. Is practicing under the supervision of a psychiatrist who is board-certified or eligible for board certification.
4. Provides a minimum of 16 hours per week of physician assistant time for every 50 ACT clients.

   (4) Team leader. A team leader shall be a person on the team who meets all of the following criteria:
   1. Has a master’s degree in a mental health field, including but not limited to nursing, social work, mental health counseling, psychiatric rehabilitation, or psychology.
   2. Is actively involved in direct contact with individuals being served by the team.
   3. Is a full-time staff member whose responsibilities are limited to the ACT team and who serves as the clinical and administrative supervisor of the team.

   (5) Registered nurse. A registered nurse on the team shall be a person who meets all of the following criteria:
   1. Is licensed as a registered nurse pursuant to 655—Chapter 3.
   2. Has experience working with persons with severe and persistent mental illness.
   3. Mental health professional. A mental health professional on the team shall be a person who meets all of the following criteria:
      1. Is a mental health counselor or marital and family therapist licensed pursuant to 645—Chapter 31; a social worker licensed as a master or independent social worker pursuant to 645—Chapter 280; or an occupational therapist licensed pursuant to 645—Chapter 206.
      2. Has experience working with persons with severe and persistent mental illness.
   4. Substance abuse treatment professional. A substance abuse treatment professional on the team shall be a person who meets all of the following criteria:
      1. Is an appropriately credentialed counselor pursuant to 641—subparagraph 155.21(8)“h”(1).
      2. Has at least three years of experience working with persons with substance use disorders.
   5. Community support specialist. A community support specialist on the team shall be a person who meets all of the following criteria:
      1. Has a bachelor’s degree with at least 30 semester hours or equivalent quarter hours in a human services field, including but not limited to sociology, social work, counseling, psychology, or human services.
      2. Has experience working with persons with severe and persistent mental illness.
   6. Peer support specialist. A peer support specialist on the team shall be a person who meets all of the following criteria:
      1. Has been diagnosed with a severe and persistent mental illness.
      2. Has met all requirements of the Appalachian Consulting Group Peer Support Training Model by no later than six months after the date of hire.

   (10) Employment specialist. An employment specialist on the team shall be a person who meets all of the following criteria:
   1. Has experience working with persons with severe and persistent mental illness.
   2. Meets one of the following:
      • Has a bachelor’s degree with at least 30 semester hours or equivalent quarter hours in a human services field, including but not limited to sociology, social work, counseling, or psychology, and completes at least 12 hours of employment services training within six months of the date of hire.
      • Has a high school diploma or equivalent, has at least one year of specialized vocational training or supervised experience in vocational and related services, including but not limited to supported employment, job coaching, supported community living, or habilitation, and completes at least 12 hours of employment services training within six months of the date of hire.

   (11) Psychologist. A psychologist on the team shall be a person who meets all of the following criteria:
   1. Is licensed pursuant to 645—Chapter 240.
   2. Has experience working with persons with a severe and persistent mental illness.

   d. ACT provider standards. Organizations seeking regional designation as an ACT provider shall meet the following criteria at initial application and annually thereafter. A designated ACT provider shall:
      1. Develop and maintain written ACT-specific admission policies and procedures, including but not limited to a gradual rate of admission and program eligibility requirements.
2. Develop and maintain written ACT-specific discharge policies and procedures. Discharge criteria shall include but are not limited to the following:
   1. An individual reaches individually established goals for discharge, and the individual and program staff mutually agree to the termination of services; or
   2. An individual requests discharge, demonstrates the ability to function in all major role areas without ongoing assistance from the program and without significant relapse when services are withdrawn, and the program staff agree to the termination of services; or
   3. An individual moves outside the geographic area of the team’s responsibility. In such cases, the team shall arrange for transfer of responsibility for mental health services to an ACT program or another provider wherever the individual is relocating, and the team shall maintain contact with the individual until the service transfer is implemented; or
   4. An individual declines or refuses services and requests discharge despite the team’s best efforts to develop an acceptable treatment plan with the individual.

3. Documentation of discharges. Documentation shall include:
   1. The reason(s) for discharge as stated by both the individual and the team.
   2. A summary of the individual’s biopsychosocial status at the time of discharge.
   3. A written final evaluation summary of the individual’s progress toward the goals in the treatment plan.
   4. A plan developed in conjunction with the individual for follow-up treatment after discharge.
   5. The signature of each of the following:
      ● The individual, or documentation of why the individual’s signature was not obtained.
      ● The service coordinator.
      ● The team leader.
      ● The psychiatrist, advanced registered nurse practitioner, or physician assistant under the supervision of a board-certified psychiatrist.

   e. ACT team standards. All designated ACT teams shall:
      1. Participate in all of the individual’s mental health services.
      2. Ensure that services for the psychiatric needs of the individual are available 24 hours a day.
      3. Develop a specific treatment plan based on the assessment of needs and including goals and actions to address the individual’s medical, social, educational, and other needs.
      4. Make referrals to services and related activities to assist the individual with the individual’s assessed needs.
      5. Monitor and perform follow-up activities necessary to ensure that the treatment plan is carried out and that the individual has access to necessary services. Activities may include monitoring contacts with providers, family members, natural supports, and others.
      6. Hold team meetings at least four times a week to facilitate ACT services and briefly review the status of the individual with other members of the team.

7. Have the capacity to provide multiple contacts a week with individuals experiencing severe symptoms, trying a new medication, experiencing a health problem or serious life event, trying to go back to school or starting a new job, making changes in a living situation or employment, or having significant ongoing problems in daily living. All members of the team share responsibility for addressing the needs of all individuals. The number of team contacts per individual served shall average at least three per week per individual when calculated across all individuals served by the team. Contacts may be weekly, daily, or more frequent. The frequency of contacts is determined by the needs of the individual.

8. Have the capacity to rapidly increase service intensity to an individual when the individual’s status requires it or the individual requests it.

9. Ensure that treatment, rehabilitation, and support activities are available 24 hours a day, 7 days a week, 365 days a year, including nights, weekends, and holidays. If there are insufficient numbers of staff to operate an after-hours on-call system, staff shall provide crisis response during regular work hours and arrange coverage for all other hours through a reliable crisis response service.

10. Provide no more than 20 percent of service contacts in office-based settings.
f. **Staff-to-client ratio.** ACT teams shall maintain a ratio of at least one full-time or full-time equivalent staff person to every ten individuals served. The ACT team staff-to-client ratios do not include the psychiatrist, advanced nurse practitioner, or physician assistant practicing under the supervision of a psychiatrist.

g. **Eligibility criteria for ACT services.** To be eligible to receive ACT services, the individual shall meet all of the following criteria:
   1. Is at least 17 years of age.
   2. Has a severe and persistent mental illness or complex mental health symptomology. Individuals with a primary diagnosis of substance use disorder, developmental disability, personality disorder, or organic disorder are not eligible for ACT services.
   3. Is in need of a consistent team of professionals and multiple mental health and support services to live independently in the community and reduce hospitalizations, as evidenced by one or both of the following:
      1. A pattern of repeated treatment failures during the previous 12 months, including at least two psychiatric hospitalizations or psychiatric care delivered at least twice in an emergency department, at an access center, or by a mobile crisis team; or
      2. The need for multiple or combined mental health and basic living supports to prevent the need for a more intrusive level of care.
   4. Presents a reasonable likelihood that ACT services will lead to specific, observable improvements in the individual’s functioning and assist the individual in achieving or maintaining independent community living. Specifically, the individual:
      1. Is medically stable;
      2. Does not require a level of care that includes more intensive medical monitoring;
      3. Presents a low risk to self, others, or property, with treatment and support; and
      4. Lives independently in the community or demonstrates a capacity and desire to live independently in the community.

h. **ACT services.** ACT teams shall provide the following services:

   1. **Initial assessment and treatment planning.**
      1. An assessment of the individual shall be completed within 30 days of admission that includes psychiatric history, medical history, educational history, employment, substance use, problems with activities of daily living, social interests, and family relationships.
      2. An individualized written treatment plan shall be developed based on the assessment. The treatment plan shall identify the necessary psychiatric rehabilitation treatment and support services, including all of the following:
         * Treatment objectives and outcomes.
         * The expected frequency and duration of each service.
         * The location where the services will be provided.
         * A crisis plan.
         * The schedule for updates of the treatment plan.
   2. **Evaluation and medication management.**
      1. The evaluation portion of ACT services consists of a comprehensive mental health evaluation and assessment of the individual by a psychiatrist, advanced registered nurse practitioner, or physician assistant.
      2. Medication management consists of the prescription and management of medication by a psychiatrist, advanced registered nurse practitioner, or physician assistant in response to the individual’s complaints and symptoms. A psychiatrist registered nurse assists in this management by making contact with the individual regarding medications and their effect on the individual’s complaints and symptoms.
      3. **Integrated therapy and counseling for mental health and substance abuse.** Integrated therapy and counseling consists of direct counseling for treatment of mental health and substance abuse symptoms by a psychiatrist, licensed mental health professional, advanced registered nurse practitioner, physician assistant, or substance abuse specialist. Individual counseling may be provided by other team members under the supervision of a psychiatrist or licensed mental health practitioner.
(4) Skill teaching. Skill teaching consists of side-by-side demonstration and observation of daily living activities by any team member.

(5) Community support. Community support may be provided by any team member and consists of the following activities focused on recovery and rehabilitation:
   1. Personal and home skills training to assist the individual to develop and maintain skills for self-direction and coping with the living situation.
   2. Community skills training to assist the individual in maintaining a positive level of participation in the community through development of socialization skills and personal coping skills.

(6) Medication monitoring. Medication monitoring services shall be provided by a psychiatric nurse and other team members under the supervision of a psychiatrist or psychiatric nurse and consists of:
   1. Monitoring the individual’s day-to-day functioning, medication compliance, and access to medications; and
   2. Ensuring that the individual keeps appointments.

(7) Case management for treatment and service plan coordination. Case management consists of the development of an individualized treatment and service plan, including personalized goals and outcomes, to address the individual’s medical symptoms and remedial functional impairments. Case management includes:
   1. Assessments, referrals, follow-up, and monitoring.
   2. Assisting the individual in gaining access to necessary medical, social, educational, and other services.
   3. Assessing the individual to determine service needs by collecting relevant historical information through records and other information from relevant professionals and natural supports.

(8) Crisis response. Crisis response consists of direct assessment and treatment of the individual’s urgent or crisis symptoms in the community by any team member, as appropriate.

(9) Work-related services. Work-related services may be provided by any team member. Services consist of assisting the individual in managing mental health symptoms as they relate to job performance and may include:
   1. Collaborating with the individual to look for job situations of the individual’s choice and creating strategies to manage situations that cause symptoms to increase.
   2. Assisting the individual to develop or enhance skills to obtain a work placement, such as individual work-related behavioral management.
   3. Providing supports to maintain employment, such as crisis intervention related to employment.
   4. Teaching communication, problem-solving, and safety skills.
   5. Teaching personal skills, such as time management and appropriate grooming for employment.

(10) Peer support services. Peer support services are provided by a peer support specialist and include, but are not limited to, education and information, individual advocacy, and crisis response.

(11) Support services. All team members are responsible for providing support services. Services consist of assisting the individual in obtaining the basic necessities of daily life, including but not limited to:
   1. Medical and dental services.
   2. Safe, clean, and affordable housing.
   3. Financial support.
   4. Benefits counseling.
   5. Social services.
   6. Transportation.
   7. Legal advocacy and representation.

(12) Education, support, and consultation to family members and other major supports of individuals. All team members are responsible for providing education, support, and consultation to family members and other major supports of individuals with the agreement or consent of the individual. Services include but are not limited to:
I. Individualized psychoeducation about the individual’s illness and the role of the family and other significant people in the therapeutic process.

2. Intervention to restore contact, resolve conflicts, and maintain relationships with family or other significant people or both.

3. Ongoing communication and collaboration, face-to-face and by telephone, between the ACT team and the family.

4. Introduction and referral to family self-help programs and advocacy organizations that promote recovery.

5. Assistance to obtain necessary services for individuals with children, including but not limited to:
   - Individual supportive counseling.
   - Parenting training.
   - Service coordination.
   - Services to help the individual throughout pregnancy and the birth of a child.
   - Services to help the individual fulfill parenting responsibilities and coordinate services for the child or children.
   - Services to help the individual restore relationships with children who are not in the individual’s custody.

25.6(3) Mobile response. The purpose of mobile response is to provide short-term individualized crisis stabilization, following a crisis screening or assessment, that is designed to restore the individual to a prior functional level. Mobile response services shall be provided as described in rule 441—24.36(225C).

25.6(4) 23-hour observation and holding. The purpose of 23-hour observation and holding is to provide up to 23 hours of care for adults in a safe and secure, medically staffed treatment environment. Twenty-three-hour observation and holding shall be provided as described in rule 441—24.37(225C).

25.6(5) Crisis stabilization community-based services. The purpose of crisis stabilization community-based services is to provide short-term services designed to de-escalate a crisis situation and stabilize an individual following a mental health crisis in the setting where the individual lives, works, or recreates. Crisis stabilization community-based services shall be provided as described in rule 441—24.38(225C).

25.6(6) Crisis stabilization residential services. The purpose of crisis stabilization residential services is to provide a short-term alternative living arrangement in a setting of no more than 16 beds that is designed to de-escalate a crisis situation and stabilize an individual following a mental health crisis. Crisis stabilization residential services shall be provided as described in rule 441—24.39(225C).

25.6(7) Subacute mental health services. The purpose of subacute mental health services is to provide a comprehensive set of wraparound services to adults who have had or are at imminent risk of having acute or crisis mental health symptoms.

a. Regional coordination. Each region shall designate at least one subacute mental health service provider and ensure that subacute mental health services are available to the residents of the region consistent with subrule 25.4(4).

b. Subacute mental health services standards.

   (1) Subacute mental health services in a facility-based setting shall be provided as described in Iowa Code chapter 135G and 481—Chapter 71.

   (2) Subacute mental health services in a community-based setting are the same as assertive community treatment (ACT) services provided as described in subrule 25.6(2).

25.6(8) Intensive residential services. The purpose of intensive residential services is to serve adults with the most intensive severe and persistent mental illness conditions who have functional impairments and may also have multi-occurring conditions. Intensive residential services provide intensive 24-hour supervision, behavioral health services, and other supportive services in a community-based residential setting.
a. **Regional coordination.** Each region shall designate at least one intensive residential services provider and ensure that intensive residential services are available to the residents of the region consistent with subrule 25.4(9).

   (1) Regions shall work collaboratively to develop intensive residential services strategically located throughout the state with the capacity to serve a minimum of 120 individuals, with the support of the medical assistance program.

   (2) Intensive residential services may be shared by two or more regions.

   (3) Each region shall establish methods to provide for reimbursement of a region when the non-Medicaid-eligible resident of another region utilizes intensive residential services or other non-Medicaid-covered services located in that region.

b. **Intensive residential services standards.** An organization that seeks regional designation as an intensive residential service provider shall meet the following criteria at initial application and annually thereafter. A designated intensive residential service provider shall:

   (1) Be enrolled as an HCBS 1915(i) habilitation provider or an HCBS 1915(c) intellectual disability waiver supported community living provider in good standing with the Iowa Medicaid enterprise.

   (2) Provide staffing 24 hours a day, 7 days a week, 365 days a year.

   (3) Maintain a minimum staffing ratio of one staff to every two and one-half residents. Staffing ratios shall be responsive to the needs of the individuals served.

   (4) Ensure that all staff members have the following minimum qualifications:

      1. One year of experience working with individuals with a mental illness or multi-occurring conditions.

      2. A high school diploma or equivalent.

      3. Ensure that within the first year of employment, staff members complete 48 hours of training in mental health and multi-occurring conditions. During each consecutive year of employment, staff members shall complete 24 hours of training in mental health and multi-occurring conditions. Staff training shall include, but is not limited to the following:

         1. Applied behavioral analysis.


         5. Motivational interviewing.

         6. Psychiatric medications.

         7. Substance use disorders and treatment.

         8. Other diagnoses or conditions present in the population served.

   (6) Provide coordination with the individual’s clinical mental health and physical health treatment, and other services and supports.

   (7) Provide clinical oversight by a mental health professional. The mental health professional shall review and consult on all behavioral health services provided to the individual, and any other plans developed for the individual, including but not limited to service plans, behavior intervention plans, crisis intervention plans, emergency plans, cognitive rehabilitation plans, or physical rehabilitation plans.

   (8) Have a written cooperative agreement with an outpatient mental health provider and ensure that individuals have timely access to outpatient mental health services, including but not limited to ACT.

   (9) Be licensed as a substance abuse treatment program pursuant to Iowa Code chapter 125 or have a written cooperative agreement with and timely access to licensed substance abuse treatment services for those individuals with a demonstrated need.

   (10) Accept and serve eligible individuals who are court-ordered to intensive residential services.

   (11) Provide services to eligible individuals on a no reject, no eject basis.

   (12) If funded through HCBS and not licensed as a residential care facility, serve no more than five individuals at a site.

   (13) Be located in a neighborhood setting to maximize community integration and natural supports.
Demonstrate specialization in serving individuals with an SPMI or multi-occurring conditions and serve individuals with similar conditions in the same site.

c. **Eligibility criteria for admission to intensive residential services.** To be eligible to receive intensive residential services, an individual shall meet all of the following criteria:

1. The individual is an adult with a diagnosis of a severe and persistent mental illness or multi-occurring conditions.
2. The individual is approved by the Iowa Medicaid enterprise or Medicaid managed care organization, as appropriate, for the highest rate of home-based habilitation or the highest rate of home- and community-based services intellectual disability waiver supported community living service. Reimbursement rates for intensive residential services shall be equal to or greater than the established fees for those services. Regional reimbursement rates for non-Medicaid individuals receiving intensive residential services shall be negotiated by the region and the provider and shall be no less than the minimum Medicaid rate.
3. The individual has had a standardized functional assessment and screening for multi-occurring conditions completed 30 days or less prior to application for intensive residential services, and the functional assessment and screening demonstrates that the individual:
   1. Has a diagnosis that meets the criteria of severe and persistent mental illness as defined in rule 441—25.1(331);
   2. Has three or more areas of significant impairment in activities of daily living or instrumental activities of daily living;
   3. Is in need of 24-hour supervised and monitored treatment to maintain or improve functioning and avoid relapse that would require a higher level of treatment;
   4. Has exhibited a lack of progress or regression after an adequate trial of active treatment at a less intensive level of care;
   5. Is at risk of significant functional deterioration if intensive residential services are not received or continued; and
   6. Meets one or more of the following:
      - Has a record of three or more psychiatric hospitalizations in the 12 months preceding application for intensive residential services.
      - Has a record of more than 30 medically unnecessary psychiatric hospital days in the 12 months preceding application for intensive residential services.
      - Has a record of more than 90 psychiatric hospital days in the 12 months preceding application for intensive residential services.
      - Has a record of three or more emergency room visits related to a psychiatric diagnosis in the 12 months preceding application for intensive residential services.
      - Is residing in a state resource center and has an SPMI.
      - Is being served out of state due to the unavailability of medically necessary services in Iowa.
      - Has an SPMI and is scheduled for release from a correctional facility or a county jail.
      - Is homeless or precariously housed.

441—25.7(331) **Non-core services.** When a mental health and disability services region chooses to make the following non-core services available, the region shall ensure that such services meet the requirements of this rule.

25.7(1) **Prescreening assessments.** Prescreening assessments provided by the region or an entity contracting with the region shall meet the following requirements:

a. The prescreening assessment shall be provided in an emergency room or other crisis assessment setting within four hours of an emergency detention of an individual believed to be mentally ill to determine if inpatient psychiatric hospitalization is necessary.

b. The prescreening assessment shall be performed by a licensed physician or mental health professional who shall also provide ongoing consultations while the individual remains in the emergency room or other crisis assessment setting. The services provided by the consulting professional are
intended to supplement, but do not replace, the services of the emergency room or other crisis setting staff.

c. The licensed physician or mental health professional shall submit appropriate documentation and reports to the emergency room or other crisis setting and the court as necessary.

d. The region or entity contracting with the region shall ensure the coordination of appropriate levels of care. Coordination may include but is not limited to:

1. Securing an inpatient psychiatric bed when inpatient psychiatric hospitalization is needed.

2. Utilizing community-based resources and services such as 23-hour observation and holding, crisis stabilization community-based or residential services, subacute facility-based mental health services or detoxification centers.

3. Facilitating outpatient treatment appointments when inpatient psychiatric hospitalization is not needed.

25.7(2) Transportation. A service provider that is under contract with a region and transports individuals pursuant to an Iowa Code chapter 229 court order shall meet the following requirements:

a. The transport vehicle shall be secure such that the individual being transported cannot open doors or windows of the vehicle while it is moving.

b. Transportation staff shall complete a minimum of eight hours of training in mental health issues and crisis intervention in the first month of employment. After the initial training, each staff member shall complete a minimum of two hours of training annually.

[ARC 4207C, IAB 1/2/19, effective 3/1/19]

These rules are intended to implement Iowa Code chapter 331.

441—25.8 to 25.10 Reserved.

DIVISION II
REGIONAL SERVICE SYSTEM

PREAMBLE

These rules define the standards for a regional service system. The mental health and disability services and children’s behavioral health services provided by counties operating as a region shall be delivered in accordance with a regional service system management plan approved by the region’s governing board and implemented by the regional administrator (Iowa Code section 331.393). Iowa counties are encouraged to enter into a regional system when the regional approach is likely to increase the availability of services to residents of the state who need the services. It is the intent of the Iowa general assembly that the adult residents of this state should have access to needed mental health and disability services and that Iowa children should have access to needed behavioral health services regardless of the location of their residence.

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.11(331) Definitions.

“Access point” means a provider, public or private institution, advocacy organization, legal representative, or educational institution with staff trained to complete applications and guide individuals with a disability to needed services.

“Assessment and evaluation” means the same as defined in rule 441—25.1(331).

“Assistive technology account” means funds in contracts, savings, trust or other financial accounts, financial instruments, or other arrangements with a definite cash value that are set aside and designated for the purchase, lease, or acquisition of assistive technology, assistive technology services, or assistive technology devices. Assistive technology accounts must be held separately from other accounts. Funds must be used to purchase, lease, or otherwise acquire assistive technology services or devices for a working individual with a disability. Any withdrawal from an assistive technology account other than for the designated purpose becomes a countable resource.

“Authorized representative” means a person designated by the individual or by Iowa law to act on the individual’s behalf in specified affairs to the extent prescribed by law.
“Chief executive officer” means the person chosen and supervised by the governing board who serves as the single point of accountability for the mental health and disability services region and whose responsibilities include, but are not limited to, planning, budgeting, monitoring county and regional expenditures, and ensuring the delivery of quality services that achieve expected outcomes for the individuals served.

“Choice” means the individual or authorized representative chooses the services, supports, and goods needed to best meet the individual’s goals and accepts the responsibility and consequences of those choices.

“Clear lines of accountability” means the structure of the governing board’s organization makes it evident that the ultimate responsibility for the administration of the non-Medicaid-funded mental health and disability services lies with the governing board and that the governing board directly and solely supervises the organization’s chief executive officer.

“Community” means an integrated setting of an individual’s choice.

“Conflict-free case management” means there is no real or seeming incompatibility between the case manager’s other interests and the case manager’s duties to the individual served and includes case management separate from direct service provision; eligibility determination for services; establishment of funding levels for the individual’s services; and requirements that prohibit the case manager from performing evaluations, assessments, and plans of care if the case manager is related by blood or marriage to the individual or any of the individual’s paid caregivers or persons financially responsible for the individual or empowered to make financial or health-related decisions on behalf of the individual.

“Coordinator of children’s behavioral health services” means a member of the regional administrative entity staff who meets the requirements described in Iowa Code section 331.390(3) “b” and is responsible for coordinating behavioral health services for children.

“Coordinator of mental health and disability services” means a member of the regional administrative entity staff who meets the requirements described in Iowa Code section 331.390(3) “b” and is responsible for coordinating mental health and disability services for adults.

“Countable household income” means earned and unearned income of the family of a child according to the modified adjusted gross income methodology.

“Countable resource” means real or personal property that has a cash value that is available to the owner upon disposition and is capable of being liquidated.

“Countable value” means the equity value of a resource, which is the current fair market value minus any legal debt on the item.

“County of residence” means the same as defined in Iowa Code section 331.394.

“Department” means the department of human services.

“Director” means the director of human services.

“Disability services” means the same as defined in Iowa Code section 225C.2.

“Emergency service” means the same as defined in rule 441—88.21 (249A).

“Empowerment” means that the service system ensures the rights, dignity, and ability of individuals and their families to exercise choices, take risks, provide input, and accept responsibility.

“Exempt resource” means a resource that is disregarded in the determination of eligibility for public funding assistance and in the calculation of client participation amounts.

“Federal poverty level” means the most recently revised annual poverty income guidelines published in the Federal Register by the United States Department of Health and Human Services.

“Homeless person” means the same as defined in Iowa Code section 48A.2.

“Household” means, for an individual who is 18 years of age or over, the individual, the individual’s spouse or domestic partner, and any children, stepchildren, or wards under the age of 18 who reside with the individual. For an individual under the age of 18, “household” means the individual, the individual’s parents (or parent and domestic partner), stepparents or guardians, and any children, stepchildren, or wards under the age of 18 of the individual’s parents (or parent and domestic partner), stepparents, or guardians who reside with the individual.

“Income” means all gross income received by the individual’s household, including but not limited to wages, income from self-employment, retirement benefits, disability benefits, dividends, annuities,
public assistance, unemployment compensation, alimony, child support, investment income, rental income, and income from trust funds.

“Individual” means any person seeking or receiving services in a regional service system.

“Individualized services” means services and supports that are tailored to meet the personalized needs of the individual.

“Liquid assets” means assets that can be converted to cash in 20 days. Liquid assets include but are not limited to cash on hand, checking accounts, savings accounts, stocks, bonds, cash value of life insurance, individual retirement accounts, certificates of deposit, and other investments.

“Managed care” means a system that provides the coordinated delivery of services and supports that are necessary and appropriate, delivered in the least restrictive settings and in the least intrusive manner. Managed care seeks to balance three factors: achieving high-quality outcomes for participants, coordinating access, and containing costs.

“Managed system” means a system that integrates planning, administration, financing, and service delivery. The system consists of the financing or governing organization, the entity responsible for care management, and the network of service providers.

“Management organization” means an organization contracted to manage part or all of the service system for a region.

“Medical savings account” means an account that is exempt from federal income taxation pursuant to Section 220 of the U.S. Internal Revenue Code (26 U.S.C. §220) as supported by documentation provided by the bank or other financial institution. Any withdrawal from a medical savings account other than for the designated purpose becomes a countable resource.

“Mental health professional” means the same as defined in Iowa Code section 228.1(6).

“Modified adjusted gross income” means the methodology prescribed in 42 U.S.C. Section 1396a(e)(14) and 42 CFR 435.603.

“Non-liquid assets” means assets that cannot be converted to cash in 20 days. Non-liquid assets include, but are not limited to, real estate, motor vehicles, motor vessels, livestock, tools, machinery, and personal property.

“Population” means the same as defined in Iowa Code section 331.388.

“Provider” means an individual, firm, corporation, association, or institution which is providing or has been approved to provide medical assistance, is accredited under 441—Chapter 24, holds a professional license to provide the service, is accredited by a national insurance panel, or holds other national accreditation or certification.

“Region incentive fund” means the same as defined in Iowa Code section 225C.7A.

“Regional administrator” or “regional administrative entity” means the administrative office or organization formed by agreement of the counties participating in a mental health and disability services region to function on behalf of those counties.

“Regional services fund” means the mental health and disability regional services fund created in Iowa Code section 225C.7A.

“Regional service system management plan” means the regional service system plan developed pursuant to Iowa Code section 331.393 for the funding and administration of non-Medicaid-funded mental health and disability services and includes an annual service and budget plan, a policies and procedures manual, and an annual report and how the region will coordinate with the department in the provision of mental health and disability services funded under the medical assistance program.

“Resources” means all liquid and non-liquid assets that are owned in part or in whole by the individual household, that could be converted to cash to use for support and maintenance, and that the individual household is not legally restricted from using for support and maintenance.

“Retirement account” means any retirement or pension fund or account listed in Iowa Code section 627.6(8) “f.”

“Retirement account in the accumulation stage” means a retirement account into which a deposit was made in the previous tax year. Any withdrawal from a retirement account becomes a countable resource.
“Service system” refers to the mental health and disability services and supports administered by the regional administrative entity and paid from the regional services fund.

“State case status” means the standing of an individual who has no county of residence.

“State commission” means the same as defined in Iowa Code section 225C.5.

“System of care” means the coordination of a system of services and supports to individuals and their families that ensures they optimally live, work, and recreate in integrated communities of their choice.

“System principles” means practices that include individual choice, community and empowerment.

[ARC 1173C; IAB 11/13/13, effective 1/1/14; ARC 4896C, IAB 2/12/20, effective 3/18/20; ARC 6008C, IAB 11/3/21, effective 10/4/21; ARC 6195C, IAB 2/9/22, effective 3/16/22]

441—25.12(331) Regional governance structure. The counties comprising a mental health and disability services region shall enter into an agreement to form a regional administrator under the control of a governing board to function on behalf of those counties as defined in Iowa Code chapter 28E and sections 331.388, 331.390 and 331.392 and 2013 Iowa Acts, House File 648, section 14.

25.12(1) Governing board. The governing board shall comply with the provisions of Iowa Code section 331.390, Iowa Code chapter 69 and other applicable laws relating to boards and commissions, including but not limited to the following:

a. The governing board shall include the following voting members:
   (1) At least one board of supervisors member from each county comprising the region or their designees.
   (2) One adult person who utilizes mental health and disability services or is an actively involved relative of an adult who utilizes such services, designated by the regional adult mental health and disability services advisory committee.
   (3) Members designated by the regional children’s behavioral health services advisory committee as follows:
      1. One member representing the education system in the region.
      2. One member who is a parent of a child who utilizes children’s behavioral health services or is an actively involved relative of a child who utilizes such services.

   b. The governing board shall include the following nonvoting members in an ex officio capacity:
      (1) One member representing an adult service provider in the region, designated by the regional adult mental health and disability services advisory committee.
      (2) One member representing a children’s behavioral health service provider in the region, designated by the regional children’s behavioral health services advisory committee.

   c. The governing board shall create a regional adult mental health and disability services advisory committee, which shall designate members to the governing board as defined in Iowa Code section 331.390(2).

   d. The governing board shall create a regional children’s behavioral health services advisory committee, which shall designate members to the governing board as defined in Iowa Code section 331.390(2).

   e. The governing board shall appoint and evaluate the performance of the chief executive officer of the regional administrative entity who will serve as the single point of accountability for the region.

25.12(2) Regional administrator. The formation of the regional administrator shall be as defined in Iowa Code sections 331.388 and 331.390.

a. The regional administrative entity is under the control of the governing board.

b. The regional administrative entity shall enter into and manage performance-based contracts in accordance with Iowa Code section 225C.4(1) “u.”

c. The regional administrative entity structure shall have clear lines of accountability.

d. The regional administrative entity functions as a lead agency utilizing shared county or regional staff or other means of limiting administrative costs.

e. The regional administrative entity staff shall include one or more coordinators of mental health and disability services.
f. The regional administrative entity staff shall include one or more coordinators of children’s behavioral health services.

25.12(3) Regional service system management. The region may either directly implement a system of service management and contract with service providers, or contract with a private entity to manage the regional service system, provided all requirements of Iowa Code section 331.393 are met by the private entity.

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.13(331) Regional finances.

25.13(1) Funding. Funding for non-Medicaid mental health and disability services and children’s behavioral health services is under the control of the governing board and shall:

a. Be maintained to limit administrative burden and provide public transparency regarding financial processes.
   b. Be maintained in one of three ways:
      (1) In a combined account.
      (2) In separate county accounts that are under the control of the governing board.
      (3) In other arrangements authorized by law.

25.13(2) Accounting system and financial reporting. The accounting system and financial reporting to the department shall conform to Iowa Code section 331.391 and include all non-Medicaid mental health and disability expenditures. Information shall be separated and identified in a uniform chart of accounts, including but not limited to the following: expenses for administration; purchase of services; and enterprise costs for which the region is a service provider or is directly billing and collecting payments.

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.14(331) Regional governance agreement. The expectations for regional governance agreements entered into by the counties comprising a mental health and disability services region are defined in Iowa Code sections 28E.1, 331.388, 331.390 and 331.392.

25.14(1) Organizational provisions. The organizational provisions of the regional governance agreement shall include the following:

a. A statement of purpose, goals, and objective of entering into the agreement.
   b. Identification of the governing board membership and the terms, methods of appointment, and voting procedures, including whether or not voting will be weighted.
   c. The identification of the process for selecting the executive staff, including but not limited to the chief executive officer of the regional administrative entity.
   d. Identification of the counties participating in the agreement.
   e. The time period of the agreement and terms for termination or renewal of the agreement.
   f. Provisions for joining a region. Additional counties may join the region. The agreement shall not prohibit a county from being assigned by the department to a region according to Iowa Code section 331.389(4) “c.”
   g. Methods for dispute resolution and mediation.
   h. Methods for termination of a county’s participation in the region.
   i. Provision for formation and assigned responsibilities for one or more regional advisory committees for adult mental health and disability services consisting of:
      (1) Individuals who utilize services or the actively involved relatives of such individuals.
      (2) Service providers of adult mental health and disability services.
      (3) Governing board members.
      (4) Other interests identified in the agreement.
   j. Provision for formation and assigned responsibilities for one or more regional advisory committees for children’s behavioral health services consisting of:
      (1) A parent of a child who utilizes services or an actively involved relative of such child.
      (2) A member of the education system.
      (3) An early childhood advocate.
(4) A child welfare advocate.
(5) A children’s behavioral health service provider.
(6) A member of the juvenile court.
(7) A pediatrician.
(8) A child care provider.
(9) A local law enforcement representative.
(10) A regional governing board member.

25.14(2) Administrative provisions. The administrative provisions of the regional governance agreement shall include all of the following:

a. Identification of whether the region will either directly implement a system of service management or contract with a private entity to manage the regional service system as defined in Iowa Code section 331.393(7).

b. Responsibility of the governing board in appointing and evaluating the performance of the chief executive officer of the regional administrative entity.

c. A general list of the functions and responsibilities of the regional administrative entity’s chief executive officer and other staff including but not limited to coordinators of mental health and disability services and coordinators of children’s behavioral health services.

d. Specification of the functions to be carried out by each party to the agreement and by any subcontractor of a party to the agreement.

25.14(3) Financial provisions. The financial provisions of the regional governance agreement shall include all of the following:

a. Methods for pooling, managing and expending funds under control of the regional administrative entity. If the agreement does not provide for pooling of the participating county moneys in a single fund, the agreement shall specify how the participating county moneys will be subject to the control of the regional administrative entity.

b. Methods for allocating administrative funding and resources.

c. Methods for allocating a region’s cash flow amount in the event a county leaves the region. A region’s cash flow amount shall be divided by the percentage of each county’s population according to the region’s population indicated in the region’s annual service and budget plan and shall be allocated to the counties.

d. Methods for contributing initial funds to the region.

e. Methods for acquiring or disposing of real property.

f. The process for how to use savings achieved for reinvestment.

g. A process for performance of an annual independent audit of the regional administrator.

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4896C, IAB 2/12/20, effective 3/18/20; ARC 5956C, IAB 10/6/21, effective 12/1/21]


25.15(1) Eligibility for mental health services. An individual must comply with all of the following requirements to be eligible for mental health services under the regional service system:

a. The individual complies with the financial eligibility requirements in rule 441—25.16(331).

b. The individual is at least 18 years of age.

c. The individual is a resident of this state.

d. The individual has had at any time during the preceding 12-month period a mental health, behavioral, or emotional disorder or, in the opinion of a mental health professional, may now have such a diagnosable disorder. The diagnosis shall be made in accordance with the criteria provided in the most recent Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association and shall not include the manual’s “V” codes identifying conditions other than a disease or injury. The diagnosis shall also not include substance-related disorders, dementia, antisocial personality, or developmental disabilities, unless co-occurring with another diagnosable mental illness.

e. The results of a standardized functional assessment support the need for mental health services of the type and frequency identified in the individual’s case plan. The standardized functional
assessment methodology shall be designated for mental health services by the director of human services in consultation with the state commission. A functional assessment must be completed within 90 days of application for services.

25.15(2) Eligibility for children’s behavioral health services. An individual must comply with all of the following requirements to be eligible for children’s behavioral health services under the regional service system:
   a. The individual is a child under 18 years of age.
   b. The child’s custodial parent is a resident of the state of Iowa, and the child is physically present in the state.
   c. The child’s family meets the financial eligibility requirements in rule 441—25.16(331).
   d. The child has been diagnosed with a serious emotional disturbance. A serious emotional disturbance diagnosis is not required to access comprehensive facility and community-based crisis services according to Iowa Code section 331.397A(4)”b.”

25.15(3) Eligibility for intellectual disability services. An individual must comply with all of the following requirements to be eligible for intellectual disability services under the regional service system:
   a. The individual complies with the financial eligibility requirements in rule 441—25.16(331).
   b. The individual is at least 18 years of age.
   c. The individual is a resident of this state.
   d. The individual has a diagnosis of intellectual disability as defined by Iowa Code section 4.1(9A).
   e. The results of a standardized functional assessment support the need for intellectual disability services of the type and frequency identified in the individual’s case plan. The standardized functional assessment methodology shall be designated for intellectual services by the director of human services in consultation with the state commission. A functional assessment must be completed within 90 days of application for services.

25.15(4) Other conditions of eligibility for intellectual disability services.
   a. An individual who is 17 years of age, is a resident of this state, and is receiving publicly funded children’s services may be considered eligible for services through the regional service system during the three-month period preceding the individual’s eighteenth birthday in order to provide a smooth transition from children’s to adult services.
   b. An individual less than 18 years of age and a resident of the state may be considered eligible for those intellectual disability services made available to all or a portion of the residents of the region of the same age and eligibility class under the county management plan of one or more counties of the region applicable prior to formation of the region. Eligibility for services under this paragraph is limited to availability of regional service system funds without limiting or reducing core services, and if part of the approved regional service system management plan.

25.15(5) Eligibility for brain injury services. An individual must comply with all of the following requirements to be eligible for brain injury services under the regional service system, if such services were provided to the same class of individuals by a county in the region prior to regional formation.
   a. The individual complies with the financial eligibility requirements in rule 441—25.16(331).
   b. The individual is at least 18 years of age.
   c. The individual is a resident of this state.
   d. The individual has a diagnosis of brain injury as defined in rule 441—83.81(249A).
   e. The results of a standardized functional assessment support the need for brain injury services of the type and frequency identified in the individual’s case plan. The standardized functional assessment methodology used is the methodology approved for brain injury services by the director of human services in consultation with the state commission. A functional assessment must be completed within 90 days of application for services.

25.15(6) Other conditions of eligibility for brain injury services. An individual who is 17 years of age, is a resident of this state, and is receiving publicly funded children’s services may be considered eligible for services through the regional service system during the three-month period preceding the individual’s eighteenth birthday in order to provide a smooth transition from children’s to adult services.

25.15(7) Eligibility for developmental disability services.
a. Until funding is designated for other service populations, eligibility for the core service domains shall be as identified in Iowa Code section 331.397(1) "b." 

b. If a county in a region was providing services to an eligibility class of individuals with a developmental disability other than intellectual disability prior to formation of the region, the class of individuals shall remain eligible for the services provided when the region is formed, providing that funds are available to continue such services without limiting or reducing core services. The individual must also meet the requirements in paragraphs 25.15(7) "c," "d," "e" and "f."

c. The individual complies with the financial eligibility requirements in rule 441—25.16(311).

d. The individual is at least 18 years of age.

e. The individual is a resident of this state.

f. The individual has a diagnosis of a developmental disability other than an intellectual disability as defined in rule 441—24.1(225C).

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.16(331) Financial eligibility requirements. The regional service system management plan shall identify basic financial eligibility standards for mental health and disability services as defined in Iowa Code sections 331.395 and 331.396A.

25.16(1) Income requirements.

a. Income requirements for adult mental health and disability services shall be as follows:
   (1) The person must have an income equal to or less than 150 percent of the federal poverty level.
   (2) A person who is eligible for federally funded services and other support must apply for such services and support.

b. Income requirements for children’s behavioral health services shall be as follows:
   (1) The child’s family has countable household income equal to or less than 500 percent of the federal poverty level. Countable household income and family size shall be determined using the modified adjusted gross income methodology.
   (2) An eligible child whose family’s countable household income is at least 150 percent and not more than 500 percent of the federal poverty level shall be subject to a cost share as described in subrule 25.16(3).

   (3) Verification of income. Income shall be verified using the best information available.
      1. Pay stubs, tip records and employers’ statements are acceptable forms of verification of earned income.
      2. Self-employment income can be verified through business records from the previous year if they are representative of anticipated earnings. If business records from the previous year are not representative of anticipated earnings, an average of the business records from the previous two or three years may be used if that average is representative of anticipated earnings.
   (4) Changes in income. Financial eligibility shall be reviewed on an annual basis and may be reviewed more often in response to increases or decreases in income.
   (5) A child who is eligible for federally funded services and other support must apply for such services and support.

25.16(2) Resource requirements. There are no resource limits for the family of a child seeking children’s behavioral health services. An adult seeking mental health and disability services must have resources that are equal to or less than $2,000 in countable value for a single-person household or $3,000 in countable value for a multiperson household or follow the most recent federal supplemental security income guidelines.

a. The countable value of all countable resources, both liquid and non-liquid, shall be included in the eligibility determination except as exempted in this subrule.

b. A transfer of property or other assets within five years of the time of application with the result of, or intent to, qualify for assistance may result in denial or discontinuation of funding.

c. The following resources shall be exempt:
(1) The homestead, including equity in a family home or farm that is used as the individual household’s principal place of residence. The homestead shall include all land that is contiguous to the home and the buildings located on the land.
(2) One automobile used for transportation.
(3) Tools of an actively pursued trade.
(4) General household furnishings and personal items.
(5) Burial account or trust limited in value as to that allowed in the medical assistance program.
(6) Cash surrender value of life insurance with a face value of less than $1,500 on any one person.
(7) Any resource determined excludable by the Social Security Administration as a result of an approved Social Security Administration work incentive.

d. If an individual does not qualify for federally funded or state-funded services or other support but meets all income, resource, and functional eligibility requirements of this chapter, the following types of resources shall additionally be considered exempt from consideration in eligibility determination:
   (1) A retirement account that is in the accumulation stage.
   (2) A medical savings account.
   (3) An assistive technology account.
   (4) A burial account or trust limited in value as to that allowed in the medical assistance program.

e. An individual who is eligible for federally funded services and other support must apply for and accept such funding and support.

25.16(3) Cost-share standards. A regional administrative entity must comply with cost-share standards as defined in Iowa Code sections 331.395 and 331.396A.

a. Cost sharing is allowed for adults with income above 150 percent of the federal poverty level as defined by the most recently revised poverty guidelines published by the United States Department of Health and Human Services.

Cost-share amounts for regionally funded adult mental health and disability services in this rule are related to core services as defined in Iowa Code section 331.397 and must be identified in the enrollment and eligibility section of the region’s policy and procedures approved by the department.

b. Cost-share amounts for children’s behavioral health services are applicable to core services as defined in Iowa Code section 331.397A. The family of a child receiving regional funding for behavioral health services shall be responsible for a cost-share amount based on the family’s household income as follows:

<table>
<thead>
<tr>
<th>Family Income as a % of FPL</th>
<th>Cost Share % Paid by Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 150%</td>
<td>0%</td>
</tr>
<tr>
<td>151 to 200%</td>
<td>10%</td>
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<tr>
<td>201 to 250%</td>
<td>15%</td>
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<tr>
<td>251 to 300%</td>
<td>20%</td>
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<td>301 to 350%</td>
<td>35%</td>
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<td>351 to 400%</td>
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<td>401 to 450%</td>
<td>65%</td>
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<tr>
<td>451 to 500%</td>
<td>80%</td>
</tr>
<tr>
<td>Over 500%</td>
<td>100%</td>
</tr>
</tbody>
</table>

25.16(4) Cost-share standards required by any federal, state, regional, or municipal program. Any cost sharing or other client participation required by any federal, state, regional or municipal program in which the individual participates shall be required by the regional administrative entity. Such cost sharing includes, but is not limited to:

a. Client participation for maintenance in a residential care facility through the state supplementary assistance program.

b. The financial liability for institutional services paid by counties as provided in Iowa Code section 230.15.
c. The financial liability for attorney fees related to commitment as provided by Iowa Code section 229.8.  
[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.17(331) Exempted counties. If a county has been exempted pursuant to Iowa Code section 331.389 from the requirement to enter into a regional service system, the county and the county’s board of supervisors shall fulfill all the requirements of this chapter for a regional service system management plan.  
[ARC 1173C, IAB 11/13/13, effective 1/1/14]

441—25.18(331) Annual service and budget plan. The annual service and budget plan shall describe the services to be provided and the cost of those services for the ensuing year.

25.18(1) The annual service and budget plan is due on April 1 prior to the July 1 implementation of the annual plan and shall be approved by the region’s governing board prior to submittal to the department.

25.18(2) The annual service and budget plan shall include but not be limited to the following:

a. Access points. A list of the local access points for mental health and disability services and children’s behavioral health services, including the names of the access points and the physical locations and contact information.

b. Service coordination and targeted case management. A list of the service coordination and targeted case management agencies utilized in the region, whether funded by the region, the medical assistance program, or third-party payers, including the physical location and contact information for those agencies.

c. Crisis planning. A list of accredited crisis services available in the region for crisis prevention, response and resolution, including contact information for the agencies responsible.

d. Intensive mental health services. Identification of the intensive mental health services designated by the region according to rule 441—25.6(331), including the provider name, contact information, and location of each of the following:

(1) Access center(s).
(2) ACT services.
(3) Intensive residential services.
(4) Subacute mental health services.

e. Children’s behavioral health services. Identification of children’s behavioral health services as described in subrule 25.2(4), including eligibility requirements or reference to where eligibility requirements can be found in the policies and procedures manual.

f. Scope of services. A description of the scope of services to be provided, a projection of need for the service, and the funding necessary to meet the need.

(1) The scope shall include the regional core services as identified in rule 441—25.2(331).
(2) The scope shall also include services in addition to the required core services.

g. Budget and financing provisions for the next year. The provisions shall address how county, regional, state and other funding sources will be used to meet the service needs within the region.

h. Financial forecasting measures. A description of the financial forecasting measures used in the identification of service need and funding necessary for services and a financial statement of actual revenues and actual expenses by chart of account codes, including levies by county.

i. Provider reimbursement provisions. A description of the types of provider reimbursement methods that will be used, including fee for service, compensation for a “system of care” approach, and for use of nontraditional providers. A region also shall provide information on funding approaches that identify and incorporate all services and sources of funding used by the individuals receiving services, including the medical assistance program.  
[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.19(331) Annual service and budget plan approval. The annual service and budget plan shall be submitted each year by April 1. The director shall review all regional annual service and budget
plans submitted by the dates specified. If the director finds the regional annual service and budget plan in compliance with these rules and state and federal laws, the director may approve the plan. A plan approved by the director for a fiscal year beginning July 1 shall remain in effect until June 30, subject to amendment.

25.19(1) Criteria for acceptance. The director shall determine a plan is acceptable when it contains all the required information, meets the criteria described in this division, and is in compliance with all applicable state and federal laws. The director may request additional information to determine whether or not the plan contains all the required information and meets criteria described in this division.

25.19(2) Notification. Except as specified in subrule 25.19(3), the director shall notify the region in writing of the decision on the plan by June 1 of each year. The decision shall specify that either:

a. The annual service and budget plan is approved as it was submitted, either with or without supplemental information already requested and received.

b. The annual service and budget plan will not be approved until revisions are made. The letter will specify the nature of the revisions requested and the time frames for their submission.

25.19(3) Review of late submittals. The director may review plans not submitted by April 1 after all plans submitted by that date have been reviewed. The director will proceed with the late submittals in a timely manner.

25.19(4) Amendments. An amendment to the annual service and budget plan shall be approved by the regional governance board and submitted to the department at least 45 days before the date of implementation. Before implementation of any amendment to the plan, the director must approve the amendment.

a. Criteria for acceptance. The director shall determine an amendment is acceptable when it contains all the required information and meets the criteria described in this division for the applicable part of the annual service and budget plan and is in compliance with all applicable state and federal laws. The director may request additional information to determine whether or not the amendment contains all the required information and meets criteria described in this division.

b. Notification. The director shall notify the region, in writing, of the decision on the amendment within 45 days of receipt of the amendment. The decision shall specify either that:

(1) The amendment is approved as it was submitted, either with or without supplemental information already requested and received.

(2) The amendment is not approved. The notification will include why the amendment is not approved.

25.19(5) Reconsideration. Regions dissatisfied with the director’s decision on a plan or an amendment may file a letter with the director requesting reconsideration. The letter requesting reconsideration must be received within 30 working days of the date of the notice of decision and shall include a request for the director to review the decision and the reasons for dissatisfaction. Within 30 working days of the receipt of the letter requesting reconsideration, the director will review both the reconsideration request and evidence provided. The director shall issue a final decision in writing.

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4207C, IAB 1/2/19, effective 3/1/19]

441—25.20(331) Annual report. The annual report shall describe the services provided, the cost of those services, the number of individuals served, and the outcomes achieved for the previous fiscal year. The annual report is due on December 1 following a completed fiscal year of implementing the annual service and budget plan. The annual report shall include but not be limited to:

1. Services actually provided.
2. The status of service development.
3. Actual numbers of children and adults served.
4. Documentation that each regionally designated access center has met the service standards in subrule 25.6(1).
5. Documentation that each regionally designated ACT team has been evaluated for program fidelity, including a peer review as required by subrule 25.6(2), and documentation of each team’s most recent fidelity score.
6. Documentation that each regionally designated subacute service has met the service standards in subrule 25.6(7).
7. Documentation that each regionally designated intensive residential service home or intensive residential service has met the service standards in subrule 25.6(8).
8. Financial statement of actual revenues and actual expenditures by chart of account codes, including levies by county.

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4207C, IAB 1/2/19, effective 3/1/19; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.21(331) Policies and procedures manual for the regional service system. The policies and procedures manual shall describe the policies and process developed to direct the management and administration of the regional service system. The initial manual is due on April 1, 2014, and will remain in effect subject to amendment.

25.21(1) Content. The manual shall include but not be limited to:

a. Financing and delivery of services and supports. A description of the region’s process used to develop and ensure the ongoing financial accountability and delivery of services outlined in the region’s annual service and budget plan shall be included.

b. Enrollment. The application and enrollment process that is readily accessible to individuals and their families or authorized representatives shall be included. This procedure shall identify regional access points and where individuals can apply for services and how and when the applications will reach the regional administrative entity’s designated staff for processing.

c. Eligibility. The process utilized to determine eligibility shall be included in the manual and shall include but not be limited to:

(1) The criteria used to authorize or deny funding for services and supports. This shall include guidelines for who is eligible to receive services and supports by eligibility group, and type of service or support.

(2) Financial eligibility and copayment criteria, which shall meet the requirements of rule 441—25.16(331).

(3) The time frames for conducting eligibility determination that provide for timely access to services, including necessary and immediate services not to exceed ten days.

(4) The process for development of a written notice of decision. The time frame for sending a written notice of decision to the individual and guardian (if applicable) and the service providers identified in the notice shall be included. The notice of decision shall:

1. Explain the action taken on the application and the reasons for that action.
2. State what services are approved and name the service providers.
3. Outline the individual’s right to appeal.
4. Describe the appeal process.

d. Utilization of and access to services. The process for managing utilization of and access to services and other assistance shall be included. The process shall describe how coordination between the services included in the annual service and budget plan and the disability services administered by the state and others will be managed.

e. Quality management and improvement process. The quality management and improvement process shall at a minimum meet the requirements of the department’s outcome and performance measures process as outlined in Iowa Code sections 225C.4(1)“f” and 225C.6A.

f. Risk management and fiscal viability. If the region contracts with a private entity, the manual must include risk management provisions and fiscal viability of the annual services and budget plan.

g. Targeted case management.

(1) Designation of targeted case management providers. The process used to identify and designate targeted case management providers for the region shall be described. This process shall include the requirement for the implementation of evidence-based practice models of case management within the region. Requirements of this practice include:

1. Providing the individual receiving the case management with a choice of providers.
2. Allowing a service provider to be the case manager but prohibiting the provider from referring
that individual only to services administered by the provider.
3. Provisions to ensure compliance with, but not exceed, federal requirements for conflict-free
case management.
2. Qualifications of targeted case managers. A region’s manual shall require that any targeted case
managers or other persons providing service coordination while working for the designated provider
meet the qualifications of qualified case managers and supervisors as defined in rule 441—24.1(225C).
3. Targeted case management and service coordination services. Targeted case management and
service coordination services utilized in a regional service system shall include but are not limited to the
following as defined in Iowa Code section 331.393(4)“g”:  
   1. Performance and outcome measures relating to the health, safety, school attendance and
      performance, work performance, and community residency of the individuals receiving the services.
   2. Standards for delivery of the services, including but not limited to the social history,
      assessment, service planning, incident reporting, crisis planning, coordination, and monitoring for
      individuals receiving the services.
   3. Methodologies for complying with the requirements of paragraph 25.21(1)“g.” Methodologies
      may include the use of electronic record keeping and remote or Internet-based training.
      h. System of care approach plan.
      i. Decentralized service provision. Measures to provide services in a dispersed manner that meet
         the minimum access standards of core services and that utilize the strengths and assets of the service
         providers within and available to the region shall be included.
   j. Provider network formation and management. The manual shall require that providers that
      are subject to license, accreditation or approval meet established standards. The manual shall detail the
      approval process, including criteria, developed to select providers that are not currently subject to license,
      accreditation or approval standards. The manual shall identify the process the regional administrative
      entity will use to contract with providers and manage the provider network to ensure it meets the needs
      of the individuals in the region. The provider network will include but is not limited to the following:
      (1) A contract with a community mental health center that provides services in the individual’s
          region or with a federally qualified health center that provides psychiatric and outpatient mental health
          services in the individual’s region.
      (2) Contracts with licensed and accredited providers to provide each service in the required core
          service domains.
      (3) Adequate numbers of licensed and accredited providers to ensure availability of core services
          so that there is no waiting list for services due to lack of available providers.
      (4) A contract with an inpatient psychiatric hospital unit or state mental health institute within
          reasonably close proximity.
      k. Service provider payment provisions. A policy for payment of service providers which
         describes the method and process of paying for services and supports delivered to the region shall be
         included.
      l. Grievance processes. The manual shall develop and implement processes for appealing the
         decisions of the regional administrative entity in the following circumstances:
         (1) Nonexpedited appeal process. The appeal process shall be based on objective criteria, specify
             time frames, provide for notification in accessible formats of the decisions to all parties, and provide
             some assistance to individuals with disabilities using the process. Responsibility for the final step in the
             appeal process shall be a state administrative law judge in nonexpedited appeals.
         (2) Expedited appeal process. This appeal process is to be used when the decision of the regional
             administrative entity concerning an individual varies from the type and amount of service identified
             to be necessary for the individual in a clinical determination made by a mental health professional
             and the mental health professional believes that the failure to provide the type and amount of service
             identified could cause an immediate danger to an individual’s health or safety. This appeal process shall
             be performed by a mental health professional who is either the administrator of the division of mental
             health and disability services of the department of human services or the administrator’s designee.
1. The appeal shall be filed within five days of receipt of the notice of decision by the regional administrative entity.
2. The expedited review by the division administrator or designee shall take place within two days of receipt of the request, unless more information is needed. There is an extension of two days from the time the new information is received.
3. The administrator shall issue an order, including a brief statement of findings of fact, conclusions of law, and policy reasons for the order, to justify the decision made concerning the expedited review. If the decision concurs with the contention that there is an immediate danger to the individual’s health or safety, the order shall identify the type and amount of service which shall be provided for the individual. The administrator or designee shall give such notice as is practicable to individuals who are required to comply with the order. The order is effective when issued.
4. The decision of the administrator or designee shall be considered a final agency action and is subject to judicial review in accordance with Iowa Code section 17A.19.

m. Implementation of interagency and multisystem collaboration and care coordination. The policies and procedures manual shall describe how the region will collaborate with other funders, other regional service systems, service providers, case management, individuals and their families or authorized representatives, and advocates to ensure that authorized services and supports are responsive to individuals’ needs, consistent with system principles, and cost-efficient. The manual shall describe the process for collaboration with the court to ensure alternatives to commitment and to coordinate funding for services to individuals who are under court-ordered commitment services pursuant to Iowa Code chapter 229.

n. Addressing multioccurring needs. The policies and procedures manual shall include criteria and measures to be used to address the needs of individuals who have two or more co-occurring mental health, intellectual or other developmental disability, brain injury, or substance-related disorders. The manual shall also include criteria and measures to be used to address the needs of individuals with specialized needs.

o. Service management and functional assessment. The policies and procedures manual shall describe how functional assessments and service management will be incorporated in accordance with applicable requirements.

p. Service system management. The policies and procedures manual shall identify whether the region will be directly implementing a system of service management or will contract with a private entity to manage the regional service system. If the region contracts with a private entity, the region will ensure that all requirements of Iowa Code section 331.393 and these administrative rules are fulfilled.

q. Assistance to other than core service populations. The policies and procedures manual shall specify the services populations, other than core service populations, to whom the region will provide assistance if funding is available.

r. Waiting list criteria. The policies and procedures manual shall specify whether the region will use waiting lists. If the policy and procedures manual specifies the use of waiting lists for funding services and supports, it shall specify criteria for the use and review of each waiting list, including the criteria to be used to determine how and when an individual will be placed on a waiting list. The criteria will include how core services and additional core services will be impacted the least by budgetary limitations. The manual shall specify how waiting list data will be used in future planning.

25.21(2) Approval. The manual shall be submitted by April 1, 2014, as a part of the region’s management plan for the fiscal year beginning July 1, 2014. The manual shall be approved by the region’s governing board and is subject to approval by the director of human services. The director shall review all regional annual service and budget plans submitted by the dates specified. If the director finds the manual in compliance with these rules and state and federal laws, the director may approve the plan. A plan approved by the director for the fiscal year beginning July 1, 2014, shall remain in effect subject to amendment.

a. Criteria for acceptance. The director shall determine a plan is acceptable when it contains all the required information, meets the criteria described in this division, and is in compliance with all
applicable state and federal laws. The director may request additional information to determine whether or not the plan contains all the required information and meets criteria described in this division.

b. Notification.

(1) Except as specified in subparagraph 25.21(2)“b”(2), the director shall notify the region in writing of the decision on the plan by June 1, 2014. The decision shall specify that either:

1. The policies and procedures manual is approved as it was submitted, either with or without supplemental information already requested and received.
2. The policies and procedures manual will not be approved until revisions are made. The letter will specify the nature of the revisions requested and the time frames for their submission.

(2) Review of late submittals. The director may review manuals not submitted by April 1, 2014, after all manuals submitted by that date have been reviewed. The director will proceed with the late submittals in a timely manner.

25.21(3) Amendments. An amendment to the policy and procedures manual shall be approved by the regional governance board and submitted to the department at least 45 days before the date of implementation. Before implementation of any amendment to the manual, the director must approve the amendment.

a. Criteria for acceptance. The director, in consultation with the state commission, shall determine an amendment is acceptable when it contains all the required information and meets the criteria described in this division for the applicable part of the policy and procedures manual and is in compliance with all applicable state and federal laws. The director may request additional information to determine whether or not the amendment contains all the required information and meets criteria described in this division.

b. Notification. The director shall notify the region, in writing, of the decision on the amendment within 45 days of receipt of the amendment. The decision shall specify either that:

(1) The amendment is approved as it was submitted, either with or without supplemental information already requested and received.
(2) The amendment is not approved. The notification will explain why the amendment is not approved.

25.21(4) Reconsideration. Regions dissatisfied with the director’s decision on a manual or an amendment may file a letter with the director requesting reconsideration. The letter of reconsideration must be received within 30 working days of the date of the notice of decision and shall include a request for the director to review the decision and the reasons for dissatisfaction. Within 30 working days of the receipt of the letter requesting reconsideration, the director will review both the reconsideration request and evidence provided. The director shall issue a final decision in writing.

These rules are intended to implement Iowa Code sections 331.388 to 331.398.

[ARC 1173C, IAB 11/13/13, effective 1/1/14; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.22(225C) Incentive fund application, approval, and reporting.

25.22(1) Application for regional incentive funds. A mental health and disability services region must submit an application on forms specified by the department with required supporting documentation. An application to receive regional incentive funds must meet the following requirements:

a. The mental health and disability services region shall submit the application with supporting documentation electronically to the department by 4:30 p.m. on November 15, 2021, for state fiscal year 2022 funding.

b. The mental health and disability services region shall submit the application with supporting documentation electronically to the department by 4:30 p.m. on November 15, 2022, for state fiscal year 2023 funding.

c. The application shall be complete and signed by the chairperson of the mental health and disability services region governing board and regional chief executive officer.

d. Application supporting documentation shall include evidence to demonstrate compliance with subrule 25.22(2).
25.22(2) Applicant conditions. To receive funding in state fiscal years 2022 and 2023, the mental health and disability services region must meet the following conditions:
   a. The mental health and disability services region must be in compliance with the regional service system management plan as defined in Iowa Code section 331.393.
   b. Applicants for state fiscal year 2022 funding must have an ending balance in the region’s combined services fund equal to or less than 40 percent of the actual expenditures in state fiscal year 2020.
   c. Applicants for state fiscal year 2023 funding must have an ending balance in the region’s combined services fund equal to or less than 20 percent of the actual expenditures in state fiscal year 2021.
   d. The mental health and disability services region must need incentive funds for one or more of the following circumstances:
      1. Operating in a deficit and a reduction in available funding for core services as the result of the reduction and elimination of the levy.
      2. Support of non-core services to maintain individuals in a community setting or reduce the risk that individuals needing services and supports would be placed in more restrictive, higher-cost settings.

25.22(3) Incentive fund application review and approval. The department shall make its final decisions for incentive funds on or before December 15 of the fiscal year of application.
   a. A written notice regarding acceptance or rejection of an application and the total amount obligated shall be furnished to the mental health and disability services region.
   b. The department shall distribute incentive funds payable to the mental health and disability services regions for the amounts due on or before January 1.

25.22(4) Incentive fund reporting. Mental health and disability services regions shall submit to the department a report on forms specified by the department twice each calendar year subsequent to an award distribution. Reports shall be submitted by February 15 and August 15.

25.22(5) Incentive fund review. The department shall analyze year-end financial records and annual independent audits of the mental health and disability services region for all years subsequent to an incentive fund award. If the department determines a mental health and disability services region’s actual need for incentive funds was less than the amount of incentive funds granted, the mental health and disability services region shall refund the difference between the amount of assistance granted and the actual need.
   a. A written notice outlining the department’s findings and moneys identified for repayment shall be furnished to the regional administrative entity.
   b. The mental health and disability services region shall submit the refund within 30 days of receiving notice from the department. Refunds shall be credited to the incentive fund.

This rule is intended to implement Iowa Code section 225C.7A.
[ARC 6008C, IAB 1/3/21, effective 10/4/21; ARC 6195C, IAB 2/9/22, effective 3/16/22]

441—25.23 to 25.40 Reserved.

DIVISION III
MINIMUM DATA SET

441—25.41(331) Minimum data set. Each county shall maintain data on all clients served through the MH/DD services fund.

25.41(1) Submission of data. Each county shall submit to DHS a copy of the data regarding each individual that the county serves through the central point of coordination process.
   a. DHS state payment program, state supplementary assistance program, mental health institutes, state resource centers, Medicaid program, and Medicaid managed care contractors shall provide the equivalent data in a compatible format on the same schedule as the required submission from the counties.
   b. DHS shall maintain the data in the data analysis unit for research and analysis purposes only. Only summary data shall be reported to policymakers or the public.

25.41(2) Data required. The data to be submitted are as follows:
a. Basic client information including a unique identifier, name, address, county of residence and county of legal settlement.
   b. The state I.D. number for state payment cases.
   c. Demographic information including date of birth, sex, ethnicity, marital status, education, residential living arrangement, current employment status, monthly income, income sources, type of insurance, insurance carrier, veterans’ status, guardianship status, legal status in the system, source of referral, diagnosis in the current version of the DSM, diagnosis in the current version of the ICD, disability group (i.e., intellectual disability, developmental disability, chronic mental illness, mental illness), central point of coordination (county number preceded by A 1), and central point of coordination (CPC) name.
   d. Service information including the decision on services, date of decision, date client terminated from CPC services and reason for termination, residence, approved service, service beginning dates, service ending dates, reason for terminating each service, approved units of services, unit rate for service, expenditure data, and provider data.
   e. Counties shall not be penalized in any fashion for failing to collect data elements in situations of crisis or in outreach efforts to identify or engage people in needed mental health services. For the purposes of this rule:
      (1) Situations of crisis include but are not limited to voluntary and involuntary hospitalizations, legal and transportation services associated with involuntary hospitalizations, emergency outpatient services, mobile crisis team services, jail diversion services, mental health services provided in a county jail, and other services for which the county is required to pay but does not have access to the client to collect the required information.
      (2) Outreach efforts to identify or engage people in needed mental health services include but are not limited to mental health advocate services; services for homeless persons, refugees, or other legal immigrants; services for state cases who do not have documentation with them and are unable to help the county locate appropriate records; consultation; education to raise public awareness; 12-step or other support groups for persons with dual disorders; and drop-in centers.
   f. Although all of the data in the minimum data set are important to provide support for program analysis, a county shall be penalized for noncompliance with this rule if the county does not provide 100 percent reporting of the data elements listed in this paragraph. Beginning with the data reported for state fiscal year 2008, less than 100 percent reporting for the following items shall be viewed as noncompliance unless the data are exempted by paragraph “e”:
      (1) Client identifiers:
         1. Lname3 (the first three letters of the client’s last name).
         2. Last4SSN (the last four digits of the client’s social security number).
         3. SEX (the client’s sex).
         4. BDATE (the client’s birth date).
      (2) CPC (central point of coordination).
      (3) Payment information:
         1. PYMTDATE (CoMIS payment date).
         2. FUND CODE (CoMIS fund code).
         3. DG (CoMIS diagnosis).
         4. COACODE (CoMIS chart of accounts code).
         5. BEGDATE (CoMIS service beginning date).
         6. ENDDATE (CoMIS service ending date).
         7. UNITS (CoMIS units of service).
         8. COPD (CoMIS county paid).
         (4) ValidSSN (valid social security number indicator).
         (5) IsPerson (IsPerson indicator).
   g. Although all of the data in the minimum data set are important to provide support for program analysis, a county shall be penalized for noncompliance with this rule if the county does not provide 90 percent reporting of the data elements listed in this paragraph beginning with the data reported for fiscal
year 2008. Less than 90 percent reporting for the following items shall be viewed as noncompliance unless the data are exempted by paragraph “e”:

1. Application Date (application date).
2. RESCO (residence county).
3. LEGCO (legal county).
4. Provider ID (vendor number).

h. The department shall analyze the data received on or before December 1 each year by December 15 or by the next business day if December 15 falls on a weekend or holiday.

1. When a county’s data submission does not meet the specifications in paragraph “f” or “g,” the department will notify the county by email.
2. The county shall have 30 days from the date of the email notice to submit the missing data or to provide an explanation of why the data cannot be reported.
3. If the county does not report the data or provide an adequate explanation within 30 days, the department shall find the county in noncompliance.

i. The department shall post the aggregate reports received by December 1 on the department’s website within 90 days.

25.41(3) Method of data collection. A county may choose to collect this information using the county management information system (CoMIS) that was designed by the department or may collect the information through some other means. If a county chooses to use another system, the county must be capable of supplying the information in the same format as CoMIS.

a. Except as provided in subparagraph (3), each county shall submit the following files in Microsoft Excel format (version 97 to 2000) or comma-delimited text file (CSV) format using data from the associated CoMIS table or from the county’s chosen management information system:

<table>
<thead>
<tr>
<th>Files to submit</th>
<th>Associated CoMIS Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>WarehouseClient.xls or WarehouseClient.csv</td>
<td>Client Data</td>
</tr>
<tr>
<td>WarehouseIncome.xls or WarehouseIncome.csv</td>
<td>Income Review</td>
</tr>
<tr>
<td>WarehousePayment.xls or WarehousePayment.csv</td>
<td>Payment</td>
</tr>
<tr>
<td>WarehouseProvider.xls or WarehouseProvider.csv</td>
<td>Provider</td>
</tr>
<tr>
<td>WarehouseProviderServices.xls or WarehouseProviderServices.csv</td>
<td>tblProviderServices</td>
</tr>
<tr>
<td>WarehouseService.xls or WarehouseService.csv</td>
<td>Service Authorizations</td>
</tr>
</tbody>
</table>

(1) Paragraphs “b” through “g” list the data required in each file and specify the structure or description for each data item to be reported.

(2) The field names used in the report files must be exactly the same as indicated in the corresponding paragraph, including spaces, and must be entered in the first row for each sheet.

(3) The file labeled WarehouseService.xls or WarehouseService.csv or service authorization (described in paragraph “g” of this subrule) shall be removed from this requirement on June 30, 2011, if data from this file have not been used by that date.

b. File name: WarehouseClient.xls or WarehouseClient.csv.
Sheet name: Warehouse_Client_Transfer_Query.
<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPC</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Central point of coordination number: county number preceded by a 1</td>
</tr>
<tr>
<td>RESCO</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Residence county of client: 1-99 = County number 100 = State of Iowa 900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>LEGCO</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Legal county of client: 1-99 = County number 100 = State of Iowa 900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>Lname3</td>
<td>Text</td>
<td>3</td>
<td></td>
<td>The first 3 characters of the last name</td>
</tr>
<tr>
<td>Last4SSN</td>
<td>Text</td>
<td>4</td>
<td></td>
<td>The last 4 digits of the client’s social security number. If that number is unknown, then use the last 4 digits of the CLIENT ID# field and mark column “ValidSSN” with the value “No.”</td>
</tr>
<tr>
<td>BDATE</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date of client’s birth</td>
</tr>
<tr>
<td>SEX</td>
<td>Text</td>
<td>1</td>
<td></td>
<td>Sex of client: M = Male F = Female</td>
</tr>
<tr>
<td>Last Update</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date of last update to client record</td>
</tr>
<tr>
<td>SID</td>
<td>Text</td>
<td>8</td>
<td>9999999a</td>
<td>State identification number of client, if applicable (format of a valid number is 7 digits plus 1 alphabetical character).</td>
</tr>
<tr>
<td>ADD1</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>First address line</td>
</tr>
<tr>
<td>ADD2</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Second address line (if applicable)</td>
</tr>
<tr>
<td>CITY</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>City address line</td>
</tr>
<tr>
<td>STATE</td>
<td>Text</td>
<td>2</td>
<td></td>
<td>State code</td>
</tr>
<tr>
<td>ZIP</td>
<td>Number</td>
<td>5</td>
<td>0 decimal places</td>
<td>5-digit ZIP code</td>
</tr>
<tr>
<td>ETHN</td>
<td>Number</td>
<td>1</td>
<td>0 decimal places</td>
<td>Ethnicity of client: 0 = Unknown 1 = White, not Hispanic 2 = African-American, not Hispanic 3 = American Indian or Alaskan native 4 = Asian or Pacific Islander 5 = Hispanic 6 = Other (biracial; Sudanese; etc.)</td>
</tr>
<tr>
<td>MARITAL</td>
<td>Number</td>
<td>1</td>
<td>0 decimal places</td>
<td>Marital status of client: 1 = Single, never married 2 = Married (includes common-law marriage) 3 = Divorced 4 = Separated 5 = Widowed</td>
</tr>
<tr>
<td>EDUC</td>
<td>Number</td>
<td>2</td>
<td>0 decimal places</td>
<td>Education level of the client</td>
</tr>
<tr>
<td>RARG</td>
<td>Number</td>
<td>2</td>
<td>0 decimal places</td>
<td>Residential arrangement of client: 1 = Private residence/household 2 = State MHI 3 = State resource center 4 = Community supervised living 5 = Foster care or family life home 6 = Residential care facility 7 = RCF/MR 8 = RCF/PMI 9 = Intermediate care facility 10 = ICF/MR 11 = ICF/PMI 12 = Correctional facility 13 = Homeless shelter or street 14 = Other</td>
</tr>
<tr>
<td>Field Name</td>
<td>Data Type</td>
<td>Field Size</td>
<td>Format</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------</td>
<td>------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| LARG            | Number    | 1          | 0 decimal places | Living arrangement of client:  
1 = Lives alone  
2 = Lives with relatives  
3 = Lives with persons unrelated to client |
| INS             | Number    | 1          | 0 decimal places | Health insurance owned by client:  
1 = Client pays  
3 = Medicaid  
4 = Medicare  
5 = Private third party  
6 = Not insured  
7 = Medically Needy |
| INSCAR          | Text      | 50         |        | First insurance company name, if applicable                                  |
| INSCAR1         | Text      | 50         |        | Second insurance company name, if applicable                                 |
| INSCAR2         | Text      | 50         |        | Third insurance company name, if applicable                                  |
| VET             | Text      | 1          |        | Veteran status of client:  
Y = Yes  
N = No |
| CONSERVATOR     | Number    | 1          | 0 decimal places | Conservator status of client:  
1 = Self  
2 = Other |
| GUARDIAN        | Number    | 1          | 0 decimal places | Guardian status of client:  
1 = Self  
2 = Other |
| LEGSTAT         | Number    | 1          | 0 decimal places | Legal status of client:  
1 = Voluntary  
2 = Involuntary, civil commitment  
3 = Involuntary, criminal commitment |
| REFSO           | Number    | 1          | 0 decimal places | Referral source of client:  
1 = Self  
2 = Family or friend  
3 = Targeted case management  
4 = Other case management  
5 = Community corrections  
6 = Social service agency other than case management  
7 = Other |
| DSM (current version) | Text      | 50         |        | DSM (current version) diagnosis code of client |
| ICD (current version) | Text      | 50         |        | ICD (current version) diagnosis code (optional for county use; not tied to CoMIS entry) |
| DG              | Number    | 2          | 0 decimal places | Disability group of client:  
40 = Mental illness  
41 = Chronic mental illness  
42 = Mental retardation  
43 = Other developmental disability  
44 = Other categories |
| Application Date | Date      | 10         | mm/dd/yyyy | Date of client’s initial application |
| Outcome decision | Number    | 1          | 0 decimal places | Decision on client’s application:  
1 = Application accepted  
2 = Application denied  
3 = Decision pending |
| Decision date   | Date      | 10         | mm/dd/yyyy | Date decision was made on client’s application |
### Table 1: Description of Fields

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denial reason</td>
<td>Text</td>
<td>2</td>
<td></td>
<td>Denial reason code: 00 = Not applicable 01 = Over income guidelines 1A = Over resource guidelines 02 = Does not meet county plan criteria 2A = Legal settlement in another county 2B = State case 3A = Brain injury 3B = Alzheimer's 3C = Substance abuse 3D = Other 04 = Does not meet service plan criteria 05 = Client desires to discontinue process 5A = Client fails to return requested information</td>
</tr>
<tr>
<td>Client exit date from CPC</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date client was terminated from CPC services</td>
</tr>
<tr>
<td>Exit reason</td>
<td>Number</td>
<td>1</td>
<td>0 decimal places</td>
<td>Reason client left the CPC system: 0 = Unknown 1 = Client voluntarily withdrew 2 = Client deceased 3 = Unable to locate consumer 4 = Ineligible due to reasons other than income 5 = Ineligible, over income guidelines 6 = Client moved out of state 7 = Client no longer needs service 8 = Client has legal settlement in another county</td>
</tr>
<tr>
<td>Review Date</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date of last application review</td>
</tr>
<tr>
<td>PhoneNumber</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Phone number of client</td>
</tr>
<tr>
<td>ValidSSN</td>
<td>Text</td>
<td>3</td>
<td>Generated for CoMIS users in the data extract only</td>
<td>Populate this field with YES if the client has a valid social security number. If the client does not have a valid social security number, populate this field with NO.</td>
</tr>
<tr>
<td>IsPerson</td>
<td>Text</td>
<td>3</td>
<td>Generated for CoMIS users in the data extract only</td>
<td>Populate this field with YES if the client is a person. If the client entry represents a nonperson such as administrative costs, populate this field with NO.</td>
</tr>
</tbody>
</table>

c. File name: WarehouseIncome.xls or WarehouseIncome.csv.  
Sheet name: Warehouse_Income_Transfer_Query.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
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<td>Central point of coordination number: county number preceded by a 1</td>
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<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Residence county of client: 1-99 = County number 100 = State of Iowa 900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>LEGCO</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Legal county of client: 1-99 = County number 100 = State of Iowa 900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>Lname3</td>
<td>Text</td>
<td>3</td>
<td></td>
<td>The first 3 characters of the last name</td>
</tr>
<tr>
<td>Last4SSN</td>
<td>Text</td>
<td>4</td>
<td></td>
<td>The last 4 digits of the client’s social security number. If that number is unknown, then use the last 4 digits of the CLIENT ID# field and mark column “ValidSSN” with the value “No.”</td>
</tr>
<tr>
<td>BDATE</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date of client’s birth</td>
</tr>
</tbody>
</table>

- CPC: Client's Personal Identification Number
- RESCO: Residence County
- LEGCO: Legal County
- Lname3: First 3 characters of the last name
- Last4SSN: Last 4 digits of the client’s social security number
- BDATE: Date of client’s birth
<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEX</td>
<td>Text</td>
<td>1</td>
<td></td>
<td>Sex of client:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M = Male</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F = Female</td>
</tr>
<tr>
<td>EMPL</td>
<td>Number</td>
<td>2</td>
<td>0 decimal places</td>
<td>Employment situation of client:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 = Unemployed, available for work</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 = Unemployed, unavailable for work</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 = Employed full-time</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 = Employed part-time</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 = Retired</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 = Student</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 = Work activity employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8 = Sheltered work employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 = Supported employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 = Vocational rehabilitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 = Seasonally employed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 = In the armed forces</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13 = Homemaker</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14 = Other or not applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15 = Volunteer</td>
</tr>
<tr>
<td>House Hold Size</td>
<td>Number</td>
<td>2</td>
<td>0 decimal places</td>
<td>Number of people in client’s household</td>
</tr>
<tr>
<td>INCSOUR</td>
<td>Number</td>
<td>2</td>
<td>0 decimal places</td>
<td>Primary income source of client:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 = Family and friends</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 = Private relief agency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 = Social security disability benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 = Supplemental Security Income</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 = Social security benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 = Pension</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 = Food assistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8 = Veterans benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 = Workers compensation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 = General assistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 = Family investment program (FIP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 = Wages</td>
</tr>
<tr>
<td>Public Assistance Payments</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>Social Security</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>Social Security Disability</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>SSI</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>VA Benefits</td>
<td>Currency</td>
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<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>R/R Pension</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>Child Support</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>Employment Wages</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>Dividend Interest</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>Other Income</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Monthly dollar amount for this income source (where applicable)</td>
</tr>
<tr>
<td>Description 1</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Description of “Other Income”</td>
</tr>
<tr>
<td>Cash on hand</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
</tr>
<tr>
<td>Checking</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
</tr>
<tr>
<td>Savings</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
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</tbody>
</table>
### Warehouse_Payment_Type Fields

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stocks/Bonds</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
</tr>
<tr>
<td>Time Certificates</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
</tr>
<tr>
<td>Trust Funds</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
</tr>
<tr>
<td>Other Resources</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
</tr>
<tr>
<td>Description 2</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Description of “Other Resources” (where applicable)</td>
</tr>
<tr>
<td>Other Resources 2</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Dollar amount for this resource type (where applicable)</td>
</tr>
<tr>
<td>Description 3</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Description of “Other Resources 2”</td>
</tr>
<tr>
<td>Date reviewed</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date income was last reviewed (where applicable)</td>
</tr>
</tbody>
</table>

### File Name

- WarehousePayment.xls or WarehousePayment.csv

### Sheet Name

- Warehouse_Payment_Transfer_Quiz

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>CPC</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Central point of coordination number: county number preceded by a 1</td>
</tr>
<tr>
<td>RESCO</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Residence county of client: 1-99 = County number 100 = State of Iowa 900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>LEGCO</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>Legal county of client: 1-99 = County number 100 = State of Iowa 900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>Lname3</td>
<td>Text</td>
<td>3</td>
<td></td>
<td>The first 3 characters of the last name</td>
</tr>
<tr>
<td>Last4SSN</td>
<td>Text</td>
<td>4</td>
<td></td>
<td>The last 4 digits of the client’s social security number. If that number is unknown, use the last 4 digits of the CLIENT ID# field and mark column “ValidSSN” with the value ”No.”</td>
</tr>
<tr>
<td>BDATE</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date of client’s birth</td>
</tr>
<tr>
<td>SEX</td>
<td>Text</td>
<td>1</td>
<td></td>
<td>Sex of client: M = Male F = Female</td>
</tr>
<tr>
<td>PYMTDATE</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date county approves or makes payment</td>
</tr>
<tr>
<td>VENNAME</td>
<td>Text</td>
<td>50</td>
<td>mm/dd/yyyy</td>
<td>Vendor or provider paid</td>
</tr>
<tr>
<td>COCODE</td>
<td>Number</td>
<td>3</td>
<td>0 decimal places</td>
<td>County where service was provided</td>
</tr>
<tr>
<td>FUND CODE</td>
<td>Text</td>
<td>10</td>
<td></td>
<td>Fund code for payment</td>
</tr>
<tr>
<td>DG</td>
<td>Number</td>
<td>2</td>
<td>0 decimal places</td>
<td>Disability group code for payment: 40 = Mental illness 41 = Chronic mental illness 42 = Mental retardation 43 = Other developmental disability 44 = Other categories</td>
</tr>
<tr>
<td>COACODE</td>
<td>Number</td>
<td>5</td>
<td>0 decimal places</td>
<td>Chart of accounts code for payment</td>
</tr>
<tr>
<td>BEGDATE</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Beginning date of payment period</td>
</tr>
<tr>
<td>ENDDATE</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Ending date of payment period</td>
</tr>
<tr>
<td>UNITS</td>
<td>Number</td>
<td>4</td>
<td>0 decimal places</td>
<td>Number of service units for payment</td>
</tr>
<tr>
<td>COPD</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Amount paid by the county</td>
</tr>
<tr>
<td>RECEIVED</td>
<td>Currency</td>
<td>14</td>
<td>2 decimal places</td>
<td>Amount received for reimbursement (if applicable)</td>
</tr>
</tbody>
</table>
e. File name: WarehouseProvider.xls or WarehouseProvider.csv. Sheet name: Warehouse_Provider_Transfer_Queue. (If the provider has more than one office location, enter information for the headquarters office.)

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider ID</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider identifier (tax ID code)</td>
</tr>
<tr>
<td>Provider Name</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider name</td>
</tr>
<tr>
<td>Provider Address1</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider address line 1</td>
</tr>
<tr>
<td>Provider Address2</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider address line 2 (if applicable)</td>
</tr>
<tr>
<td>City</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider city</td>
</tr>
<tr>
<td>State</td>
<td>Text</td>
<td>2</td>
<td></td>
<td>Provider state code</td>
</tr>
<tr>
<td>Zip</td>
<td>Text</td>
<td>10</td>
<td></td>
<td>Provider ZIP code</td>
</tr>
<tr>
<td>COCODE</td>
<td>Number</td>
<td>3</td>
<td>0 decimals</td>
<td>Provider county code</td>
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<tr>
<td>PhoneNumber</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider phone number</td>
</tr>
<tr>
<td>Date of Last Update</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Provider last updated date</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider ID</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider identifier (tax ID code)</td>
</tr>
<tr>
<td>Provider Name</td>
<td>Text</td>
<td>50</td>
<td></td>
<td>Provider name</td>
</tr>
<tr>
<td>FUND CODE</td>
<td>Text</td>
<td>10</td>
<td></td>
<td>Fund code for payment</td>
</tr>
<tr>
<td>DG</td>
<td>Number</td>
<td>2</td>
<td>0 decimals</td>
<td>Disability group code for payment:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40 = Mental illness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41 = Chronic mental illness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>42 = Mental retardation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43 = Other developmental disability</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>44 = Other categories</td>
</tr>
<tr>
<td>COACODE</td>
<td>Number</td>
<td>5</td>
<td>0 decimals</td>
<td>Chart of accounts code for service</td>
</tr>
<tr>
<td>RATE</td>
<td>Currency</td>
<td>14</td>
<td>2 decimals</td>
<td>Payment rate</td>
</tr>
</tbody>
</table>

g. File name: WarehouseService.xls or WarehouseService.csv. Sheet name: Warehouse_Service_Transfer_Queue.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Field Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPC</td>
<td>Number</td>
<td>3</td>
<td>0 decimals</td>
<td>Central point of coordination number:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>county number preceded by a 1</td>
</tr>
<tr>
<td>RESCO</td>
<td>Number</td>
<td>3</td>
<td>0 decimals</td>
<td>Residence county of client:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-99 = County number</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 = State of Iowa</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>LEGCO</td>
<td>Number</td>
<td>3</td>
<td>0 decimals</td>
<td>Legal county of client:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-99 = County number</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 = State of Iowa</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>200 = Iowa nonresident</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>900 = Undetermined or in dispute</td>
</tr>
<tr>
<td>Lname3</td>
<td>Text</td>
<td>3</td>
<td></td>
<td>The first 3 characters of the last name</td>
</tr>
<tr>
<td>Last4SSN</td>
<td>Text</td>
<td>4</td>
<td></td>
<td>The last 4 digits of the client’s social security number. If that number is unknown, then use the last 4 digits of the CLIENT ID# field and mark column “ValidSSN” with the value “No.”</td>
</tr>
<tr>
<td>BDATE</td>
<td>Date</td>
<td>10</td>
<td>mm/dd/yyyy</td>
<td>Date of client’s birth</td>
</tr>
<tr>
<td>SEX</td>
<td>Text</td>
<td>1</td>
<td></td>
<td>Sex of client:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M = Male</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F = Female</td>
</tr>
</tbody>
</table>
This rule is intended to implement Iowa Code sections 331.438 and 331.439.

ARC 2164C, IAB 9/30/15, effective 10/1/15]

441—25.42 to 25.50 Reserved.

DIVISION IV
MENTAL HEALTH ADVOCATES
PREAMBLE

This division establishes definitions, appointment and qualifications, assignment, responsibilities of the advocate and the county, data collection requirements, and quality assurance for mental health advocate services under Iowa Code chapter 229.

ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.51(229) Definitions.

“Advocate” means mental health advocate as defined in Iowa Code section 229.1.

“Conflict of interest” means any activity that interferes or gives the appearance of interference with the exercise of professional discretion and impartial judgment.

“County of residence” means the same as defined in Iowa Code section 331.394.

“County of venue” means the county in which the Iowa Code chapter 229 commitment was filed pursuant to Iowa Code section 229.44.

“County where the individual is located” means the individual’s county of residence as defined in Iowa Code section 331.394, or if the individual has been ordered to receive treatment services under an Iowa Code chapter 229 commitment and is placed in a residential or other treatment facility.

“Individual” means the respondent who is receiving mental health advocate services under Iowa Code chapter 229.

“Judicial” means the same as defined in Iowa Code section 602.6107.

“Mental health and disability services region” means the same as defined in Iowa Code section 331.389.

ARC 2438C, IAB 3/16/16, effective 5/1/16; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.52(229) Advocate appointment and qualifications. The board of supervisors of each county shall appoint a person to act as an advocate representing the interests of individuals involuntarily
hospitalized by the court under Iowa Code chapter 229. The advocate is hired by the board of supervisors and employed by the county.

25.52(1) A person may be appointed and employed or contracted with as the advocate by one county or by multiple counties. Advocates may be appointed for counties in more than one judicial district or more than one mental health and disability services region.

25.52(2) Qualifications.
   a. The advocate shall meet the following qualifications:
      (1) Possess a bachelor’s degree with 30 semester hours or equivalent quarter hours in a human services field (including, but not limited to, psychology, social work, mental health counseling, marriage and family therapy, nursing, education, occupational therapy, and recreational therapy) and at least one year of experience in the delivery of services to persons with mental illness; or
      (2) Hold an Iowa license to practice as a registered nurse and have at least three years of experience in delivery of services to persons with mental illness.
   b. A person employed as an advocate on or before July 1, 2015, who does not meet the requirements of subparagraph 25.52(2)“a”(1) or (2) shall be considered to meet those requirements so long as the person is continuously appointed as an advocate in the employing county.
   c. A person employed as an advocate must pass criminal background, sex offender registry, and child and dependent adult abuse registry checks before hire.

[ARC 2438C, IAB 3/16/16, effective 5/1/16; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.53(229) Advocate assignment. The committing court shall assign the advocate from the county where the individual is located.

25.53(1) If the advocate assigned cannot serve the individual in an effective and efficient manner, the advocate may request another advocate to perform advocate duties on the individual’s behalf. In the event that another advocate can better represent the individual on a longer term basis, the advocate shall request that the court transfer the individual to another advocate.

25.53(2) When a conflict of interest is identified between an advocate and an individual, the court and the advocate’s county of employment shall be notified and an alternative advocate shall be assigned. The advocate’s direct supervisor is responsible to monitor and ensure that the advocate does not have a conflict of interest. In instances when dual or multiple relationships are unavoidable, advocates should take steps to protect individuals and are responsible for setting clear, appropriate, and culturally sensitive boundaries. Advocates who anticipate a conflict of interest among the individuals receiving services should clarify the advocate’s role with the parties involved and take appropriate action to minimize any conflict of interest.

25.53(3) When the advocate assigned is not the advocate from the individual’s county of residence, the advocate’s county of employment may seek reimbursement from the region in which the individual’s county of residence is located as outlined in Iowa Code section 229.19(1) “b.”

25.53(4) An advocate shall only be assigned to a child 17 years of age or under when the child is not represented by an attorney due to an existing child in need of assistance (CINA) or other juvenile court action pursuant to the Iowa Code.

[ARC 2438C, IAB 3/16/16, effective 5/1/16; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.54(229) Advocate responsibilities. The minimum duties of the advocate are outlined in Iowa Code section 229.19. The role of the advocate is to ensure that the rights of the individual are upheld.

25.54(1) The advocate shall be readily accessible to communication from the individual and shall initiate contact within 5 days of the individual’s commitment. The advocate shall inform the individual regarding the role of the advocate.

25.54(2) The advocate shall meet the individual in person within 15 days of the individual’s commitment. The advocate shall present the county grievance procedure process, in writing, to the individual. The presentation shall include the county grievance procedure and contact information and the contact information for the ombudsman. The advocate shall inform the individual about the mental health crisis services that are available.
25.54(3) The advocate shall review each report submitted to the court and communicate with the individual’s medical and treatment team. Advocates shall abide by all federal, state, and local confidentiality laws.

25.54(4) The advocate shall file with the court Iowa Ct. R. 12.36—Form 30, quarterly reports for each individual assigned to the advocate. The report shall state the actions taken with the individual and amount of time spent on behalf of the individual.

25.54(5) The advocate shall maintain an organized confidential and secure file for each individual served. The file shall contain but not be limited to:

a. Copies of quarterly reports submitted to the court.

b. Copies of correspondence sent to and received from the individual, family members, providers and others.

c. Releases of information.

d. Case notes describing the date, time and type of contact with the individuals or others and a brief narrative summary of the content or outcome of the contact.

e. Documents filed with the court electronically shall be considered as part of the individual’s file.

25.54(6) The advocate shall register as provided in Iowa Ct. R. 16.305(1) to participate in the court’s electronic document management system and shall submit all documents to be filed with the court electronically. The documents will be stored as electronic records that are retrievable and readable through the electronic document management system.

25.54(7) The advocate, as an employee of the county, shall comply with all county policies and procedures, including but not limited to hiring, supervision, grievance procedures, and training.

25.54(8) All advocate records are the property of the county, which is responsible for the provision of confidential storage, transfer, and destruction of client files, including those maintained on electronic and digital devices, with access limited according to the county’s policy on confidentiality as described in subrule 25.55(6).

25.54(9) The advocate may attend the hospitalization hearing of an individual represented by an attorney; however, payment for the advocate’s attendance is at the discretion of the county of employment.

[ARC 2438C, IAB 3/16/16, effective 5/1/16; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.55(229) County responsibilities. As the employer of the advocate, the county shall provide qualified staff to support and facilitate the provision of quality advocate services. The county shall:

25.55(1) Assign a single supervisor, a single contract manager, or the county board of supervisors as the supervising entity to carry out responsibilities in this chapter.

25.55(2) Have a job description in the personnel file of the advocate that clearly defines the advocate’s responsibilities and qualifications as defined in Iowa Code section 229.19 and in rule 441—25.104(229).

25.55(3) Have a process to verify, within 90 days of the advocate’s hire, qualification of the advocate, including degrees and certifications obtained from a primary source.

25.55(4) Provide to the advocate training and education relevant to the position, including but not limited to overview of mental health diagnosis and treatment, the mental health and disability services delivery system, confidentiality, individual rights, professional conduct, the role of advocacy and service coordination within an interdisciplinary team, Iowa Code and administrative rules, and court procedures.

25.55(5) Provide approved training on child and dependent adult abuse reporter requirements.

25.55(6) Provide to any employee with access to individuals’ files training on state and federal laws regarding nondisclosure and confidentiality of client protected health information during and after employment and maintain in the personnel files a signed document indicating the employee’s awareness of the county’s policy on confidentiality.

25.55(7) Complete criminal background, sex offender registry and child and dependent adult abuse registry checks before employment of the advocate. Any person who does not pass these checks is prohibited from being hired, or continuing to serve, as an advocate.
25.55(8) Provide advocate staff to cover the county’s caseload at all times, according to, but not limited to, each county’s unique number of individuals assigned to the advocate, travel required, types of settings where the individuals reside, services available and extended staff absences.

[ARC 2438C, IAB 3/16/16, effective 5/1/16; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.56(229) Data collection requirements.

25.56(1) Beginning in 2016 and by December 1 each year, each county shall submit to the department of human services data regarding each individual who received advocate services during the previous state fiscal year.

25.56(2) As defined in rule 441—25.41(331), the data to be submitted are as follows:
   a. Basic information about the individual, including a unique identifier and county of residence.
   b. Demographic information, including the individual’s date of birth, sex, ethnicity, education, and diagnosis made in accordance with the criteria provided in the current version of the Diagnostic and Statistical Manual of Mental Disorders (DSM) published by the American Psychiatric Association (APA).
   c. Commitment information, including the date of the individual’s initial commitment, type of commitment order, whether a juvenile or adult case, date of commitment and name of treatment facility the individual is committed to, any subsequent changes in treatment facility, and date commitment is terminated.

[ARC 2438C, IAB 3/16/16, effective 5/1/16; see Delay note at end of chapter; ARC 4896C, IAB 2/12/20, effective 3/18/20]

441—25.57(229) Quality assurance system. The county shall implement a quality assurance system which:

1. Annually measures and assesses advocates’ activities and services.
2. Gathers feedback from stakeholders including individuals using advocate services, family members, court staff, service provider staff, and regional staff regarding advocate services.
3. Implements an internal review of individual records.
4. Identifies areas in need of improvement.
5. Develops a plan to address the areas in need of improvement.
6. Implements the plan and documents the results.

[ARC 2438C, IAB 3/16/16, effective 5/1/16; ARC 4896C, IAB 2/12/20, effective 3/18/20]

These rules are intended to implement Iowa Code chapter 229.
Two ARCs

1 May 1, 2016, effective date of 25.106 (ARC 2438C) delayed 70 days by the Administrative Rules Review Committee at its meeting held April 8, 2016. At its meeting held June 14, 2016, the Committee delayed the effective date of 25.106 until the adjournment of the 2017 Session of the General Assembly.
CHAPTER 5
TRACK, GAMBLING STRUCTURE, AND EXCURSION GAMBLING BOAT
LICENSEE’S RESPONSIBILITIES
[Prior to 11/19/86, Racing Commission[693]]
[Prior to 11/18/87, Racing and Gaming Division[195]]
[Prior to 8/9/00, see also 491—Chs 20 and 25]

491—5.1(99D,99F) In general. For purposes of this chapter, the requirements placed upon an applicant shall become a requirement to the licensee once a license to race or operate a gaming facility has been granted. Every license is granted upon the condition that the license holder shall accept, observe, and enforce the rules and regulations of the commission. It is the affirmative responsibility and continuing duty of each officer, director, and employee of said license holder to comply with the requirements of the application and conditions of the license and to observe and enforce the rules. The holding of a license is a privilege. The burden of proving qualifications for the privilege to receive any license is on the licensee at all times. A licensee must accept all risks of adverse public notice or public opinion, embarrassment, criticism, or financial loss that may result from action with respect to a license. Licensees further covenant and agree to hold harmless and indemnify the Iowa racing and gaming commission from any claim arising from any action of the commission in connection with that license. This chapter applies to a license to race or operate a gaming facility unless otherwise noted.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—5.2(99D,99F) Annual reports. Licensees shall submit audits to the commission as required by Iowa Code sections 99D.20 and 99F.13.

5.2(1) The audit of financial transactions and condition of licensee’s operation shall include:
   a. An internal control letter;
   b. Documentation that the audit shall be conducted by certified public accountants authorized to practice in the state of Iowa under Iowa Code chapter 542;
   c. A balance sheet; and
   d. A profit-and-loss statement pertaining to the licensee’s activities in the state, including a breakdown of expenditures and subsidies.

5.2(2) If the licensee’s fiscal year does not correspond to the calendar year, a supplemental schedule indicating financial activities on a calendar-year basis shall be included in the report.

5.2(3) In the event of a license termination, change in business entity, or material change in ownership, the administrator may require the filing of an interim report, as of the date of occurrence of the event. The filing due date shall be the later of 30 calendar days after notification to the licensee or 30 calendar days after the date of the occurrence of the event, unless an extension is granted.

5.2(4) An engagement letter for the audit between the licensee and auditing firm shall be available upon request. The engagement letter requirement does not apply to the licensed qualified sponsoring organization. Conditions of engagement for the audit shall include, at a minimum, the following requirements:

   a. The auditing firm shall report any material errors, irregularities or illegal acts that come to the firm’s attention during the course of an audit to the licensee’s audit committee or senior management as required by the rules of professional conduct that apply to the auditing firm. The licensee shall report such material errors, irregularities or illegal acts to the commission in a timely manner following reporting to the licensee’s audit committee or senior management.

   b. The auditing firm shall inform the commission in writing of matters that come to the firm’s attention that represent significant deficiencies in the design or operation of the internal control structure.

   c. The audit supervisor or an audit staff member conducting the audit must have experience or training in the gaming industry.

   d. The auditing firm agrees to respond timely to all reasonable requests of successor auditors.

   e. The auditing firm agrees, if requested by the commission, to provide licensee management and the commission with recommendations designed to help the licensee make improvements in its internal control structure and operation, and other matters that are discovered during the audit.
5.2(5) For a licensed subsidiary of a parent company, an audit of the parent company may be filed with the following conditions:

a. The consolidated financial statements shall include in the supplemental schedule, or elsewhere as determined by the licensee and auditing firm, for each licensee: balance sheets, statements of operations, statements of cash flows, schedules of operating expenses and schedules of adjusted gross revenue and taxes and fees paid to governmental agencies.

b. Any internal audit staff assisting with the audit shall report any material errors, irregularities or illegal acts that come to the staff’s attention during the course of an audit to the licensee’s audit committee or senior management as required by the rules of professional conduct. The licensee shall report such material errors, irregularities or illegal acts to the commission in a timely manner following reporting to the licensee’s audit committee or senior management.

c. All other requirements in this rule are met and included for each entity licensed in Iowa unless an exception is granted in writing by the commission (or administrator).

5.2(6) The annual audit report required by Iowa Code section 99D.20 shall include a schedule detailing the following information: number of performances; attendance; regulatory fee; total mutuel handle and taxes paid to the state, city, and county; unclaimed winnings; purses paid indicating sources; total breakage and disbursements; and the disbursements of 1 percent of exotic wagers on three or more racing animals.

5.2(7) The annual audit report required by Iowa Code section 99F.13 shall include:

a. A schedule detailing a weekly breakdown of adjusted gross revenue; taxes paid to the state, city, county, and county endowment fund; and regulatory fees.

b. A report on whether material weaknesses in internal accounting control exist.

5.2(8) Internal control records, compliance records, marketing expenses, and supplemental schedules included in the annual reports shall be kept confidential, as outlined in Iowa Code section 99F.12(4).

[ARC 1876C, IAB 2/18/15, effective 3/25/15; ARC 4378C, IAB 3/27/19, effective 5/1/19; ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—5.3(99D,99F) Information. The licensee shall submit all information specifically requested by the commission or commission representative.

491—5.4(99D,99F) Uniform requirements.

5.4(1) Maintenance of premises and facilities. Each licensee shall at all times maintain its premises and facilities so as to be neat and clean, well landscaped, painted and in good repair, handicapped accessible, with special consideration for the comfort and safety of patrons, employees, and other persons whose business requires their attendance.

5.4(2) Facilities for commission. Each licensee shall provide reasonable, adequately furnished office space, including utilities, direct long-distance access for voice and data lines, custodial services, and necessary office equipment, and, if applicable, work space on the boat for the exclusive use of the commission employees and officials. The licensee shall also make available appropriate parking places for commission staff.

5.4(3) Sanitary facilities for patrons. Each licensee shall, on every day of operation, provide adequate and sanitary toilets and washrooms and furnish free drinking water for patrons and persons having business on the licensee’s premises.

5.4(4) First-aid room.

a. During all hours of operation, each licensee shall equip and maintain adequate first-aid facilities and have, at a minimum, one employee trained in CPR, first aid, and the use of the automated external defibrillator (AED). During live racing at horse racetracks and while excursion gambling boats are cruising, the licensee shall have present either a physician, a physician assistant, a registered nurse, a licensed practical nurse, a paramedic, or an emergency medical technician.

b. All individuals specified under paragraph 5.4(4)“a” must be currently licensed or certified, including active status, in accordance with the requirements of the Iowa department of public health.
c. Each licensee is required to have a properly functioning and readily accessible AED at the licensee’s facility.

5.4(5) Security force.

a. Peace officer. Each licensee shall ensure that a person who is a certified peace officer is present as outlined in the facility’s security plan approved by the commission. A certified peace officer pursuant to this rule must be employed by a law enforcement agency and have police powers.

b. Employ adequate security. Each licensee shall employ sufficient security to remove from the licensed premises a person violating a provision of Iowa Code chapter 99D or 99F, commission rules, or orders; any person deemed to be undesirable by racing and gaming commission officials; or any person engaging in a fraudulent practice. Security shall also be provided in and about the premises to secure restricted areas including, but not limited to, the barn area, kennel area, paddock, and racing animal drug testing area.

c. Incident reports. The licensee shall be required to file a written report, within 72 hours, detailing any incident in which an employee or patron is detected violating a provision of Iowa Code chapter 99D or 99F, a commission rule or order, or internal controls; or is removed for reasons specified under paragraph 5.4(5) “b.” In addition to the written report, the licensee shall provide immediate notification to the commission and DCI representatives on duty or, if representatives are not on duty, provide notification in a manner previously agreed upon by the representatives if the incident involved employee theft, criminal activity, Iowa Code chapter 99D or 99F violations, or gaming receipts.

d. Ejection or exclusion. A licensee may eject or exclude any person, licensed or unlicensed, from the premises or a part thereof of the licensee’s facility, solely of the licensee’s own volition and without any reason or excuse given, provided ejection or exclusion is not founded on constitutionally protected grounds such as race, creed, color, disability, or national origin.

Reports of all ejections or exclusions for any reason, other than voluntary exclusions, shall be made promptly to the commission representative and DCI and shall state the circumstances. The name of the person must be reported when the person is ejected or excluded for more than one gaming day.

The commission may exclude any person ejected by a licensee from any or all pari-mutuel facilities, gambling structures, or excursion gambling boats controlled by any licensee upon a finding that attendance of the person would be adverse to the public interest.

5.4(6) Firearms possession within licensed facility.

a. No patron or employee of the licensee, including the security department members, shall possess or be permitted to possess any pistol or firearm within a licensed facility without the express written approval of the administrator unless:

1. The person is a peace officer, on duty, acting in the peace officer’s official capacity; or
2. The person is a peace officer possessing a valid peace officer permit to carry weapons who is employed by the licensee and who is authorized by the administrator to possess such pistol or firearm while acting on behalf of the licensee within that licensed facility.

b. Each licensee shall post in a conspicuous location at each entrance a sign that may be easily read stating, “Possession of any firearm within the licensed facility without the express written permission of the Iowa racing and gaming commission is prohibited”.

5.4(7) Video recording. Licensees shall conduct continuous surveillance with the capability of video recording all on-site gambling activities under Iowa administrative rules 661—Chapter 141, promulgated by the department of public safety.

a. “Gambling activities” means participating in any form of wagering as defined by Iowa Code chapter 99F and approved by the commission; the movement, storage, and handling of uncounted gambling revenues; manual exchange of moneys for forms of wagering credit on the gaming floor; entrance of the public onto the gaming floor; and any other activity as determined by the commission administrator or administrator’s designee.

b. Commission and DCI representatives shall have unrestricted access to and use of, including independent access capabilities, both live and recorded views and images of the surveillance system.

c. A commission representative may allow a gambling game to be placed in operation pending approval under 661—Chapter 141.
d. A facility may include capabilities within the surveillance system for video recording of other areas of a facility and grounds, provided that commission and DCI access is unrestricted.

5.4(8) Commission approval of contracts and business arrangements.

a. Qualifying agreements.

(1) All contracts and business arrangements entered into by a facility are subject to commission jurisdiction. Written and verbal contracts and business arrangements involving a related party or in which the term exceeds three years or the total value in a calendar year exceeds $100,000 regardless of payment method are agreements that qualify for submission to and approval by the commission. Contracts and business arrangements with entities licensed pursuant to rule 491—11.13(99F) to obtain gambling games and implements of gambling, as defined by rule 491—11.1(99F), are exempt from submission to and approval by the commission. For the purpose of this subrule, a qualifying agreement shall be limited to:

1. Any obligation that expends, encumbers, or loans facility assets to anyone other than a not-for-profit entity, a unit of government for the payment of taxes, or an entity that provides water, sewer, gas or electric utility services to the facility.
2. Any disposal of facility assets or provision of goods and services at less than market value to anyone other than a not-for-profit entity or a unit of government.
3. A previously approved qualifying agreement, if consideration exceeds the approved amount in a calendar year by the greater of $100,000 or 25 percent or if the commission approval date of an ongoing contract is more than five years old.
4. Any type of contract, regardless of value or term, where a third party provides electronic or mechanical access to cash or credit for a patron of the facility. The contract must contain a clause that provides for immediate notification and implementation when technology becomes available to allow a person to voluntarily bar the person’s access to receive cash or credit from such devices located on the licensed premises.

(2) A debt transaction greater than $3 million entered into by a licensee or licensee’s parent company assigning an obligation to a licensee, except a debt transaction previously approved in subrule 5.4(20), is subject to commission jurisdiction. The request for approval shall include:

1. The names and addresses of all parties;
2. The amount and source of funds;
3. The nature and amount of security and collateral provided;
4. The specific nature and purpose of the transaction; and
5. The term sheet or executive summary of the transaction.

(3) A qualifying agreement must be submitted within 30 days of execution. Commission approval must be obtained prior to implementation, unless the qualifying agreement contains a written clause stating that the agreement is subject to commission approval. Qualifying agreements need only be submitted on initiation, unless there is a material change in terms or noncompliance with 5.4(8)“b”(4) or to comply with 5.4(8)“a”(1)“3.”

b. Purpose of review. The commission conducts reviews to serve the public interest to ensure that:

1. Gaming is free from criminal and corruptive elements.
2. Gaming-related funds are directed to the lawful recipient.
3. Gaming profits are not improperly distributed.
4. Iowa resources, goods and services are utilized. Resources, goods, and services shall be considered to be made in Iowa, be provided by Iowans, or emanate from Iowa if one or more of the following apply:
   1. Goods are manufactured in Iowa.
   2. Goods are distributed through a distributor located in Iowa.
   3. Goods are sold by a retailer/wholesaler located in Iowa.
   4. Resources are produced or processed in Iowa.
   5. Services are provided by a vendor whose headquarters/home office is in Iowa.
   6. Goods, resources or services are provided by a vendor whose headquarters/home office is located outside Iowa, but which has a tangible business location (not simply a post office box) and does business in Iowa.
7. Services beyond selling are provided by employees who are based in Iowa. A facility shall be considered to have utilized a substantial amount of Iowa resources, goods, services and entertainment in compliance with Iowa Code sections 99D.9 and 99F.7(5) if the facility demonstrates to the satisfaction of the commission that preference was given to the extent allowed by law and other competitive factors.

c. Related parties. Other submittal requirements notwithstanding, agreements negotiated between the facility and a related party must be accompanied by an economic and qualitative justification. For the purpose of this subrule, related party shall mean any one of the following having any beneficial interest in any other party with whom the facility is seeking to negotiate an agreement:

(1) Any corporate officer or member of a facility’s board of directors.
(2) Any owner with more than a 5 percent interest in a facility.
(3) A member of either the qualified sponsoring organization or the qualifying organization under Iowa Code section 99D.8 associated with a facility.

d. Review criteria. The commission shall approve all qualifying agreements that, in the commission’s sole opinion, represent a normal business transaction and may impose conditions on an approval. The commission may deny approval of any agreement that, in the commission’s sole opinion, represents a distribution of profits that differs from commission-approved ownership and beneficial interest. This subrule does not prohibit the commission from changing the approved ownership or beneficial interest.

5.4(9) Checks. All checks accepted must be deposited in a bank by the close of the banking day following acceptance.

5.4(10) Taxes and fees.

a. Annual taxes and fees. All taxes and fees, whose collection by the state is authorized under Iowa Code chapters 99D and 99F, shall be accounted for on a fiscal-year basis, each fiscal year beginning on July 1 and ending on June 30.

b. Submission of gambling game taxes and fees.

(1) All moneys collected for and owed to the commission or state of Iowa under Iowa Code chapter 99F shall be accounted for and itemized on a weekly basis in a format approved by the commission. Each day on the report shall be an accurate representation of the gaming activities. A week shall begin on Monday and end on Sunday.

(2) The reporting form must be received in the commission office by noon on Wednesday following the week’s end. The moneys owed, according to the reporting form, must be received in the treasurer’s office by 11 a.m. on the Thursday following the week’s end.

c. Calculation of promotional play receipts. For the purpose of calculating the amount of taxes from promotional play receipts during a fiscal year, the commission will consider promotional play receipts as taxed in proportion to total adjusted gross receipts for each gaming day.

d. Submission of sports wagering net receipts taxes.

(1) A tax is imposed on the sports wagering net receipts received each fiscal year from sports wagering. “Sports wagering net receipts” means the gross receipts less winnings paid to wagerers on sports wagering on a cash accounting basis. Voided and canceled transactions are not considered receipts for the purpose of this calculation.

(2) All moneys collected for and owed to the state of Iowa under Iowa Code chapter 99F for the payment of sports wagering taxes shall be accounted for and itemized on a monthly basis, in a format approved by the commission, by noon on Wednesday following a gaming week’s end in which the completed gaming week includes the last day of the month. All sports wagering taxes owed shall be received in the treasurer’s office by 11 a.m. on the Thursday after accounting and itemization is due in the commission office. If sports wagering net receipts for a month are negative, a credit for sports wagering taxes may be given in the subsequent month.

(3) Licensees under Iowa Code section 99F.7 or 99F.7A are responsible for the payment of all sports wagering taxes.
(4) Controls which easily allow for the designation and recording of sports wagering net receipts to an individual licensee and the redemption of winnings to the respective licensee shall be established by the licensee and approved by the administrator.

5.4(11) Rate of tax revenue. Each licensee shall prominently display at the licensee’s gambling facility the annual percentage rate of state and local tax revenue collected by state and local government from the gambling facility annually.

5.4(12) Problem gambling.
   a. The holder of a license to operate gambling games and the holder of a license to accept simulcast wagering shall adopt and implement policies and procedures designed to:
      (1) Identify problem gamblers;
      (2) Comply with the process established by the commission to allow a person to be voluntarily excluded from the gaming floor of an excursion gambling boat, from the wagering area as defined in Iowa Code section 99D.2, from the sports wagering area as defined in Iowa Code section 99F.1(24), and from the gaming floor of all other licensed facilities or gambling activities regulated under Iowa Code chapters 99D and 99F; and
      (3) Allow persons to be voluntarily excluded for five years or life from all facilities on a form prescribed by the commission. Each facility will disseminate information regarding the exclusion to all other licensees and the commission.
   b. The policies and procedures shall be developed in cooperation with the gambling treatment program and shall include without limitation the following:
      (1) Training of key employees to identify and report suspected problem gamblers;
      (2) Procedures for recording and tracking identified problem gamblers;
      (3) Policies designed to prevent serving alcohol to intoxicated patrons on the gaming floor or wagering area;
      (4) Steps for removing problem gamblers from the gaming floor or wagering area;
      (5) Procedures for preventing reentry of problem gamblers;
      (6) Procedures to prominently display problem gambling materials produced by the Iowa gambling treatment program throughout the facility with at least one display located in a high-traffic area of patrons; and
      (7) Procedures for a licensee’s website to include a link to the commission’s website for individuals to self-exclude themselves pursuant to Iowa Code sections 99F.4(22) and 99D.7(23).
   c. A licensee shall include information on the availability of the gambling treatment program in a substantial number of its advertisements and printed materials.
   d. Money forfeited by a voluntarily excluded person pursuant to Iowa Code sections 99D.7(23) and 99F.4(22) shall be withheld by the licensee and remitted to the general fund of the state by the licensee under Iowa Code chapters 99D and 99F.

5.4(13) Records regarding ownership.
   a. In addition to other records and information required by these rules, each licensee shall maintain the following records regarding the equity structure and owners:
      (1) If a corporation:
         1. A certified copy of articles of incorporation and any amendments thereto.
         2. A copy of bylaws and amendments thereto.
         3. A current list of officers and directors.
         4. Minutes of all meetings of stockholders and directors.
         5. A current list of all stockholders and stockholders of affiliates, including their names and the names of beneficial shareholders.
         6. A complete record of all transfers of stock.
         7. A record of amounts paid to the corporation for issuance of stock and other capital contributions and dates thereof.
         8. A record, by stockholder, of all dividends distributed by the corporation.
         9. A record of all salaries, wages, and other remuneration (including perquisites), direct and indirect, paid by the corporation during the calendar or fiscal year to all officers, directors, and
stockholders with an ownership interest at any time during the calendar or fiscal year, equal to or greater than 5 percent of the outstanding stock of any class of stock.

(2) If a partnership:
   1. A schedule showing the amounts and dates of capital contributions, the names and addresses of the contributors, and percentage of interest in net assets, profits, and losses held by each.
   2. A record of the withdrawals of partnership funds or assets.
   3. A record of salaries, wages, and other remuneration (including perquisites), direct and indirect, paid to each partner during the calendar or fiscal year.
   4. A copy of the partnership agreement and certificate of limited partnership, if applicable.

(3) If a sole proprietorship:
   1. A schedule showing the name and address of the proprietor and the amount and date of the original investment.
   2. A record of dates and amounts of subsequent additions to the original investment and withdrawals therefrom.
   3. A record of salaries, wages, and other remuneration (including perquisites), direct or indirect, paid to the proprietor during the calendar or fiscal year.

b. All records regarding ownership shall be located in a place approved by the commission.

c. If the licensee is publicly held, upon the request of the administrator, the licensee shall submit to the commission one copy of any report required to be filed by such licensee or affiliates with the Securities and Exchange Commission or other domestic or foreign securities regulatory agency. If the licensee is privately held, upon the request of the administrator, the licensee shall submit financial, ownership, or other entity records for an affiliate.

5.4(14) Retention, storage, and destruction of books, records, and documents.

a. Except as otherwise provided, all original books, records, and documents pertaining to the licensee’s operations shall be:
   (1) Prepared and maintained in a complete and accurate form.
   (2) Retained at a site approved by the administrator until audited.
   (3) Held immediately available for inspection by the commission during business hours of operations.

b. For the purpose of this subrule, “books, records, and documents” shall be defined as any book, record, or document pertaining to or prepared or generated by the licensee including, but not limited to, all forms, reports, accounting records, ledgers, subsidiary records, computer-generated data, internal audit records, correspondence, contracts, and personnel records, including information concerning a refusal to submit to drug testing and test results conducted pursuant to Iowa Code section 730.5.

c. All original books, records, and documents may be copied and stored on microfilm, microfiche, or other suitable media system approved by the administrator.

d. No original book, record, document, or suitable media copy may be destroyed by a licensee, for three years, without the prior approval of the administrator.

e. Any licensee that offers electronic wagering accounts, as defined by rule 491—12.1(99F), must prepare a disaster recovery plan that addresses off-site backups or equivalent. All disaster recovery plans shall incorporate industry standards for retention and storage of wagering account information and shall be subject to review as part of the network security risk assessment required by subrule 5.4(21).

5.4(15) Remodeling. For any construction that changes the specific function of a public space of the facility, the licensee must first submit plans to and receive the approval of the administrator.

5.4(16) Officers, agents, and employees. Licensees are accountable for the conduct of their officers, agents, and employees. The commission or commission representative reserves the right to impose penalties against the license holder or its officer, agent, employee, or both as the commission or commission representative determines appropriate. In addition, the licensee shall be responsible for the conduct of nonlicensed persons in nonpublic areas of the excursion gambling boat, gambling structure, or racetrack enclosure.
5.4(17) Designated gaming floor. The designated gaming floor is all areas occupied by or accessible from a gambling game, not otherwise obstructed by a wall, door, partition, barrier, or patron entrance. A patron entrance shall be identified by a sign visible to patrons approaching the gaming floor. The sign shall denote entrance to the gaming floor and specify that the gaming floor is not accessible to persons under the age of 21. A floor plan identifying the area shall be filed with the administrator for review and approval. Modification to a previously approved plan must be submitted for approval at least ten days prior to implementation.

5.4(18) State fire and building codes.
   a. Barges, as defined in 5.6(1)“c,” and other land-based gaming facilities and such facilities that undergo major renovation shall comply with the state building code created by Iowa Code chapter 103A, if there is no local building code in force in the local jurisdiction in which the facility is located. A licensee shall submit construction documents and plans to the state building code commissioner and receive approval prior to construction, if a facility is subject to the state building code.
   b. If there is no enforcement of fire safety requirements by a local fire department, a licensee shall also submit construction plans and documents to the state fire marshal and receive approval prior to construction. The fire marshal may cause a facility subject to this paragraph to be inspected for compliance with fire marshal rules prior to operation of the facility and shall notify the commission and the licensee of the results of any such inspection.
   c. If a proposed new or renovated facility is subject to both paragraphs “a” and “b,” a single submission of construction plans and documents to the building code commissioner, with a cover letter stating that review and approval are required with respect to both the state building code and rules of the fire marshal, is sufficient to meet both requirements. Facilities subject to both paragraphs “a” and “b” shall have received approval from both the fire marshal and the building code commissioner prior to construction.

5.4(19) Gambling setoff. Each licensee shall adopt and implement policies and procedures designed to set off winnings of patrons who have a valid lien established under Iowa Code chapters 99D and 99F.

5.4(20) Shelf application for debt.
   a. The commission may grant approval of a shelf application for a period not to exceed three years.
   b. Licensees whose parent company has issued publicly traded debt or publicly traded securities may apply to the commission for a shelf approval of debt transactions if the parent company has:
      (1) A class of securities listed on the New York Stock Exchange, the American Stock Exchange or the National Association of Securities Dealers Automatic Quotation System (NASDAQ) or has stockholders’ equity in the amount of $15 million or more as reported in the parent company’s most recent report on Form 10-K or Form 10-Q filed with the Securities and Exchange Commission (SEC) immediately preceding application; and
      (2) Filed all reports required by the SEC.
   c. The application shall be in writing and shall contain:
      (1) Proof of qualification to make the application in accordance with the criteria of this subrule.
      (2) A statement of the amount of debt sought to be approved and the intended use of potential proceeds.
      (3) Duration sought for the shelf approval.
      (4) Financing rate sought during shelf approval.
      (5) Evidence of signature by authorized representative of the licensee under oath.
      (6) Other supplemental documentation requested by the commission or commission representative following the initial submission.
   d. Once an application is approved by the commission:
      (1) The licensee shall notify the commission representative of all debt transactions within ten days of consummation, including subsequent amendments and modifications of debt transactions, and provide executed copies of the documents evidencing the transactions as may be required.
      (2) The commission representative may rescind a shelf approval without prior written notice. The rescission shall be in writing and set forth the reasons for the rescission and shall remain in effect until
lifted by the commission upon the satisfaction of any such terms and conditions as required by the
commission.

5.4(21) Network security.

a. The licensee shall biennially submit the results of an independent network security risk
assessment to the administrator for review, subject to the following requirements:
   (1) The testing organization must be independent of the licensee and shall be qualified by the
       administrator.
   (2) The network security risk assessment shall be completed no later than March 31 in each year
       an assessment is required.
   (3) Results from the network security risk assessment shall be submitted to the administrator no
       later than 90 days after the assessment is completed. Results shall include a remediation plan to address
       any risks identified during the risk assessment.
   (4) The risk assessment shall be conducted in accordance with current and accepted industry
       standard review requirements for risk assessments.
   (5) The risk assessment shall include a review of licensee controls. Review of controls shall include
       but not be limited to a comparison of licensee controls to industry standard and best practice controls,
       and an audit of the licensee processes for compliance with those controls.
   (6) For licensees issued a license to conduct sports wagering pursuant to Iowa Code section
       99F.7A, a risk assessment required by this subrule shall include any on-premises sports wagering
       authorized by the commission at that licensee’s place of business. A supplemental risk assessment
       for the sports wagering operations may be accepted in lieu of inclusion with the assessment of
       the licensee’s overall operations, at the discretion of the administrator, and providing that the supplemental
       assessment independently complies with the requirements in subparagraphs 5.4(21) “a” (1) to (5).

b. At the discretion of the administrator, additional network security risk assessments may be
   required.

5.4(22) Cashless wagering reserves. A reserve in the form of cash or cash equivalents segregated
from operational funds shall be maintained to cover the entirety of a licensee’s electronic wagering
account liability. The reserve shall equal or exceed the licensee’s wagering account liability as of the last
day in the previous quarter. An accounting of this reserve shall be made available for inspection to the
commission upon request. The method of reserve shall be submitted to and approved by the administrator
prior to implementation.

[ARC 8029B, IAB 8/12/09, effective 9/16/09; ARC 9018B, IAB 8/25/10, effective 9/29/10; ARC 0734C, IAB 5/15/13, effective
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6169C, IAB 2/9/22, effective 3/16/22]

491—5.5(99D) Pari-mutuel uniform requirements.

5.5(1) Insect and rodent control. The licensee shall provide systematic and effective insect and
rodent control, including control of flies, mosquitoes, fleas, and mice, to all areas of licensee’s premises
at all times during a race meeting.

5.5(2) Results boards, totalizators required. Each licensee shall provide and maintain computerized
totalizators and electronic boards showing odds, results, and other racing information located in plain
view of patrons.

5.5(3) Photo finish camera. A licensee shall provide two electronic photo finish devices with
mirror image to photograph the finish of each race and record the time of each racing animal in at least
hundredths of a second. The location and operation of the photo finish device must be approved by the
commission before its first use in a race. The licensee shall promptly post a photograph, on a monitor,
of each photo finish for win, place or show, or for fourth place in superfecta races, in an area accessible
to the public. The licensee shall ensure that the photo finish devices are calibrated before the first day of
each race meeting and at other times as required by the commission. On request by the commission, the
licensee shall provide, without cost, a print of a photo finish to the commission. A photo finish of each
race shall be maintained by the licensee for not less than six months after the end of the race meeting, or such other period as may be requested by the commission.

5.5(4) Electric timing device. Any electric timing device used by the licensee shall be approved by the commission.

5.5(5) Official scale. The licensee shall provide and maintain in good working order official scales or other approved weighing devices. The licensee shall provide to the stewards certification of the accuracy of the scales at the beginning of each race meeting or more frequently if requested by the stewards.

5.5(6) Lighting. Each licensee shall provide and maintain adequate illumination in the barn/kennel area, parking area, and racetrack area.

5.5(7) Fencing. The stable and kennel areas should be properly fenced as defined by the commission and admission permitted only in accord with rules of the commission.

5.5(8) Guest passes. The licensee shall develop a policy to be approved by the stewards for the issuance of guest passes for entrance to the kennel or stable area. The guest pass is not an occupational license and does not permit the holder to work in any capacity or in any way confer the benefits of an occupational license to participate in racing. The license holder sponsoring or escorting the guest shall be responsible for the conduct of the guest pass holder.

5.5(9) Stewards. There shall be three stewards for each racing meet, two appointed by the commission and one nominated by the licensee for approval by the commission. The names of licensees’ nominees for steward and biographical information describing the experience and qualifications of the nominees shall be submitted no later than 45 days before commencement of a race meeting. The commission may consider for appointment or approval a person who meets all of the following requirements. The person shall have:

a. Engaged in pari-mutuel racing in a capacity and for a period satisfactory to the commission.

b. Satisfactorily passed an optical examination within one year prior to approval as a steward evidencing corrected 20/20 vision and the ability to distinguish colors correctly.

c. Satisfied the commission that income, other than salary as a steward, is independent of and unrelated to patronage of or employment by any occupational licensee under the supervision of the steward, so as to avoid the appearance of any conflict of interest or suggestion of preferential treatment of an occupational licensee.

5.5(10) Purse information. Each licensee shall provide to the commission at the close of each racing meet the following purse information:

a. The identity of each person or entity to which purse money is paid by the licensee for purses won by racing animals at the facility. This report shall include the name, residential or business address and amount paid to that person or entity. The data should be assembled separately for Iowa and non-Iowa addressees, and aggregates should be presented in descending order of magnitude.

b. The identity of each person or entity to which purse money is paid by the licensee for purses won by Iowa-bred animals at the facility. This report shall include the name, residential or business address and amount paid to that person or entity in supplemental funds for ownership of Iowa-bred animals. The data should be assembled separately for Iowa and non-Iowa addressees, and aggregates should be presented in descending order of magnitude.

5.5(11) Designated wagering area. The designated wagering area is an area of a racetrack, designated by a licensee and approved by the commission, in which a licensee may receive from a person wagers of money on a horse or dog in a race selected by the person making the wagers as designated by the commission. Modification to a previously approved plan must be submitted for approval at least ten days prior to implementation. Exceptions to this rule must be approved in writing by the commission.

5.5(12) Mobile pari-mutuel wagering. Pari-mutuel wagering shall be allowed outside the designated wagering area using mobile pari-mutuel tellers with portable wagering devices and by any other method approved in writing by the commission.

[ARC 2927C, IAB 2/1/17, effective 3/8/17; ARC 3608C, IAB 1/31/18, effective 3/7/18; ARC 4378C, IAB 3/27/19, effective 5/1/19]

491—5.6(99F) Excursion gambling boat uniform requirements.
5.6(1) Excursion gambling boat.

a. Capacity. The minimum passenger capacity necessary for an excursion gambling boat is 250.

b. Excursion boat. A self-propelled, floating “vessel” as defined by the U.S. Coast Guard may contain more than one vessel. In order to be utilized for gaming purposes, the vessel containing the casino must either contain a permanent means of propulsion or have its means of propulsion contained in an attached vessel. In the event that the vessel containing the casino is propelled by a second vessel, the boat will be considered self-propelled only when the vessels are designed, constructed, and operated as a single unit.

c. Moored barge. “Barge” means any stationary structure approved by the commission, where the entire gaming floor is located on or near a body of water as defined under Iowa Code section 99F.7, subsection 1, and which facility is subject to land-based building codes rather than maritime or Iowa department of natural resources inspection laws and regulations.

5.6(2) Excursions.

a. Length. The excursion season shall be from April 1 through October 31 of each calendar year. An excursion boat must operate at least one excursion during the excursion season to operate during the off-season, although a waiver may be granted by the commission in the first year of a boat’s operation if construction of the boat was not completed in time for the boat to qualify. Excursions shall consist of a minimum of one hour in transit during the excursion season. The number of excursions per day is not limited. During the excursion season and the off-season, while the excursion gambling boat is docked, passengers may embark or disembark at any time during business hours pursuant to Iowa Code section 99F.4(17).

b. Dockside completion of excursions. If, during the excursion season, the captain determines that it would be unsafe to complete any portion of an excursion, or if mechanical problems prevent the completion of any portion of an excursion, the boat may be allowed to remain at the dock or, if the excursion is underway, return to the dock and conduct the gaming portion of the excursion while dockside, unless the captain determines that passenger safety is threatened.

c. Notification. If an excursion is not completed due to reasons specified in paragraph 5.6(2) “b,” a commission representative shall be notified as soon as is practical.

5.6(3) Drug testing of boat operators. Captains, pilots, and physical operators of excursion gambling boats shall be drug tested, as permitted by Iowa Code section 730.5, on a continuous basis with no more than 60 days between tests. The testing shall be conducted by a laboratory certified by the United States Department of Health and Human Services or approved under the rules adopted by the Iowa department of public health. The facility shall report positive test results to a commission representative.

These rules are intended to implement Iowa Code chapters 99D and 99F.

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0 Two or more ARCs  
1 Effective date of 5.1(5)“c” delayed until the end of the 1999 Session of the General Assembly by the Administrative Rules Review Committee at its meeting held December 8, 1998.

“Applicant” means an individual applying for an occupational license.

“Beneficial interest” means any and all direct and indirect forms of ownership or control, voting power, or investment power held through any contract, lien, lease, partnership, stockholding, syndication, joint venture, understanding, relationship (including family relationship), present or reversionary right, title or interest, or otherwise.

“Board” means either the board of stewards or the gaming board, as appointed by the administrator, whichever is appropriate. The administrator may serve as a board of one.

“Commission” means the Iowa racing and gaming commission.

“Commission representative” means a gaming representative, steward, or any person designated by the commission or commission administrator.

“Conviction” means the act or process of judicially finding someone guilty of a crime; the state of a person’s having been proved guilty; the judgment that a person is guilty of a crime or criminal offense, which includes a guilty plea entered in conjunction with a deferred judgment, and a juvenile who has been adjudicated delinquent. The date of conviction shall be the date the sentence and judgment is entered.

“Deceptive practice” means any deception or misrepresentation made by the person with the knowledge that the deception or misrepresentation could result in some benefit to the person or some other person.

“Facility” means an entity licensed by the commission to conduct pari-mutuel wagering, gaming or sports wagering operations in Iowa.

“Internet fantasy sports contest service provider” means a person, including a licensee under Iowa Code chapter 99D or 99F, who conducts an internet fantasy sports contest as authorized by Iowa Code chapter 99E.

“Jockey” means a person licensed to ride a horse in a race.

“Kennel/stable name” means any type of name other than the legal name or names used by an owner or lessee and registered with the commission.

“Licensee” means a person licensed by the commission to perform an occupation which the commission has identified as requiring a license for a person to work in the pari-mutuel, gambling structure, excursion gambling boat, sports wagering or internet fantasy sports contest industry in Iowa.

“Occupation” means a license category listed on the commission’s occupational license application form.

“Owner” means a person or entity that holds any title, right or interest, whole or partial, in a racing animal.

“Rules” means the rules promulgated by the commission to regulate the racing and gaming industries, sports wagering, and internet fantasy sports contests.

“Sports wagering” means the acceptance of wagers on an authorized sporting event by any system of wagering as authorized by the commission. “Sports wagering” does not include placing a wager on the performance or nonperformance of any individual athlete participating in a single game or match of a collegiate sporting event in which a collegiate team from this state is a participant, or placing a wager on the performance of athletes in an individual international sporting event governed by the international olympic committee in which any participant in the international sporting event is under 18 years of age.

“Theft” includes, but is not limited to:

1. The act of taking possession or control of either facility property or the property of another without the express authorization of the owner;

2. The use, disposition, or destruction of property in a manner which is inconsistent with or contrary to the owner’s rights in such property;

3. Misappropriation or misuse of property the person holds in trust for another; or
4. Any act which constitutes theft as defined by Iowa Code chapter 714. No specific intent requirement is imposed by rule 491—6.5(99D,99E,99F) nor is it required that there be any showing that the licensee received personal gain from any act of theft.

“Year” means a calendar year.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]


6.2(1) All licensees for internet fantasy sports contests and all persons participating in any capacity at a racing or gaming facility, with the exception of certified law enforcement officers while they are working for the facility as uniformed officers, are required to be properly licensed by the commission.

a. License applicants may be required to furnish to the commission a set of fingerprints and may be required to be fingerprinted or rephotographed periodically.

b. License applicants must supply current photo identification and proof of their social security number and date of birth.

c. License applicants must complete and sign the application form prescribed and published by the commission. An incomplete application shall not be processed. The application shall state the full name, social security number, residence, date of birth, and other personal identifying information of the applicant that the commission deems necessary. The application shall include, in part, whether the applicant has any of the following:

1. A record of conviction of a felony or misdemeanor, including a record involving the entry of a deferred judgment and adjudications of delinquency;

2. An addiction to alcohol or a controlled substance;

3. A history of mental illness or repeated acts of violence;

4. Military convictions;

5. Adjudication of delinquency; or

6. Overdue income taxes, fines, court-ordered legal obligations, or judgments.

d. License applicants for designated positions of higher responsibility may be required to complete a division of criminal investigation (DCI) background form.

e. A fee set by the commission shall be assessed to each license applicant. Once a license is issued, the fee cannot be refunded.

f. License applicants must pay an additional fee set by the Federal Bureau of Investigation (FBI) and by the department of public safety (DCI and bureau of identification) to cover the cost associated with the search and classification of fingerprints.

g. All racing and gaming commission fees for applications or license renewals must be paid by applicants or licensees before a license will be issued or renewed or, if the applicant is an employee of a facility, the commission fees will be directly billed to the facility.

h. An applicant who knowingly makes a false statement on the application is guilty of an aggravated misdemeanor.

i. Participation in racing and gaming, sports wagering, and internet fantasy sports contests in the state of Iowa is a privilege and not a right. The burden of proving qualifications to be issued any license is on the applicant at all times. An applicant must accept any risk of adverse public notice, embarrassment, criticism, or other action, as well as any financial loss that may result from action with respect to an application.

j. All licenses are conditional until completion of a necessary background investigation including, but not limited to, fingerprint processing through the DCI and the FBI and review of records on file with national organizations, courts, law enforcement agencies, and the commission.

k. Any licensee who allows another person use of the licensee’s license badge for the purpose of transferring any of the benefits conferred by the license may be fined, have the license suspended or revoked, or be subject to any combination of the above-mentioned sanctions. No license shall be transferable and no duplicate licenses shall be issued except upon submission of an application form and payment of the license fee.
l. It shall be the affirmative responsibility and continuing duty of each applicant to provide all information, documentation, and assurances pertaining to qualifications required or requested by the commission or commission representatives and to cooperate with commission representatives in the performance of their duties. A refusal by any person to comply with a request for information from a commission representative shall be a basis for fine, suspension, denial, revocation, or disqualification.

m. Non-U.S. citizens must supply documentation authorizing them to work in the United States or supply documentation demonstrating compliance with the North American Free Trade Agreement.

n. Portions of all completed applications accepted by the commission are confidential. The following persons have the explicit right to review all information contained on the application: the applicant, all commission officials and employees, the track steward, and DCI agents or other law enforcement officers serving in their official capacity.

o. A license may not be issued or held by an applicant who is unqualified, by experience or otherwise, to perform the duties required.

p. A license may not be issued to applicants who have not previously been licensed in the following occupations except upon recommendation by the commission representative: trainers, assistant trainers, jockeys, apprentice jockeys, exercise persons, and other occupations the commission may designate. The commission representative may, for the purpose of determining a recommendation under this subrule, consult a representative of the facility, horsemen, or jockeys.

6.2(2) All facility board members and internet fantasy sports contest service provider board members shall undergo a background investigation and be licensed immediately upon appointment. For the purposes of this chapter, the term “board members” shall also include managers of limited liability companies.

6.2(3) Multiple license restrictions.

a. A person may work outside the licensed occupation as long as the person is licensed in an equal or higher occupation.

b. In horse racing only, the following restrictions apply:

(1) A person licensed as a jockey or veterinarian may not be licensed in another capacity.

(2) A person may not be licensed as an owner and a jockey agent.

(3) No racing official may serve or act in another capacity at a race meeting at which that person is licensed as an official except if there is no conflict of interest or duties as determined by the commission representative.

6.2(4) Application endorsements. The responsibility of licensing an employee rests with the employer. Therefore, a license may not be issued to any employee unless the application includes prior endorsement of the facility’s authorized representative. All facilities must submit a list of representatives authorized to sign applications. This list shall not exceed six names. This authorization list shall be sent to the commission licensing office associated with each facility.

6.2(5) An applicant who has not held a license for the previous calendar year shall be considered a first-time applicant.

6.2(6) Interim identification badge.

a. All interim identification badges issued by a facility must be recorded in a logbook, which is available for inspection by commission or DCI representatives. The logbook must reflect the following information: date issued; user’s name and date of birth (verified by photo ID); occupation; badge number; issuer; time issued; and time returned. Badges shall only be issued on a daily basis and must be returned before the employee leaves facility premises. A badge shall be effective only until the commission licensing office’s next day of business, and may not be used to avoid obtaining a duplicate license.

b. A badge shall only be issued if:

(1) An employee is hired during a time that the commission licensing office is closed; or

(2) An employee is not in possession of the employee’s occupational license.
491—6.3(99D,99E,99F) Waiver of privilege. An applicant may claim a privilege afforded by the Constitution of the United States or of the state of Iowa in refusing to answer questions of the commission. However, a claim of privilege with respect to any testimony or evidence pertaining to an application may constitute sufficient grounds for denial. 

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]


6.4(1) Occupational license (license). The license shall be displayed in a conspicuous manner on the licensee’s clothing at all times while the licensee is on duty unless otherwise permitted by the commission representative. A licensee is prohibited from defacing, altering, or modifying a license.

6.4(2) Knowledge of rules. By acceptance of a license from the commission, the licensee agrees to follow and comply with the rules of the commission and Iowa statutes pertaining to racing and gaming, to report immediately to the commission representative any known irregularities or wrongdoing involving racing or gaming and to cooperate in subsequent investigations. Commission rules are available on the commission’s website at irgc.iowa.gov.

6.4(3) Search and seizure. Acceptance of a license from the commission by any licensee is deemed consent to search and inspection by a commission or DCI representative and to the seizure of any prohibited medication, drugs, paraphernalia or devices.

6.4(4) Misuse of license. No person shall exercise or attempt to exercise any of the powers, privileges, or prerogatives of a license unless and until the appropriate licensing form has been executed and filed with the commission except under subrule 6.2(6). The commission shall exercise the power to regulate the conduct of all persons holding licenses or participating in racing or gaming.

[ARC 2927C, IAB 2/1/17, effective 3/8/17; ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—6.5(99D,99E,99F) Grounds for denial, suspension, or revocation of a license or issuance of a fine. The commission or commission representative shall deny an applicant a license or, if a license is already issued, a licensee shall be subject to probation, fine, suspension, revocation, or other disciplinary measures, if the applicant or licensee:

6.5(1) Does not qualify under the following screening policy:

a. Applicants must be at least 18 years of age to work in areas where gaming or wagering is conducted.

b. Applicants must be at least 16 years of age to be eligible to be licensed to work for a trainer of racing animals.

c. A license shall be denied if, within the last five years, an applicant has had:

(1) A felony conviction;

(2) A conviction for an offense involving theft or fraudulent practice in excess of $500;

(3) A conviction for an offense involving the use of an alias in connection with fraud; or

(4) A conviction for an offense involving ownership, operation, or an interest in any bookmaking or other illegal enterprise or if the applicant is or has been connected with or associated with any illegal enterprise.

If the conviction occurred more than five years before application, a license shall not be issued unless the commission representative determines that sufficient evidence of rehabilitation exists.

d. Unless sufficient evidence of rehabilitation exists, a license shall be denied if any applicant has had:

(1) A conviction of a serious or aggravated misdemeanor or the equivalent; or

(2) Multiple convictions of simple misdemeanors.

e. A license shall be temporarily denied or suspended until the outcome of any pending charges is known if conviction would disqualify the applicant and the commission representative determines that the applicant poses an immediate danger to the public health, safety, or welfare of the patrons, participants, or animals associated with a facility licensed under Iowa Code chapter 99D, 99E or 99F.

f. A license shall be denied if the applicant has an addiction to alcohol or a controlled substance without sufficient evidence of rehabilitation, has a history of mental illness without demonstrating
successful treatment by a licensed medical physician, or has a history of repeated acts of violence without sufficient evidence of rehabilitation.

g. A license may be temporarily denied or a probationary license may be issued until outstanding, overdue court-ordered obligations are satisfied. These obligations include, but are not limited to, criminal or civil fines, state or federal taxes, or conditions imposed upon the applicant by a court of law that the applicant has failed to meet in a timely manner.

h. A license may be denied if an applicant is ineligible to participate in gaming in another state and it would not be in the best interest of racing or gaming to license the applicant in Iowa. A license shall be denied if an applicant is ineligible to participate in racing in another state whose regulatory agency is recognized by and reciprocates in the actions of this state.

i. A license shall be denied and not reinstated if an applicant has been denied patron privileges by order of the commission.

j. A license shall be denied if the applicant falsifies the application form and would be ineligible for licensure under one or more of the provisions set forth in paragraphs “a” through “i” above. In other cases of falsification, a license may be issued and the applicant shall be subject to a suspension, fine, or both.

k. A license shall be denied if an applicant is not of good repute or moral character. Any evidence concerning a licensee’s current or past conduct, dealings, habits, or associations relevant to that individual’s character or reputation may be considered. The commission representative shall decide what weight and effect evidence shall have in the determination of whether there is substantial evidence that the individual is not of good reputation or character. Applicants who hold positions of higher responsibility may be held to a more stringent standard of conduct and reputation than others with a less significant interest or role.

l. A license shall be denied if the applicant is a board member of an internet fantasy sports contest service provider and is under the age of 21.

6.5(2) Has not demonstrated financial responsibility or has failed to meet any monetary obligation in the following circumstances connected with racing, gaming, sports wagering, or an internet fantasy sports contest:

a. Issuance or passing of bad checks. No person shall write, issue, make, or present any check in payment for any license fee, nomination fee, entry fee, starting fee, or purse payment when that person knows or should reasonably know that the check will be refused for payment by the bank upon which it is written, or that the account upon which it is written does not contain sufficient funds for payment of the check, or that the check is written on a closed or nonexistent account.

b. Judgments. Whenever any person licensed to engage in racing suffers a final judgment entered against that person in any court of competent jurisdiction within the United States, when that judgment is based wholly, or in part, upon an indebtedness incurred by that person for supplies, equipment, or services furnished in connection with racing, the commission representatives shall schedule a hearing at which the licensee shall be required to show cause as to why the license should not be suspended.

c. Timely payment. Should an owner fail to make timely payment of any jockey fee, nomination fee, entry fee, starting fee, or any other reasonable charge normally payable to the facility, the facility shall notify the commission representatives who shall in turn give notice to the owner that a hearing will be held where the owner will be required to show cause why the license should not be suspended for failure to make the required payments.

6.5(3) Has been involved in any fraudulent or corrupt practices, including, but not limited to:

a. Offering, promising, giving, accepting, or soliciting a bribe in any form, directly or indirectly, to or by a person licensed by the commission to violate these rules or the laws of the state related to racing, gaming, sports wagering or internet fantasy sports contests.

b. Failing to report any bribe or solicitation as in 6.5(3) “a” above.

c. Soliciting by any licensee, except the facility, licensed advance deposit sports wagering operator or licensed internet fantasy sports contest service provider of bets by the public.

d. Violation of any law of the state or rule of the commission, or aiding or abetting any person in the violation of any such law or rule.
e. Theft or deceptive practice of any nature on the premises of a facility or in the performance of duties associated with advance deposit sports wagering or internet fantasy sports contests.

f. Giving under oath any false statement or refusing to testify, after proper notice, to the commission representative about any matter regulated by the commission, except in the exercise of a lawful legal privilege.

g. Failing to comply with any request for information or any order or ruling issued by the commission representative pertaining to a racing, gaming, sports wagering or internet fantasy sports contest matter.

h. Disorderly or offensive conduct; use of profane, abusive, or insulting language to, or interference with, commission representatives or racing or gaming officials while they are discharging their duties.

i. Conduct in Iowa or elsewhere that has been dishonest, undesirable, or detrimental to, or reflects negatively on, the integrity or best interests of racing, gaming, sports wagering or internet fantasy sports contests.

j. Illegal sale, possession, receipt, or use of a controlled substance or drug paraphernalia; intoxication; use of profanity; fighting; making threatening or intimidating statements; engaging in threatening or intimidating behavior; or any conduct of a disorderly nature on facility premises.

k. Discontinuance of or ineligibility for activity for which the license was issued.

l. Possessing a firearm on facility property without written permission from the commission representative.

m. Improperly influencing or attempting to improperly influence the results of a race, a gambling game, a sporting event that is subject to sports wagering, or an internet fantasy sports contest, singularly or in combination with any person.

n. Failing to report any attempt to improperly influence the result of a race, a gambling game, a sporting event that is subject to sports wagering, or an internet fantasy sports contest as in 6.5(3)”m” above.

o. Having had two rulings related to attempts to affect a race result or odds (rulings for electrical devices, serious positives, for example) in a lifetime or one ruling within the last three years. A license may be issued if one ruling has occurred outside of three years if sufficient evidence of rehabilitation exists. A license may be denied if a lengthy record of rulings from other jurisdictions exists.

p. Possessing any equipment for hypodermic injection, any substance for hypodermic administration, or any container designed to hold an injectable substance (narcotics, medications, drugs, or substances which could be used to alter the speed of racing animals) by anyone other than a veterinarian licensed by the commission. Notwithstanding the provisions of this subrule, any person may have possession of any chemical or biological substance for the person’s own treatment within a restricted area, provided that, if the chemical substance is prohibited from being dispensed without a prescription by any federal law or law of this state, the person is in possession of documentary evidence that a valid prescription has been issued to the person. Notwithstanding the provisions of this subrule, any person may have in possession within any restricted area any hypodermic syringe or needle for the purpose of self-administering to the person a chemical or biological substance, provided that the person has notified the commission representatives of the possession of the device, the size of the device, and the chemical substance to be administered and has obtained written permission for possession and use from the commission representative. A restricted area is a designated area for sample collection, paddock, racetrack, or any other area where officials carry out the duties of their positions.

q. Subjecting an animal to cruel and inhumane treatment by failing to supply it with adequate food, water, medical treatment, exercise, bedding, sanitation, and shelter; or by neglect or intentional act causing an animal to suffer unnecessary pain.

r. Offering or receiving money or other benefit for withdrawing a racing animal from a race.

s. Making a wager for a jockey by any person other than the owner or trainer of the horse ridden by the jockey.
Making a wager for a jockey on a horse by an owner or trainer other than that ridden by the jockey. This shall not be construed to include bets on another horse in combination with the horse ridden by the jockey in multiple wagering bets.

Offering or giving a jockey money or other benefit concerning a race, except by the owner or trainer of the horse to be ridden.

Entering or starting a racing animal known or believed to be ineligible or disqualified.

Possessing any device designed to increase or decrease the speed of a racing animal during a race other than an ordinary riding whip without written permission from the commission representative.

Communicating with or contacting a person who is voluntarily excluded pursuant to Iowa Code chapter 99D or 99F for gaming-, wagering-, or internet fantasy sports contest-related activities.

**491—6.6(99D,99E,99F) Applications for license after denial, revocation, or suspension.**

6.6(1) Any person whose license was denied or revoked may reapply for a license in accordance with the commission’s rules governing applications. However, the applicant must satisfy the following conditions:

   a. The applicant shall bear the burden of proof of establishing satisfaction with all license criteria and shall provide proof of satisfaction of any terms or conditions imposed as a part of the commission’s order denying or revoking the license;

   b. The applicant shall allege facts and circumstances establishing, to the commission’s satisfaction, sufficient evidence of rehabilitation and that the basis for the denial or revocation no longer exists;

   c. The applicant shall establish that the public interest and the integrity of racing and gaming would not be adversely affected if a license is granted; and

   d. If the license was revoked, a new application shall not be filed until five years have elapsed from the date of the order of revocation.

6.6(2) Any person whose license was suspended for 365 days or more may file a new application for a license upon the expiration of the period of suspension but must satisfy all of the conditions set forth in 6.6(1) “a,” “b,” and “c” above. If a person’s license has not expired after the 365-day suspension, the person must have a hearing before a board to determine if the person has satisfied all of the conditions set forth in 6.6(1) “a,” “b,” and “c” above prior to that individual’s participating in racing or gaming.

**491—6.7(99D,99E,99F) Probationary period placed on a license.** The commission representative or the board may place a probationary period on a license. The terms of the probationary period shall include the effective dates, conditions placed on the licensee and any penalty for failure to follow those conditions, including fine, suspension, denial, or revocation.

**491—6.8(99D,99E,99F) Duration of license.** A license issued by the commission is valid for three calendar years. The license shall expire at the end of the third calendar year, unless an extension is granted by the administrator.

**491—6.9(99D,99E,99F) Licensed employees moving from one location to another.**

6.9(1) Once an applicant obtains an occupational license from the commission and is in good standing, the applicant is eligible to work at any of the facilities in the state of Iowa.

6.9(2) When a facility hires a person who is already in possession of a current occupational license, a list of the person(s) hired must be filed weekly with the local commission office before the person(s) begins working. The list should contain the license number, name, social security number, and birth date of each person hired.
491—6.10(99D,99E,99F) Required report of discharge of licensed employee. Upon discharge of any licensed employee by any licensed employer for violation of rules or laws within the jurisdiction of the commission, the employer must report that fact in writing, within 72 hours, to the local commission office, including the name and occupation of the discharged licensee. In the case of discharge of a board member of an internet fantasy sports contest service provider, the employer must report that fact in writing, within 72 hours, to the Des Moines commission office, including the name and occupation of the discharged licensee.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—6.11(99D,99F,252J) Receipt of certificate of noncompliance from the child support recovery unit.

6.11(1) Upon the commission’s receipt of a certificate of noncompliance, a commission representative shall initiate procedures for the suspension, revocation, or denial of issuance or renewal of licensure to an individual. A notice of intended action shall be served by restricted certified mail, return receipt requested, or by personal service in accordance with Iowa Rule of Civil Procedure 1.305.

6.11(2) The effective date of suspension or revocation, or denial of the issuance or renewal of a license, as specified in the notice, shall be no sooner than 30 days following service of the notice upon the licensee or applicant.

6.11(3) The filing of a district court action by a licensee or applicant challenging the issuance of a certificate of noncompliance shall automatically stay any administrative action. Upon the receipt of a court order lifting the stay, dismissing the action, or otherwise directing the commission, the intended action will proceed as described in the notice. For purposes of determining the effective date of suspension or revocation, or denial of the issuance or renewal of a license, only the number of days before the action was filed and the number of days after the action was disposed of by the court will be counted.

6.11(4) Upon receipt of a withdrawal of a certificate of noncompliance from the child support recovery unit, the commission representative shall immediately reinstate, renew, or issue a license if the individual is otherwise in compliance with licensing requirements.

6.11(5) All commission fees for applications or license renewals must be paid by licensees or applicants before a license will be issued or renewed.


491—6.13(99D,99F,272D) Receipt of certificate of noncompliance from the centralized collection unit of the department of revenue.

6.13(1) Upon the commission’s receipt of a certificate of noncompliance, a commission representative shall initiate procedures for the suspension, revocation, or denial of issuance or renewal of licensure to an individual. A notice of intended action shall be served by restricted certified mail, return receipt requested, or by personal service in accordance with Iowa Rule of Civil Procedure 1.305.

6.13(2) The effective date of suspension or revocation, or denial of the issuance or renewal of a license, as specified in the notice, shall be no sooner than 30 days following service of the notice upon the licensee or applicant.

6.13(3) The filing of a district court action by a licensee or applicant challenging the issuance of a certificate of noncompliance shall automatically stay any administrative action. Upon the receipt of a court order lifting the stay, dismissing the action, or otherwise directing the commission, the intended action will proceed as described in the notice. For purposes of determining the effective date of suspension or revocation, or denial of the issuance or renewal of a license, only the number of days before the action was filed and the number of days after the action was disposed of by the court will be counted.
6.13(4) Upon receipt of a withdrawal of a certificate of noncompliance from the centralized collection unit, the commission representative shall immediately reinstate, renew, or issue a license if the individual is otherwise in compliance with licensing requirements.

6.13(5) All commission fees for applications or license renewals must be paid by licensees or applicants before a license will be issued or renewed.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]


6.14(1) A vendor’s license is required of any entity not licensed as a manufacturer or distributor that conducts operations on site at a facility or a vendor that provides geolocation security services to any licensee.

6.14(2) An applicant for a vendor’s license must complete the appropriate commission form. An authorized representative from the facility for which the vendor wishes to do continuous business must sign the form. A letter from the facility authorizing the vendor to do business shall replace a signature on the application form.

6.14(3) Any employee who works for a licensed vendor and will be supplying the goods or services to the facility must have a vendor employee license. A vendor license must be issued before a vendor employee can be issued a license to represent that company. The authorized signature on the vendor employee’s application must be the signature of the person authorized by the vendor application to sign vendor employee applications.


[ARC 7658B, IAB 3/25/09, effective 3/23/09; ARC 6160C, IAB 2/9/22, effective 3/16/22]

491—6.15(99D,99F) Applicability of rules—exceptions. Rules pertaining to and rulings against licensees shall apply in like force to the spouse and members of the immediate family or household of the licensee if the continuation of participation in racing or gaming by the affected person circumvents the intent of the rule or affects the ruling by permitting a person under the control or direction of the licensee to serve in essence as a substitute for a suspended licensee, or a person ineligible to participate in a particular activity.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.16(99D) Disclosure of ownership of racing animals. All entities of ownership (individual, lessee, lessor, general partnership, or corporation) and all trainers are responsible for making full and accurate disclosure of the ownership of all racing animals registered or entered for racing. Disclosure shall identify in writing all individuals or entities that, directly or indirectly, through a contract, lien, lease, partnership, stockholding, syndication, joint venture, understanding, relationship (including family relationship), present or reversionary right, title or interest, or otherwise hold any interest in a racing animal, and those individuals or entities who by virtue of any form of interest might exercise control over the racing animal or may benefit from the racing of the animal. The degree and type of ownership held by each individual person shall be designated. The transfer of a racing animal to avoid application of a commission rule or ruling is prohibited and constitutes grounds for discipline.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.17(99D) Owners of racing animals.

6.17(1) Each greyhound owner must obtain an owner’s license from the commission to enter an animal in an official schooling race or a purse race at an Iowa racetrack.

6.17(2) Each owner is subject to the laws of Iowa and the rules promulgated by the commission immediately upon acceptance and occupancy of accommodations from or approved by a facility or upon making entry to run on its track. Owners shall accept the decision of the commission representative on any and all questions, subject to the owner’s right of appeal to the commission.

6.17(3) An owner who is under the age of 18 must have a parent or guardian cosign any contractual agreements.
6.17(4) No person or entity that is not the owner of record of a properly registered racing animal that is in the care of a licensed trainer may be licensed as an owner.

6.17(5) Temporary horse owner license. Rescinded IAB 11/5/08, effective 12/10/08.

[ARC 76588, IAB 3/25/09, effective 3/23/09]

491—6.18(99D) Kennel/stable name.

6.18(1) Licensed owners and lessees wishing to race under a kennel/stable name may do so by applying for a license with the commission on forms furnished by the commission. All kennel/stable names must be licensed with the commission on forms furnished by the commission, and in accordance with the requirements of 491—6.17(99D).

6.18(2) A kennel/stable name license is only necessary if the kennel/stable name is a name other than the licensed owner’s legal name (first and last name), the owner’s full name followed by the word “kennel” or “stable,” or a licensed partnership or corporation.

6.18(3) In applying to race under a kennel/stable name, the applicant must disclose the identities behind the name and, if applicable, comply with partnership and corporation rules. The application form must appoint one person to act as the agent for the kennel/stable name.

6.18(4) Changes in identities involved in a kennel/stable name must be reported immediately to and approved by the commission representative.

6.18(5) A licensed owner who has registered under a kennel/stable name may at any time cancel the kennel/stable name after giving written notice to the commission.

6.18(6) A kennel/stable name may be changed by registering a new name.

6.18(7) A licensed owner may not register a kennel/stable name that the commission determines to be either misleading to the public or unbecoming to the sport.

6.18(8) Neither sole owners nor partners, after adopting use of a kennel/stable name, may use their real names to reflect ownership that is reflected in the kennel/stable name.

6.18(9) A fee set by the commission shall be assessed for each application for a kennel/stable name license.

6.18(10) No person may register with any racing authority a stable name which has already been registered by another person, or which is the real name of another owner of race horses, or which is the real or stable name of any prominent person who does not own race horses, or which is not plainly distinguishable from that of another registered stable name.

6.18(11) Contract kennels must be licensed with the commission, on forms furnished by the commission, in the name of the kennel booking contract entered into between the contract kennel and the facility; this name shall be listed in the official program as “kennel.”

6.18(12) A licensed kennel owner shall not be a party to more than one kennel name at the same facility.

[ARC 76588, IAB 3/25/09, effective 3/23/09]

491—6.19(99D) Leases (horse racing only).

6.19(1) No licensee shall lease a racing animal for the purpose of racing at facilities in this state without prior approval of the commission representatives.

6.19(2) Both lessor and lessee must be licensed as owners.

6.19(3) Each licensee who leases a racing animal must submit a copy of that lease to the commission representatives. The lease must contain the conditions of the lease arrangement and the names of all parties and racing animals related to the lease. Failure to submit accurate and complete information under this rule is a violation of these rules.

6.19(4) Both seller and purchaser, or their agents or representatives, of a racing animal that is sold after being registered for racing with a racing association shall immediately notify the commission representatives of the sale and transfer. The commission representatives may require a declaration of the facts of the sale and transfer under oath and penalty of perjury.

[ARC 76588, IAB 3/25/09, effective 3/23/09]

491—6.20(99D) Partnerships owning racing animals.
6.20(1) A partnership is defined as a formal or informal arrangement between two or more persons to own a racing animal. All partnerships, excluding spouses, must be licensed with the commission on forms furnished by the commission, and in accordance with the requirements of 491—6.17(99D).

6.20(2) The managing partner(s) listed on the application and all parties owning 5 percent or more must be licensed as individual owners.

a. The commission representative may request a partnership to have on file with the commission an agreement whereby the managing partner(s) is designated to be responsible for each racing animal. This agreement must be notarized and must be signed by all partners. A copy of this agreement must be attached to the registration certificate on file in the racing secretary’s office.

b. It will be the responsibility of the managing partner(s) to make sure that all parties are eligible for licensure. The commission representative shall deny, suspend, or revoke the license of any partnership in which a member (either qualified or limited by rights or interests held, or controlled by any individual or entity) would be ineligible to be licensed as an owner or to participate in racing.

c. Any owner who is a member of a partnership may be required to list all racing animals that the owner intends to race in Iowa in which an interest is owned (either in whole or in part).

d. All parties to a partnership shall be jointly and severally liable for all stakes, forfeits, and other obligations.

e. An authorized agent may be appointed to represent the partnership in all matters and be responsible for all stakes, forfeits, entries, scratches, signing of claim slips, and other obligations in lieu of the managing partner(s).

6.20(3) A partnership name under which a racing animal races shall be considered a kennel/stable name for purposes of these rules. It will not be necessary for the partnership to obtain a kennel/stable name license.

6.20(4) Any partner’s share or partial share of a partnership that owns a racing animal shall not be assigned without the written consent of the other partner(s), the commission representative’s approval, and filing with the racing secretary. Any alteration in a partnership structure or percentages must be reported promptly in writing, notarized, signed by all members of the partnership, and filed with the commission.

6.20(5) The commission representative may review the ownership of each racing animal entered to race and shall ensure that each registration certificate or eligibility certificate is properly endorsed by the transferor to the present owner(s). The commission representative may determine the validity for racing purposes of all liens, transfers and agreements pertaining to ownership of a racing animal and may call for adequate evidence of ownership at any time. The commission representative may declare any animal ineligible to race if its ownership, or control of its ownership, is in question.

6.20(6) A fee set by the commission shall be assessed for each application for a partnership license. [ARC 7658B, IAB 3/25/09, effective 3/23/09; ARC 2927C, IAB 2/1/17, effective 3/8/17]

491—6.21(99D) Corporations owning racing animals.

6.21(1) All corporations must be duly licensed by the commission on forms furnished by the commission, and in accordance with the requirements of 491—6.17(99D). In addition, any stockholder owning a beneficial interest of 5 percent or more of the corporation must be licensed as an owner. The corporation must submit a complete list of stockholders owning a beneficial interest of 5 percent or more.

6.21(2) The corporation stockholders owning less than 5 percent of the stock of a corporation need not be licensed; however, the commission may request a list of these stockholders. The list shall include names, percentages owned, addresses, social security numbers, and dates of birth. These stockholders shall not have access to the backstretch, to the paddock area, or to the winner’s circle other than as guests of a facility, commission representatives, or designated licensees and may be required to submit additional information as requested by the commission representative, which may include a release for confidential information and submission of fingerprint cards; and the commission may assess costs, as required, for criminal history checks. This information shall be supplied to the commission representative within 30 days of the date of the request.
6.21(3) Any and all changes in either the corporation structure or the respective interest of stockholders as described above must be notarized and promptly filed with the commission representatives.

6.21(4) The corporate name under which the corporation does business in Iowa shall be considered a kennel/stable name for purposes of these rules. It shall not be necessary for the corporation to obtain a kennel/stable name license.

6.21(5) A corporation, in lieu of an executive officer, may appoint a racing manager or an authorized agent for the purposes of entry, scratches and the signing of claim slips, among other obligations.

6.21(6) The commission representative may deny, suspend, or revoke the license of a corporation for which a beneficial interest includes or involves any person or entity that is ineligible (through character, moral fitness or any other criteria employed by the commission) to be licensed as an owner or to participate in racing, regardless of the percentage of ownership interest involved.

6.21(7) Any stockholder holding a beneficial interest of 5 percent or more of a corporation must, in addition to being licensed, list any interest owned in all racing animals in which any beneficial interest is owned.

6.21(8) The corporation must pay a prescribed fee to the commission.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.22(99D) Authorized agents for owner entities of racing animals.

6.22(1) Any persons represented by a kennel name, stable name, corporation, partnership, or single person entity may assign an agent for the kennel name, stable name, corporation, partnership, or single person entity. The assigned agent is then authorized to handle matters pertaining to racing, which may include authorization to collect all purses or other moneys.

6.22(2) The application for a license as an authorized agent must be signed by the principal and clearly set forth the powers of the agent, including whether the agent is empowered to collect money from the facility. The application must be notarized and a copy must be filed with the facility.

6.22(3) Changes in an agent’s powers or revocation of an agent’s authority must be in writing, notarized, and filed with the commission’s licensing office and the facility.

6.22(4) The authorized agent must pay a prescribed fee to the commission.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.23(99D) Trainers and assistant trainers of racing animals.

6.23(1) All trainers and assistant trainers of racing animals and their employees are subject to the laws of Iowa and the rules promulgated by the commission immediately upon acceptance and occupancy of accommodations from or approved by the facility or upon making entry to run on its track. Trainers, assistant trainers, and their employees shall accept the decision of the commission representative on any and all questions, subject to their right of appeal to the commission.

6.23(2) Licensing of trainers and assistant trainers. Eligibility:
   a. An applicant must be at least 18 years of age to be licensed by the commission as a trainer or assistant trainer.
   b. An applicant must be qualified, as determined by the commission representative, by reason of experience, background, and knowledge of racing. A trainer’s license from another jurisdiction may be accepted as evidence of experience and qualifications. Evidence of qualifications may require, and, if an applicant has previously never been licensed as a trainer or assistant trainer, shall require, four or more of the following:
      (1) Passing a written examination.
      (2) Passing an interview or oral examination.
      (3) Passing a demonstration of practical skills in a “barn test” (horse racing only).
      (4) A minimum of two written statements from licensed trainers during the concurrent race meet attesting to the applicant’s character and qualifications.
      (5) Proof the applicant has held a racing participant license of another type for a minimum of two years prior to application.
c. An applicant must have a racing animal eligible to race and registered to race at the current race meeting.

[ARC 7658B, IAB 3/25/09, effective 3/23/09; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—6.24(99D) Jockeys and apprentice jockeys.

6.24(1) Eligibility.
   a. An applicant for a jockey license must be at least 16 years of age, and if under 18 years of age, the applicant must have the written consent of a parent or guardian.
   b. A jockey shall pass a physical examination given within the previous 12 months by a licensed physician affirming fitness to participate as a jockey. The commission representatives may require that any jockey be reexamined and may refuse to allow any jockey to ride pending completion of such examination.
   c. An applicant shall show competence by prior licensing, demonstration of riding ability, or temporary participation in races. An applicant may participate in a race or races, with the commission representative’s prior approval for each race, not to exceed five races.
   d. A jockey shall not be an owner or trainer of any horse competing at the race meeting where the jockey is riding.
   e. A person who has never ridden in a race at a recognized meeting shall not be granted a license as jockey or apprentice jockey.

6.24(2) Apprentice jockeys.
   a. The conditions of an apprentice jockey license do not apply to quarter horse racing. A jockey’s performance in quarter horse racing does not apply to the conditions of an apprentice jockey license.
   b. An applicant with an approved apprentice certificate may be licensed as an apprentice jockey.
   c. An applicant for an apprentice jockey license must be at least 16 years of age, and if under 18 years of age, the applicant must have written consent of parent or guardian. Before such license is granted, the gaming representative shall ascertain that the applicant has suitable qualifications and aptitude to hold an apprentice jockey’s license and that the applicant has not been previously licensed as a jockey under any jurisdiction.
   d. Rescinded IAB 1/30/08, effective 3/5/08.

6.24(3) Jockeys from foreign countries. Upon making application for a license in this jurisdiction, jockeys from a foreign country shall declare that they are holders of valid licenses in their countries, not under suspension, and bound by the rules and laws of this state. To facilitate this process, the jockey shall present a declaration sheet to the commission representative in a language recognized in this jurisdiction.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.25(99D) Jockey agent.

6.25(1) An applicant for a license as a jockey agent shall:
   a. Provide written proof of agency with at least one jockey licensed by the commission; and
   b. Be qualified, as determined by the commission representative, by reason of experience, background, and knowledge. A jockey agent’s license from another jurisdiction may be accepted as evidence of experience and qualifications. Evidence of qualifications may require passing one or both of the following:
      (1) A written examination.
      (2) An interview or oral examination.
   c. An applicant not previously licensed as a jockey agent shall be required to pass a written and oral examination.

6.25(2) A jockey agent may serve as agent for no more than two jockeys and one apprentice jockey.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.26(99D) Driver. In determining eligibility for a driver’s license, the board shall consider:

1. Whether the applicant has obtained the required U.S.T.A. license.
2. Evidence of driving experience and ability to drive in a race.
3. The age of the applicant. No person under 18 years of age shall be licensed by the commission as a driver. However, a person under 18 years of age, but at least 16 years of age who has the written consent of a parent or guardian, may be licensed to drive in qualifying races only.

4. Evidence of physical and mental ability.

5. Results of a written examination to determine qualifications to drive and knowledge of commission rules.

6. Record of rule violations.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.27(99D) Practicing veterinarians. Every veterinarian practicing on facility premises must have an unrestricted and current license to practice veterinary science issued by the state of Iowa veterinary regulatory authority and shall be licensed by the commission in accordance with the commission rules governing occupational licensing.

6.27(1) Every veterinarian seeking to be licensed by the commission shall submit verification of a current and unrestricted license to practice veterinary science issued by the state of Iowa veterinary regulatory authority.

6.27(2) A veterinarian seeking to be licensed by the commission shall disclose in the veterinarian’s application to the commission all disciplinary action taken against any licenses to practice veterinary science held by the applicant.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.28(99D,99F) Alcohol and drug testing.

6.28(1) Alcohol prohibition/preliminary breath test. Licensees whose duties require them to be in a restricted area of a racing facility shall not have present within their systems an amount of alcohol of 0.05 percent or more. A restricted area is a designated area for sample collection, paddock, racetrack, or other area where racing officials carry out the duties of their positions.

Acting with reasonable cause, a commission representative may direct the above licensees to submit to a preliminary breath test. A licensee shall, when so directed, submit to examination.

If the results show a reading of 0.05 percent alcohol content or more, the licensee shall not be permitted to continue duties for that day. For a second violation, the licensee shall not be permitted to continue duties for that day and then shall be subject to fine or suspension by the board or commission representative. For a subsequent violation, the licensee may be subject to procedures following positive chemical analysis (see 6.28(3)).

If the results show a reading of 0.10 percent alcohol content or more, the licensee is subject to fine or suspension by the board or commission representative. For a subsequent violation, the licensee may be subject to procedures following positive chemical analysis (see 6.28(3)).

6.28(2) Drug prohibition/body fluid test. Licensees whose duties require them to be in a restricted area, as defined in subrule 6.28(1), of a racing facility shall not have present within their systems any controlled substance as listed in Schedules I to V of U.S.C. Title 21 (Food and Drug Section 812), Iowa Code chapter 124 or any prescription drug unless it was obtained directly or pursuant to valid prescription or order from a duly licensed physician who is acting in the course of professional practice. Acting with reasonable cause, a commission representative may direct the above licensees to deliver a specimen of urine or subject themselves to the taking of a blood sample or other body fluids at a collection site approved by the commission. In these cases, the commission representative may prohibit the licensee from participating in racing until the licensee evidences a negative test result. Sufficient sample should be collected to ensure a quantity for a split sample when possible. A licensee who refuses to provide the samples herein described shall be in violation of these rules and shall be immediately suspended and subject to disciplinary action by the board or commission representative. All confirmed positive test costs and any related expenses shall be paid for by the licensee. Negative tests shall be at the expense of the commission.

With reasonable cause noted, an on-duty commission representative may direct a licensee to deliver a test. The commission representative shall call the approved laboratory or hospital and provide information regarding the person who will be coming; that the licensee will have a photo ID; the name
and number to call when the licensee arrives; to whom and where to mail the results; and who should be called with the results. The licensee will be directed to immediately leave the work area and proceed to an approved laboratory or hospital for testing with the following directions:

1. If under impairment, the licensee must have another person drive the licensee to the laboratory or hospital.
2. On arrival at the laboratory or hospital, the licensee must show the license to the admitting personnel for verification.
3. On arrival at the laboratory or hospital, the licensee shall be required to sign a consent for the release of information of the results to a commission representative.

6.28(3) Procedures following positive chemical analysis.

a. After professional evaluation, if the licensee’s condition proves nonaddictive and not detrimental to the best interest of racing, and the licensee can produce a negative test result and agrees to further testing at the discretion of the commission representative to ensure unimpairment, the licensee may be allowed to participate in racing.

b. After professional evaluation, should the licensee’s condition prove addictive or detrimental to the best interest of racing, the licensee shall not be allowed to participate in racing until the licensee can produce a negative test result and show documented proof of successful completion of a certified alcohol/drug rehabilitation program approved by the commission. The licensee must also agree to further testing at the discretion of the commission representative to ensure unimpairment.

c. For a second violation, a licensee shall be suspended and allowed to enroll in a certified alcohol/drug rehabilitation program approved by the administrator and to apply for reinstatement only at the discretion of the administrator.

[ARC 7658B, IAB 3/25/09, effective 3/23/09]

491—6.29(99D) Time by which owner, jockey and trainer must be licensed. The owner (includes stable names, partnerships, and corporations), the jockey and the trainer of a horse entered to race must be licensed by the first post time of the race card for the day in which the horse is entered.

[ARC 7658B, IAB 3/25/09, effective 3/23/09; ARC 2468C, IAB 3/30/16, effective 5/4/16]

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CHAPTER 8
PARI-MUTUEL WAGERING, SIMULCASTING AND ADVANCE DEPOSIT WAGERING

[Prior to 11/19/86, Racing Commission[693]]
[Prior to 11/18/87, Racing and Gaming Division[195]]

491—8.1(99D) Definitions.

“Account” means an account approved by the commission for pari-mutuel advance deposit wagering with a complete record of credits, wagers and debits established by a licensee account holder and managed by a licensee or ADWO.

“Administrator” means the administrator of the Iowa racing and gaming commission or the administrator’s designee.

“Advance deposit wagering” means a method of pari-mutuel wagering in which an individual may establish an account, deposit money into the account, and use the account balance to pay for pari-mutuel wagering.

“Advance deposit wagering center” means an actual location, the equipment, and the staff of a licensee, ADWO, or both involved in the management, servicing and operation of the pari-mutuel advance deposit wagering for the licensee.

“Advance deposit wagering operator” or “ADWO” means an advance deposit wagering operator licensed by the commission who has entered into an agreement with the licensee of the horse racetrack in Polk County and the Iowa Horsemen’s Benevolent and Protective Association to provide pari-mutuel advance deposit wagering.

“Authorized receiver” means a receiver that conducts and operates a pari-mutuel wagering system on the results of contests being held or conducted and simulcast from the enclosures of one or more host facilities.

“Betting interest” means a number assigned to a single runner, an entry or a field for wagering purposes.

“Board of stewards” means a board established by the administrator to review conduct by pari-mutuel facilities and their employees that may constitute violations of the rules and statutes relating to pari-mutuel racing. The administrator may serve as a board of one.

“Breakage” means the odd cents by which the amount payable on each dollar wagered in a pari-mutuel pool exceeds a multiple of ten cents. “Breakage” is the net pool minus payoff.

“Commission” means the Iowa racing and gaming commission.

“Commission representative” means an employee of the commission designated to represent the commission in matters pertaining to the operation of the mutuel department. In the absence of a specifically appointed representative, a commission steward will perform the functions and duties of the commission representative.

“Contest” means a race on which wagers are placed.

“Credits” means all positive inflows of money to an account.

“Dead heat” means that two or more runners have tied at the finish line for the same position in the order of finish.

“Debits” means all negative outflow of money from an account.

“Deposit” means a payment of money into an account.

“Double” means a wager to select the winners of two consecutive races and is not a parlay and has no connection with or relation to any other pool conducted by the facility and shall not be construed as a “quinella double.”

“Entry” means two or more runners are coupled in a contest because of common ties and a wager on one of them shall be a wager on all of them.

“Exacta” (may also be known as “perfecta” or “correcta”) means a wager selecting the exact order of finish for first and second in that contest and is not a parlay and has no connection with or relation to any other pool conducted by the facility.

“Facility” means an entity licensed by the commission to conduct pari-mutuel wagering in Iowa.
“Field” means when the individual runners competing in a contest exceed the numbering capacity of the totalizator and all runners of the higher number shall be grouped together. A wager on one in the field shall be a wager on all. (No “fields” shall be allowed in greyhound racing.)

“Guest facility” means a facility which offers licensed pari-mutuel wagering on contests conducted by another facility (the host) in either the same state or another jurisdiction.

“Host facility” means the facility conducting a licensed pari-mutuel meeting from which authorized contests or entire performances are simulcast.

“Interstate simulcasting” means the telecast of live audio and visual signals of pari-mutuel racing sent to or received from a state outside the state of Iowa to an authorized racing or gaming facility for the purpose of wagering. For the purposes of this definition, “interstate” also includes foreign jurisdictions.

“Intrastate simulcasting” means the telecast of live audio and visual signals of pari-mutuel racing conducted on a licensed pari-mutuel track within Iowa sent to or received from an authorized pari-mutuel facility within Iowa for the purpose of pari-mutuel wagering.

“Licensee” means a horse racetrack located in Polk County operating under a license issued by the commission.

“Licensee account holder” means any individual at least 21 years of age who successfully completed an application and for whom the licensee or ADWO has opened an account. “Licensee account holder” does not include any corporation, partnership, limited liability company, trust, estate or other formal or nonformal entity.

“Minus pool” means when the total amount of money to be returned to the public exceeds what is in the pool because of the deduction of a commission and because of the rule stipulation that no mutuel tickets shall be paid at less than $1.05 for each $1.00 wagered.

“Mutuel department” means that area of a racetrack where wagers are made and winning tickets are cashed and where the totalizator is installed and any area used directly in the operation of pari-mutuel wagering.

“Mutuel manager” means an employee of the facility who manages the mutuel department.

“Net pool” means the amount remaining in each separate pari-mutuel pool after the takeout percentage, as provided for by Iowa Code section 99D.11, has been deducted.

“Odds” means the approximate payoffs per dollar based on win pool wagering only on each betting interest for finishing first without a dead heat with another betting interest.

“Official” means that the order of finish for the race is “official” and that payoff prices based upon the “official” order of finish shall be posted.

“Order of finish” means the finishing order of each runner from first place to last place in each race. For horse racing only, the order of finish may be changed by the stewards for a rule infraction prior to posting of the official order of finish.

“Pari-mutuel pool” means the total amount of money wagered on each separate pari-mutuel pool for payoff purposes.

“Payoff” means the amount distributed to holders of valid winning pari-mutuel tickets in each pool as determined by the official order of finish and includes the amount wagered and profit.

“Place” means a runner finishing second.

“Place pool” means the total amount of money wagered on all betting interests in each race to finish first or second.

“Post time” means the scheduled starting time for a contest.

“Proper identification” means a form of identification accepted in the normal course of business to establish that the person making a transaction is a licensee account holder.

“Quinella” means a wager selecting two runners to finish first and second, regardless of the order of finish, and is not a parlay and has no connection with or relation to any other pool conducted by the facility.

“Quinella double” means a wager which consists of selecting the quinella in each of two designated contests and is an entirely separate pool from all other pools and has no connection with or relation to any other pool conducted by the facility.

“Runner” means each entrant in a contest, designated by a number as a betting interest.
“Sales transaction data” means the data between totalizator ticket-issuing machines and the totalizator central processing unit for the purpose of accepting wagers and generating, canceling and cashing pari-mutuel tickets and the financial information resulting from the processing of sales transaction data, such as handle.

“Secure personal identification code” means an alpha-numeric character code provided by a licensee account holder as a means by which the licensee or ADWO may verify a wager or account transaction as authorized by the licensee account holder.

“Show” means a runner finishing third.

“Show pool” means the total amount of money wagered on all betting interests in each contest to finish either first, second or third.

“Source market fee” or “host fee” means the part of a wager that is made on any race by a person who is a licensee account holder and that is returned to the licensee and the Iowa Horsemens’ Benevolent and Protective Association pursuant to the terms of a negotiated agreement as required by 491—8.6(99D).

“Steward” means a racing official appointed or approved by the commission to perform the supervisory and regulatory duties relating to pari-mutuel racing.

“Superfecta” means a wager selecting the exact order of finish for first, second, third, and fourth in that contest and is not a parlay and has no connection with or relation to any other pool conducted by the facility.

“Totalizator” means a machine for registering wagers and computing odds and payoffs based upon data supplied by each pari-mutuel ticket-issuing machine.

“Trifecta” means a wager selecting the exact order of finish for first, second, and third in that race and is not a parlay and has no connection with or relation to any other pool conducted by the facility.

“Tri-superfecta” means a wager selecting the exact order of finish for first, second and third in the first designated tri-super contest combined with selecting the exact order of finish for first, second, third and fourth in the second designated tri-super contest.

“Twin quinella” means a wager in which the bettor selects the first two finishers, regardless of order, in each of two designated contests. Each winning ticket for the twin quinella must be exchanged for a free ticket on the second twin quinella contest in order to remain eligible for the second-half twin quinella pool.

“Twin superfecta” means a wager in which the bettor selects the first four finishers, in their exact order, in each of two designated contests. Each winning ticket for the first twin superfecta contest must be exchanged for a free ticket on the second twin superfecta contest in order to remain eligible for the second-half twin superfecta pool.

“Twin trifecta” means a wager in which the bettor selects the three runners that will finish first, second, and third in the exact order as officially posted in each of the two designated twin trifecta races.

“Underpayment” means when the payoff to the public resulting from errors in calculating pools and errors occurring in the communication in payoffs results in less money returned to the public than is actually due.

“Win” means a runner finishing first.

“Win pool” means the total amount wagered on all betting interests in each contest to finish first.

“Withdrawal” means a payment of money from an account by the licensee or ADWO to the licensee account holder when properly requested by the licensee account holder.

[ARC 0734C, IAB 5/15/13, effective 6/19/13; ARC 4378C, IAB 3/27/19, effective 5/1/19; ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 5423C, IAB 2/10/21, effective 3/17/21; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—8.2(99D) General.

8.2(1) Wagering. Each facility shall conduct wagering in accordance with applicable laws and these rules. Such wagering shall employ a pari-mutuel system approved by the commission. The totalizator shall be tested prior to and during the meeting as required by the commission. Annually, the facility shall have an external audit, approved by the administrator, of the totalizator system. All systems of wagering other than pari-mutuel, such as bookmaking and auction-pool selling, are prohibited, and any person attempting to participate in prohibited wagering shall be ejected or excluded from facility grounds.
8.2(2) **Records.** The facility shall maintain records of all wagering so the commission may review such records for any contest including the opening line, subsequent odds fluctuation, the amount and at which window wagers were placed on any betting interest and such other information as may be required. Such wagering records shall be retained by each facility and safeguarded for a period of time specified by the commission. The commission may require that certain of these records be made available to the wagering public at the completion of each contest.

The facility shall provide the commission with a list of the licensed individuals afforded access to pari-mutuel records and equipment at the wagering facility.

8.2(3) **Pari-mutuel tickets.** A pari-mutuel ticket is evidence of a contribution to the pari-mutuel pool operated by the facility and is evidence of the obligation of the facility to pay to the holder thereof such portion of the distributable amount of the pari-mutuel pool as is represented by such valid pari-mutuel ticket. The facility shall cash all valid winning tickets when such are presented for payment during the course of the meeting where sold and for a specified period after the last day of the meeting as provided in paragraph 8.2(4) “g.”

a. To be deemed a valid pari-mutuel ticket, such ticket shall have been issued by a pari-mutuel ticket machine operated by the facility and recorded as a ticket entitled to a share of the pari-mutuel pool and contain imprinted information as to:

1. The name of the facility operating the meeting.
2. A unique identifying number or code.
3. Identification of the terminal at which the ticket was issued.
4. A designation of the performance for which the wagering transaction was issued.
5. The contest number for which the pool is conducted.
6. The type(s) of wagers represented.
7. The number(s) representing the betting interests for which the wager is recorded.
8. The amount(s) of the contributions to the pari-mutuel pool or pools for which the ticket is evidence.

b. No pari-mutuel ticket recorded or reported as previously paid, canceled, or nonexistent shall be deemed a valid pari-mutuel ticket by the facility. The facility may withhold payment and refuse to cash any pari-mutuel ticket deemed not valid, except as provided in paragraph 8.2(4) “e.”

8.2(4) **Pari-mutuel ticket sales.**

a. Pari-mutuel tickets shall not be sold by anyone other than a facility licensed to conduct pari-mutuel wagering.

b. No pari-mutuel ticket may be sold on a contest for which wagering has already been closed, and no facility shall be responsible for ticket sales entered into but not completed by issuance of a ticket before the totalizator is closed for wagering on such contest.

c. Claims pertaining to a mistake on an issued or unissued ticket must be made by the bettor prior to leaving the seller’s window.

d. Payment on winning pari-mutuel wagers shall be made on the basis of the order of finish as purposely posted and declared “official.” Any subsequent change in the order of finish or award of purse money(s) as may result from a subsequent ruling by the stewards or administrator shall in no way affect the pari-mutuel payoff. If an error in the posted order of finish or payoff figures is discovered, the official order of finish or payoff prices may be corrected and an announcement concerning the change shall be made to the public.

e. The facility shall not satisfy claims on lost, mutilated, or altered pari-mutuel tickets without authorization from the administrator.

f. The facility shall have no obligation to enter a wager into a betting pool if unable to do so due to equipment failure.

g. Payment on valid pari-mutuel tickets shall be made only upon presentation and surrender to the facility where the wager was made within 60 days following the close of the meeting during which the
wager was made. Failure to present any such ticket within 60 days shall constitute a waiver of the right to receive payment.

8.2(5) Advance performance wagering. No facility shall permit wagering to begin more than one hour before scheduled post time of the first contest of a performance unless it has first obtained the authorization of the administrator.

8.2(6) Claims for payment from pari-mutuel pool. At a designated location, a written, verified claim for payment from a pari-mutuel pool shall be accepted by the facility in any case where the facility has withheld payment or has refused to cash a pari-mutuel wager. The claim shall be made on such form as approved by the administrator, and the claimant shall make such claim under penalty of perjury. The original of such claim shall be forwarded to the administrator within 48 hours.

a. In the case of a claim made for payment of a mutilated pari-mutuel ticket which does not contain the total imprinted elements required in paragraph 8.2(3) “a” of these general provisions, the facility shall make a recommendation to accompany the claim forwarded to the administrator as to whether or not the mutilated ticket has sufficient elements to be positively identified as a winning ticket.

b. In the case of a claim made for payment on a pari-mutuel wager, the administrator shall adjudicate the claim and may order payment thereon from the pari-mutuel pool or by the facility, may deny the claim, or may make such other order as the administrator may deem proper.

8.2(7) Payment for errors. If an error occurs in the payment amounts for pari-mutuel wagers which are cashed or entitled to be cashed, and as a result of such error the pari-mutuel pool involved in the error is not correctly distributed among winning ticket holders, the following shall apply:

a. Verification is required to show that the amount of the commission, the amount in breakage, and the amount in payoffs are equal to the total gross pool. If the amount of the pool is more than the amount used to calculate the payoff, the underpayment shall be added to the corresponding pool of the next contest. If an underpayment is discovered after the close of the meeting, the underpayment shall be held in an interest-bearing account approved by the administrator until being added, together with accrued interest, to the corresponding pool of the next meet.

b. Any claim not filed with the facility within 30 days, inclusive of the date on which the underpayment was publicly announced, shall be deemed waived, and the facility shall have no further liability therefor.

c. In the event the error results in an overpayment to winning wagers, the facility shall be responsible for such payment.

8.2(8) Betting explanation. A summary explanation of pari-mutuel wagering and each type of betting pool offered shall be published in the program for every wagering performance. The rules of racing relative to each type of pari-mutuel pool offered must be prominently displayed on facility grounds and available upon request through facility representatives.

8.2(9) Display of betting information.

a. Approximate odds for win pool betting shall be posted on display devices within view of the wagering public and updated at intervals of not more than 90 seconds.

b. The probable payoff or amounts wagered, in total and on each betting interest, for other pools may be displayed to the wagering public at intervals and in a manner approved by the administrator.

c. Official results and payoffs must be displayed upon each contest being declared official.

8.2(10) Canceled contests. If a contest is canceled or declared “no contest,” refunds shall be granted on valid wagers in accordance with these rules.

8.2(11) Refunds.

a. Notwithstanding other provisions of these rules, refunds of the entire pool shall be made on:

(1) Win pools, exacta pools, and first-half double pools offered in contests in which the number of betting interests has been reduced to fewer than two.

(2) Place pools, quinella pools, trifecta pools, first-half quinella double pools, first-half twin quinella pools, first-half twin trifecta pools, and first-half tri-superfecta pools offered in contests in which the number of betting interests has been reduced to fewer than three.

(3) Show pools, superfecta pools, and first-half twin superfecta pools offered in contests in which the number of betting interests has been reduced to fewer than four.
b. Authorized refunds shall be paid upon presentation and surrender of the affected pari-mutuel ticket.

8.2(12) Coupled entries and mutuel fields.
   a. Contestants coupled in wagering as a coupled entry or mutuel field shall be considered part of a single betting interest for the purpose of price calculations and distribution of pools. Should any contestant in a coupled entry or mutuel field be officially withdrawn or scratched, the remaining contestants in that coupled entry or mutuel field shall remain valid betting interests and no refunds will be granted. If all contestants within a coupled entry or mutuel field are scratched, then tickets on such betting interests shall be refunded, notwithstanding other provisions of these rules.
   b. For the purpose of price calculations only, coupled entries and mutuel fields shall be calculated as a single finisher, using the finishing position of the leading contestant in that coupled entry or mutuel field to determine order of placing. This rule shall apply to all circumstances, including situations involving a dead heat, except as otherwise provided by these rules.

8.2(13) Pools dependent upon betting interests. Unless the administrator otherwise provides, at the time the pools are opened for wagering, the facility:
   a. May offer win, place, and show wagering on all contests with six or more betting interests.
   b. May prohibit show wagering on any contest with five or fewer betting interests scheduled to start.
   c. May prohibit place wagering on any contest with four or fewer betting interests scheduled to start.
   d. May prohibit quinella wagering on any contest with three or fewer betting interests scheduled to start.
   e. May prohibit quinella double wagering on any contests with three or fewer betting interests scheduled to start.
   f. May prohibit exacta wagering on any contest with three or fewer betting interests scheduled to start.
   g. May prohibit trifecta wagering on any contest with five or fewer betting interests scheduled to start, or as provided in subparagraph 8.2(13)“g”(1) below:
      (1) Cancel trifecta. The stewards have the authority to cancel trifecta wagering at any time they determine an irregular pattern of wagering or determine that the conduct of the race would not be in the interest of the regulation of the pari-mutuel wagering industry or in the public confidence in racing. The stewards may approve smaller fields for trifecta wagering if extraneous circumstances are shown by the facility.
      (2) Reserved.
   h. May prohibit superfecta wagering on any contest with seven or fewer betting interests scheduled to start.
      i. May prohibit twin quinella wagering on any contests with three or fewer betting interests scheduled to start.
      j. May prohibit twin trifecta wagering on any contests with seven or fewer betting interests scheduled to start, except as provided in subparagraph 8.2(13)“g”(1).
      k. May prohibit tri-superfecta wagering on any contests with seven or fewer betting interests scheduled to start.
      l. May prohibit twin superfecta wagering on any contests with seven or fewer betting interests scheduled to start.

8.2(14) Prior approval required for betting pools.
   a. A facility that desires to offer new forms of wagering must apply in writing to the administrator and receive written approval prior to implementing the new betting pool.
   b. The facility may suspend previously approved forms of wagering with the prior approval of the administrator. Any carryover shall be held until the suspended form of wagering is reinstated. A facility may request approval of a form of wagering or separate wagering pool for specific requirements.

8.2(15) Closing of wagering in a contest.
a. All wagering shall stop and all pari-mutuel machines shall be locked at post time or at the actual start of the races. Machines shall be automatically locked, unless unusual circumstances dictate that the stewards act differently.

b. The facility shall maintain, in good order, a system approved by the administrator for closing wagering.

8.2(16) Complaints pertaining to pari-mutuel operations.

a. When a patron makes a complaint to a facility regarding the mutuel department, the facility shall immediately issue a complaint report, setting out:
   (1) The name of the complainant;
   (2) The nature of the complaint;
   (3) The name of the persons, if any, against whom the complaint was made;
   (4) The date of the complaint;
   (5) The action taken or proposed to be taken, if any, by the facility.

b. The facility shall submit every complaint report to the commission within five days after the complaint was made.

8.2(17) Facility/vendor employees. All facility/vendor employees shall report immediately to the administrator any known irregularities or wrongdoings by any person involving pari-mutuel wagering and shall cooperate in subsequent investigations.

8.2(18) Unrestricted access. The facility shall permit the commission unrestricted access at all times to its facilities and equipment and to all books, ledgers, accounts, documents and records of the facility that relate to pari-mutuel wagering.

8.2(19) Totalizator breakdown. In the event of irreparable breakdown of the totalizator during the wagering on a race, the wagering on that race shall be declared closed and the payoff shall be computed on the sums wagered in each pool up to the time of the breakdown.

8.2(20) Minimum wager and payoff. The minimum wager to be accepted by any licensed facility for win, place and show wagering shall be $2. The minimum payoff on a $2 wager shall be $2.10. For all other wagers, the minimum wager to be accepted by any licensed facility shall be $1. The minimum payoff for a $1 wager shall be $1.05. Any deviation from these minimums must be approved by the administrator. In cases where a minus pool occurs, the facility is responsible for the payment of the minimum payoff and no breakage shall be incurred from that pari-mutuel pool.

8.2(21) Underage wagering prohibited. No person under the age of 21 shall be permitted by any licensed facility to purchase or cash a pari-mutuel ticket.

8.2(22) Emergency situations. In the event of an emergency in connection with the mutuel department not covered in these rules, the pari-mutuel manager representing the facility shall report the problem to the stewards, and the stewards shall render a full report to the administrator or administrator’s designee within 48 hours.

8.2(23) Commission mutuel supervisor. The commission may employ a mutuel supervisor with accounting experience to serve as the commission’s designated representative at each race meeting as provided in Iowa Code section 99D.19. In the absence of a specifically appointed commission mutuel supervisor, the board of stewards or simulcast steward will perform the functions and duties of the commission.

[ARC 0734C, IAB 5/15/13, effective 6/19/13; ARC 1876C, IAB 2/18/15, effective 3/25/15; ARC 3608C, IAB 1/31/18, effective 3/7/18; ARC 5422C, IAB 2/10/21, effective 3/17/21]

491—8.3(99D) Approval of pari-mutuel wagers.

8.3(1) Pools permitted. All pari-mutuel wagering pools approved by the commission shall be separately and independently calculated and distributed. Takeout shall be deducted from each gross pool as stipulated by Iowa Code section 99D.11. The remainder of the moneys in the pool shall constitute the net pool for distribution as payoff on winning wagers.

8.3(2) Pari-mutuel wagering submissions. Prior to conducting a new pari-mutuel wager, a facility shall submit proposals for the wager including, but not limited to, the wager type, calculation of payoff, refunds and distribution of pools. The wager submission, or requests for modification to an approved
wager, shall be in writing and approved by the administrator or an administrator’s designee prior to implementation.

8.3(3) Public notice. The public shall have access to the wagering rules and the calculation of payoffs and distribution of pools which are approved by the commission. Signage shall be conspicuously posted in the wagering area to direct patrons to the wagering area where this information can be viewed. [ARC 0734C, IAB 5/15/13, effective 6/19/13]

491—8.4(99D) Simulcast wagering.

8.4(1) General.

a. Rules. All simulcasting must be transmitted live, and all wagering on simulcasting shall be made in accordance with the commission rules on pari-mutuel wagering. Commission rules in effect during live racing shall remain in effect during simulcasting where applicable.

b. Transmission. The method used to transmit sales transaction and data including, but not limited to, the odds, will pay, race results, and payoff prices must be approved by the commission, based upon the determination that provisions to secure the system and transmission are satisfactory. If the method relies on Internet service to transmit, a backup Internet service shall be used in the event of transmission failure until all transactions are completed for the day.

c. Communication. A communication system between the host track and the receiving facility must be provided which will allow the totalizator operator and the commission representatives at the host track to communicate with the facility receiving the signal. The facility is responsible during the racing program’s operating hours for reporting any problems or delays to the public.

d. Approval.

(1) All simulcasting, both interstate and intrastate, must be preapproved by the commission or commission representative. Each facility conducting simulcasting shall submit an annual written simulcast proposal to the commission with the application for license renewal required by 491—Chapter 1.

(2) The commission representative, upon written request, may grant modifications to the annual simulcast proposal. The commission representative may approve or disapprove simulcast requests at the representative’s discretion. Factors that may be considered include, but are not limited to, economic conditions of a facility, impact on other facilities, impact on the Iowa breeding industry, other gambling in the state, and any other considerations the commission representative deems appropriate.

(3) Once simulcast authority has been granted by the commission or commission representative, it shall be the affirmative responsibility of the facility granted simulcast authority to obtain all necessary permission from other jurisdictions and tracks to simulcast the pari-mutuel races. In addition, the burden of adhering to state and federal laws concerning simulcasting rests on the facility at all times.

8.4(2) Simulcast host.

a. Every host facility, if requested, may contract with an authorized receiver for the purpose of providing authorized users its simulcast. All contracts governing participation in interstate or intrastate pools shall be submitted to the commission representative for prior approval. Contracts shall be of such content and in such format as required by the commission representative.

b. A host facility is responsible for the content of the simulcast and shall use all reasonable effort to present a simulcast which offers the viewers an exemplary depiction of each performance.

c. Unless otherwise permitted by the commission representative, every simulcast will contain in its video content a digital display of actual time of day, the name of the host facility from which the simulcast originates, the number of the contest being displayed, and any other relevant information available to patrons at the host facility.

d. The host facility shall maintain such security controls, including encryption over its uplink and communications systems, as directed or approved by the commission or commission representative.

e. Financial reports shall be submitted daily or as otherwise directed by the commission representative. Reports shall be of such content and in such format as required by the commission representative.

8.4(3) Authorized receiver.
a. An authorized receiver shall provide:

(1) Adequate transmitting and receiving equipment of acceptable broadcast quality which shall not interfere with the closed circuit TV system of the host facility for providing any host facility patron information.

(2) Pari-mutuel terminals, pari-mutuel odds displays, modems and switching units enabling pari-mutuel data transmissions, and data communications between the host and guest facilities.

(3) A voice communication system between each guest facility and the host facility providing timely voice contact among the commission representative, placing judges, and mutuel departments.

b. The guest facility and all authorized receivers shall conduct pari-mutuel wagering pursuant to the applicable commission rules.

c. Not less than 30 minutes prior to the commencement of transmission of the performance of pari-mutuel contests, the guest facility shall initiate a test program of its transmitter, encryption and decoding, and data communication to ensure proper operation of the system.

d. The guest facility shall, in conjunction with the host facility(ies) for which it operates pari-mutuel wagering, provide the commission representative with a certified report of its pari-mutuel operations as directed by the commission representative.

e. Every authorized receiver shall file with the commission an annual report of its simulcast operations and an audited financial statement.

f. The mutuel manager shall notify the commission representative when the transfer of pools, pool totals, or calculations are in question, or if partial or total cancellations occur, and shall suggest alternatives for continued operation. Should loss of video signal occur, wagering may continue with approval from the commission representative.

[ARC 0734C, IAB 5/15/13, effective 6/19/13; ARC 4954C, IAB 2/26/20, effective 4/1/20; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—8.5(99D) Interstate common-pool wagering.

8.5(1) General.

a. All contracts governing participation in interstate common pools shall be submitted to the commission representative for prior approval. Financial reports shall be submitted daily or as otherwise directed by the commission representative. Contracts and reports shall be of such content and in such format as required by the commission representative.

b. Individual wagering transactions are made at the point of sale in the state where placed. Pari-mutuel pools are combined for computing odds and calculating payoffs but will be held separate for auditing and all other purposes.

c. Any surcharges or withholdings in addition to the takeout shall be applied only in the jurisdiction otherwise imposing such surcharges or withholdings.

d. In determining whether to approve an interstate common pool which does not include the host facility or which includes contests from more than one facility, the commission representative shall consider and may approve use of a bet type which is not utilized at the host facility, application of a takeout rate not in effect at the host facility, or other factors which are presented to the commission representative.

e. The content and format of the visual display of racing and wagering information at facilities in other jurisdictions where wagering is permitted in the interstate common pool need not be identical to the similar information permitted or required to be displayed under these rules.

8.5(2) Guest state participation in interstate common pools.

a. With the prior approval of the commission representative, pari-mutuel wagering pools may be combined with corresponding wagering pools in the host state or with corresponding pools established by one or more other jurisdictions.

b. The commission representative may permit adjustment of the takeout from the pari-mutuel pool so that the takeout rate in this jurisdiction is identical to that of the host facility or identical to that of other jurisdictions participating in a merged pool.

c. When takeout rates in the merged pools are not identical, the net-price calculation shall be the method by which the differing takeout rates are applied.
d. Rules established in the state of the host facility designated for a pari-mutuel pool shall apply.

e. The commission representative shall approve agreements made between the facility and other participants in interstate common pools governing the distribution of breakage between the jurisdictions.

f. If, for any reason, it becomes impossible to successfully merge the bets placed into the interstate common pool, the facility shall make payoffs in accordance with payoff prices that would have been in effect if prices for the pool of bets were calculated without regard to wagers placed elsewhere, except that, with the permission of the commission representative, the facility may alternatively determine either to pay winning tickets at the payoff prices at the host facility or to declare such accepted bets void and make refunds in accordance with the applicable rules.

8.5(3) Host state participation in merged pools.

a. With the prior approval of the commission representative, a facility licensed to conduct pari-mutuel wagering may determine that one or more of its contests be utilized for pari-mutuel wagering at guest facilities in other jurisdictions and may also determine that pari-mutuel pools in guest jurisdictions be combined with corresponding wagering pools established by it as the host facility or comparable wagering pools established by two or more jurisdictions.

b. When takeout rates in the merged pool are identical, the net-price calculation shall be the method by which the differing takeout rates are applied.

c. Rules of racing established for races held in this state shall also apply to interstate common pools unless the commission representative specifically determines otherwise.

d. The commission representative shall approve agreements made between the facility and other participants in interstate common pools governing the distribution of breakage between the jurisdictions.

e. Any contract for interstate common pools entered into by the facility shall contain a provision to the effect that if, for any reason, it becomes impossible to successfully merge the bets placed in another jurisdiction into the interstate common pool formed by the facility or if, for any reason, the commission representative or facility determines that attempting to effect transfer of pool data from the guest jurisdiction may endanger the facility’s wagering pool, the facility shall have no liability for any measure taken which may result in the guest’s wagers not being accepted into the pool.

8.5(4) Takeout rates in interstate common pools.

a. With the prior approval of the commission representative, a facility wishing to participate in an interstate common pool may change its takeout rate so as to achieve a common takeout rate with all other participants in the interstate common pool.

b. A facility wishing to participate in an interstate common pool may request that the commission representative approve a methodology whereby host facility and guest facility jurisdictions with different takeout rates for corresponding pari-mutuel pools may effectively and equitably combine wagers from the different jurisdictions into an interstate common pool.

[ARC 0734C, IAB 5/15/13, effective 6/19/13; ARC 6106C, IAB 2/9/22, effective 3/16/22]

491—8.6(99D) Advance deposit wagering.

8.6(1) Authorization to conduct advance deposit wagering.

a. A licensee may request authorization from the commission to conduct advance deposit wagering pursuant to Iowa Code section 99D.11(6) “c” and these rules. As part of the request, the licensee shall submit a detailed plan of how its advance deposit wagering system would operate. The commission may require changes in a proposed plan of operations as a condition of granting a request. No subsequent changes in the system’s operation may occur unless ordered by the commission or until approval is obtained from the commission after it receives a written request.

b. The commission may conduct investigations or inspections or request additional information from the licensee as the commission deems appropriate in determining whether to allow the licensee to conduct advance deposit wagering.

c. The licensee shall establish and manage an advance deposit wagering center.

d. The commission may issue an ADWO license to an entity that enters into an agreement with the commission, the licensee, and the Iowa Horsemen’s Benevolent and Protective Association. The terms of any ADWO’s license shall include but not be limited to:
(1) Any source market fees and host fees to be paid on any races subject to advance deposit wagering.
(2) An annual ADWO license fee in an amount to be determined by the commission.
(3) Completion of all necessary background investigations.
(4) Acceptance of wagers on live races conducted at the horse racetrack in Polk County from all of its licensee account holders.
(5) A bond or irrevocable letter of credit on behalf of the ADWO to be determined by the commission.
(6) A detailed description and certification of systems and procedures used by the ADWO to validate the identity and age of licensee account holders and to validate the legality of wagers accepted.
(7) Certification of prompt commission access to all records relating to licensee account holder identity and age in hard-copy or standard electronic format acceptable to the commission.
(8) Certification of secure retention of all records related to advance deposit wagering and accounts for a period of not less than three years or such longer period as specified by the commission.
(9) Utilization and communication of pari-mutuel wagers to a pari-mutuel system meeting all requirements for pari-mutuel systems employed by licensed racing facilities in Iowa.

e. Commission access to and use of information concerning advance deposit wager transactions and licensee account holders shall be considered proprietary, and such information shall not be disclosed publicly except as may be required pursuant to statute or court order or except as part of the official record of any proceeding before the commission. This requirement shall not prevent the sharing of this information with other pari-mutuel regulatory authorities or law enforcement agencies for investigative purposes.

f. For each advance deposit wager made for an account by telephone, the licensee or ADWO shall make a voice recording of the entire transaction and shall not accept any such wager if the voice-recording system is inoperable. Voice recordings shall be retained for not less than six months and shall be made available to the commission for investigative purposes.

8.6(2) Establishing an account.

a. A person must have an established account in order to place advance deposit wagers. An account may be established in person at the licensee’s facility or with the ADWO by mail or electronic means. For establishing an account, the application must be signed or otherwise authorized in a manner acceptable to the commission and shall include the applicant’s full legal name, principal residence address, telephone number, and date of birth and any other information required by the commission. The licensee and ADWO shall have a process to verify that the player is not on the statewide self-exclusion list set forth in Iowa Code section 99F.4(22) prior to establishing an account. The licensee and ADWO shall review and deactivate accounts of newly enrolled participants of the statewide self-exclusion program and comply with all other requirements set forth by the commission and in Iowa Code section 99F.4(22).

b. Each application submitted will be subject to electronic verification with respect to the applicant’s name, principal residence address and date of birth by either a national, independent individual reference service company or by means of a technology which meets or exceeds the reliability, security, accuracy, privacy and timeliness provided by individual reference service companies. An applicant’s social security number may be necessary for completion of the verification process and for tax-reporting purposes. If there is a discrepancy between the application submitted and the information provided by the electronic verification or if no information on the applicant is available from such electronic verification, another individual reference service may be accessed or another technology meeting the requirements described above may be used to verify the information provided. If these measures prove unsatisfactory, then the applicant will be contacted and given instructions as to how to resolve the matter.

c. The identity of a licensee account holder must be verified via electronic means or copies of other documents before the licensee account holder may place an advance deposit wager.
d. Each account shall have a unique identifying account number. The identifying account number may be changed at any time by the licensee or ADWO provided that the licensee or ADWO informs the licensee account holder in writing prior to the change.

e. The applicant shall provide the licensee or ADWO with an alpha-numeric code to be used as a secure personal identification code when the licensee account holder is placing an advance deposit wager. The licensee account holder has the right to change this code at any time.

f. The licensee account holder shall receive at the time the account is approved a unique account identification number; a copy of the advance deposit wagering rules and such other information and material pertinent to the operation of the account; and such other information as the licensee, ADWO or commission may deem appropriate.

g. The account is nontransferable.

h. The licensee or ADWO may close or refuse to open an account for what it deems good and sufficient reason and shall order an account closed if it is determined that information used to open an account was false or that the account has been used in violation of these rules or the licensee’s or ADWO’s terms and conditions.

8.6(3) Operation of an account. The ADWO shall submit operating procedures with respect to licensee account holder accounts for commission approval. The submission shall include controls and reasonable methods that provide for the following:

a. A written report to the commission for any incident where there is a violation of Iowa Code chapter 99D or 99F, a commission rule or order, or an internal control within 72 hours of detection. In addition to the written report, the ADWO shall provide immediate notification to the commission if an incident involves employee theft, criminal activity, or a violation of Iowa Code chapter 99D or 99F.

b. The segregation of incompatible functions so that no employee is in a position to perpetrate and conceal errors or irregularities in the normal course of the employee’s duties.

c. User access controls for all sensitive and secure, physical and virtual, areas and systems within a wagering operation.

d. Treatment of problem gambling by:

(1) Identifying problem gamblers.

(2) Complying with the process established by the commission pursuant to Iowa Code section 99F.4(22) and 491—subrule 5.4(12).

(3) Cooperating with the Iowa gambling treatment program in creating and establishing controls.

(4) Including information on the availability of the gambling treatment program in a substantial number of the licensee’s advertisements and printed materials.

e. Setoff winnings of customers who have a valid lien established under Iowa Code chapter 99F.

These rules are intended to implement Iowa Code chapter 99D.

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CHAPTER 10
THOROUGHBRED AND QUARTER HORSE RACING

491—10.1(99D) Terms defined. As used in the rules, unless the context otherwise requires, the following definitions apply:

“Age” means the age of a horse reckoned from the first day of January of the year of foaling.
“Allowance race” means an overnight race for which eligibility and weight to be carried are determined according to specified conditions that include age, sex, earnings, and number of wins.
“Also eligible” means:
1. A number of eligible horses, properly entered, which were not drawn for inclusion in a race but which become eligible according to preference or lot when an entry is scratched prior to the scratch time deadline; or
2. The next preferred nonqualifier for the finals or consolation from a set of elimination trials that will become eligible in the event a finalist is scratched by the stewards for a rule violation or is otherwise eligible if written race conditions permit.
“Appeal” means a request for the commission or its designee to investigate, consider, and review any decisions or rulings of stewards.
“Arrears” means all moneys owed by a licensee, including subscriptions, jockey fees, forfeitures, and any default incident to these rules.
“Authorized agent” means a person licensed by the commission and appointed by a written instrument, signed and acknowledged before a notary public by the owner on whose behalf the agent will act.
“Bleeder” means a horse that hemorrhages from within the respiratory tract during a race, within one and one-half hours postrace, during exercise or within one and one-half hours of exercise.
“Bleeder list” means a tabulation of all bleeders to be maintained by the commission.
“Chemist” means any official racing chemist designated by the commission.
“Claiming race” means a race in which any horse starting may be claimed (purchased for a designated amount) in conformance with the rules. (See also waived claiming rule in paragraph 10.6(18) “k.”)
“Commission” means the racing and gaming commission.
“Conditions” means qualifications that determine a horse’s eligibility to be entered in a race.
“Contest” means a competitive racing event on which pari-mutuel wagering is conducted.
“Coupled entry” means two or more contestants in a contest that are treated as a single betting interest for pari-mutuel wagering purposes. (See also “Entry.”)
“Day” means a 24-hour period ending at midnight.
“Dead heat” means when the noses of two or more horses reach the finish line of a race at the same time.
“Declaration” means the act of withdrawing an entered horse from a race prior to the closing of entries.
“Detention barn” means the barn designated for the collection from horses of test samples under the supervision of the commission veterinarian; also the barn assigned by the commission to a horse on the bleeder list, for occupancy as a prerequisite for receiving bleeder medication.
“Entry” means a horse made eligible to run in a race; or two or more horses, entered in the same race, which have common ties of ownership, lease, or training. (See also “Coupled entry.”)
“Facility” means an entity licensed by the commission to conduct pari-mutuel wagering or gaming operations in Iowa.
“Facility premises” means all real property utilized by the facility in the conduct of its race meeting, including the racetrack, grandstand, concession stands, offices, barns, stable area, employee housing facilities, parking lots, and any other areas under the jurisdiction of the commission.
“Field or mutuel field” means a group of two or more horses upon which a single bet may be placed. A mutuel field is required when the number of horses starting in a race exceeds the capacity of the track.
totalizator. The highest numbered horse within the totalizator capacity and all the higher-numbered horses following are then grouped together in the mutuel field.

“Foreign substances” means all substances except those that exist naturally in the untreated horse at normal physiological concentration.

“Forfeit” means money due from a licensee because of an error, fault, neglect of duty, breach of contract, or penalty imposed by the stewards or the commission.

“Handicap” means a race in which the weights to be carried by the horses are assigned by the racing secretary or handicapper for the purpose of equalizing the chances of winning for all horses entered.

“Horse” means any equine (including equine designated as a mare, filly, stallion, colt, ridgeling, or gelding) registered for racing; specifically, an entire male 5 years of age and older.

“Hypodermic injection” means any injection into or under the skin or mucosa, including intradermal injection, subcutaneous injection, submucosal injection, intramuscular injection, intravenous injection, intra-arterial injection, intra-articular injection, intrabursal injection, and intraocular (intraconjunctival) injection.

“Inquiry” means an investigation by the stewards of potential interference in a contest prior to declaring the result of said contest official.

“Jockey” means a professional rider licensed to ride in races.

“Licensee” means any person or entity licensed by the commission to engage in racing or related regulated activity.

“Maiden race” means a contest restricted to nonwinners.

“Meet/meeting” means the specified period and dates each year during which a facility is authorized by the commission to conduct pari-mutuel wagering on horse racing.

“Month” means a calendar month.

“Nomination” means the naming of a horse to a certain race or series of races generally accompanied by payment of a prescribed fee.

“Nominator” means the person or entity in whose name a horse is nominated for a race or series of races.

“Objection” means:

1. A written complaint made to the stewards concerning a horse entered in a race and filed not later than one hour prior to the scheduled post time of the first race on the day in which the questioned horse is entered; or
2. A verbal claim of foul in a race lodged by the horse’s jockey, trainer, owner, or the owner’s authorized agent before the race is declared official.

“Official starter” means the official responsible for dispatching the horses for a race.

“Official time” means the elapsed time from the moment the first horse crosses the starting point until the first horse crosses the finish line.

“Overnight race,” also known as a purse race, means a contest for which entries close at a time set by the racing secretary.

“Owner” means a person or entity that holds any title, right or interest, whole or partial, in a horse, including the lessee and lessor of a horse.

“Paddock” means an enclosure in which horses scheduled to compete in a contest are saddled prior to racing.

“Performance” means a schedule of 8 to 12 races per day unless otherwise authorized by the commission.

“Post position” means the preassigned position from which a horse will leave the starting gate.

“Post time” means the scheduled time for horses to arrive at the starting gate for a contest.

“Prize” means the combined total of any cash, premium, trophy, and object of value awarded to the owners of horses according to order of finish in a race.

“Purse” means the total cash amount for which a race is contested.

“Purse race” means a race for money or other prize to which the owners of horses entered do not contribute money toward its purse.
“Race” means a running contest between horses ridden by jockeys for a purse, prize, or other reward run at a facility in the presence of the stewards of the meeting. This includes purse races, overnight races and stakes races.

“Recognized meeting” means any meeting with regularly scheduled races for horses on the flat in a jurisdiction having reciprocal relations with this state and the commission for the mutual enforcement of rulings relating to horse racing.

“Rules” means the rules promulgated by the commission to regulate the conduct of horse racing.

“Scratch” means the act of withdrawing an entered horse from a contest after the closing of entries.

“Scratch time” means the deadline set by the facility for withdrawal of entries from a scheduled performance.

“Smoke” means the procedure of reviewing entries for correctness, eligibility, weight allowances, and medications.

“Stakes race” means a contest in which nomination (if applicable), entry, and starting fees contribute to the purse. No overnight race shall be considered a stakes race. Special designations or classifications for stakes races such as “graded stakes” or “black type” shall be determined by the appropriate breed registries or recognized authorities.

“Starter” means a horse that becomes an actual contestant in a race by virtue of the starting gate opening in front of it upon dispatch by the official starter.

“Steward” means a duly appointed racing official with powers and duties specified by rules.

“Subscription” means moneys paid for nomination, entry, eligibility, or starting of a horse in a stakes race.

“Test level” means the concentration of a foreign substance found in the test sample.

“Test sample” means any bodily substance including, but not limited to, blood, urine, or hair taken from a horse under the supervision of the commission veterinarian and as prescribed by the commission for the purpose of analysis.

“Totalizator” means the system used for recording, calculating, and disseminating information about ticket sales, wagers, odds, and payoff prices to patrons at a pari-mutuel wagering facility.

“Veterinarian” means a veterinarian holding a current unrestricted license issued by the state of Iowa veterinary regulatory authority and licensed by the commission.

“Winner” means the horse whose nose reaches the finish line first or is placed first through disqualification by the stewards.

“Year” means a calendar year.

[ARC 9987B, IAB 2/8/12, effective 3/14/12; ARC 2468C, IAB 3/30/16, effective 5/4/16; ARC 4194C, IAB 12/19/18, effective 1/23/19]

491—10.2(99D) Facilities’ responsibilities.

10.2(1) Stalls. The facility shall ensure that racing animals are stabled in individual box stalls; that the stables and immediate surrounding area are maintained in approved sanitary condition at all times; that satisfactory drainage is provided; and that manure and other refuse are kept in separate boxes or containers at locations distant from living quarters and promptly and properly removed.

10.2(2) Paddocks and equipment. The facility shall ensure that paddocks, starting gates, and other equipment subject to contact by different animals are kept in a clean condition and free of dangerous surfaces.

10.2(3) Receiving barn and stalls. Each facility shall provide a conveniently located receiving barn or stalls for the use of horses arriving during the meeting. The barn shall have adequate stable room and facilities, hot and cold water, and stall bedding. The facility shall employ attendants to operate and maintain the receiving barn or stalls in a clean and healthy condition.

10.2(4) Fire protection. The facility shall develop and implement a program for fire prevention on facility premises in accordance with applicable state fire codes. The facility shall instruct employees working on facility premises in procedures for fire prevention and evacuation. The facility shall, in accordance with state fire codes, prohibit the following:

a. Smoking in horse stalls, feed and tack rooms, and in the alleyways.
b. Sleeping in feed rooms or stalls.

c. Open fires and oil- or gasoline-burning lanterns or lamps in the stable area.

d. Leaving any electrical appliance unattended or in unsafe proximity to walls, beds, or furnishings.

e. Keeping flammable materials, including cleaning fluids or solvents, in the stable area.

f. Locking a stall which is occupied by a horse.

The facility shall post a notice in the stable area which lists the prohibitions outlined in 10.2(4)”a” to “f” above.

10.2(5) Starting gate.

a. During racing hours a facility shall provide at least two operable padded starting gates that have been approved by the commission.

b. During designated training hours a facility shall make at least one starting gate and qualified starting gate employee available for schooling.

c. If a race is started at a place other than in a chute, the facility shall provide and maintain in good operating condition backup equipment for moving the starting gate. The backup equipment must be immediately available to replace the primary moving equipment in the event of failure.

10.2(6) Distance markers.

a. A facility shall provide and maintain starting point markers and distance poles in a size and position that can be clearly seen from the steward’s stand.

b. The starting point markers and distance poles must be marked as follows:

<table>
<thead>
<tr>
<th>Distance</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 poles</td>
<td>red and white horizontal stripes</td>
</tr>
<tr>
<td>1/8 poles</td>
<td>green and white horizontal stripes</td>
</tr>
<tr>
<td>1/16 poles</td>
<td>black and white horizontal stripes</td>
</tr>
<tr>
<td>220 yards</td>
<td>green and white</td>
</tr>
<tr>
<td>250 yards</td>
<td>blue</td>
</tr>
<tr>
<td>300 yards</td>
<td>yellow</td>
</tr>
<tr>
<td>330 yards</td>
<td>black and white</td>
</tr>
<tr>
<td>350 yards</td>
<td>red</td>
</tr>
<tr>
<td>400 yards</td>
<td>black</td>
</tr>
<tr>
<td>440 yards</td>
<td>red and white</td>
</tr>
<tr>
<td>550 yards</td>
<td>black and white horizontal stripes</td>
</tr>
<tr>
<td>660 yards</td>
<td>green and white horizontal stripes</td>
</tr>
<tr>
<td>770 yards</td>
<td>black and white horizontal stripes</td>
</tr>
<tr>
<td>870 yards</td>
<td>blue and white horizontal stripes</td>
</tr>
</tbody>
</table>

10.2(7) Detention enclosure. Each facility shall maintain a detention enclosure for use by the commission for securing samples of urine, saliva, blood, hair, or other bodily substances or tissues for chemical analysis from horses that have run in a race. The enclosure shall include a wash rack, commission veterinarian office, a walking ring, at least four stalls, workroom for the sample collectors with hot and cold running water, and glass observation windows for viewing of the horses from the office and workroom. An owner, trainer, or designated representative licensed by the commission shall be with a horse in the detention barn at all times.

10.2(8) Ambulance. A facility shall maintain, on the premises during every day that its track is open for racing or exercising, an ambulance for humans and an ambulance for horses, equipped according to prevailing standards and staffed by medical doctors, paramedics, or other personnel trained to operate them. When an ambulance is used for transfer of a horse or patient to medical facilities, a replacement ambulance must be furnished by the facility to comply with this rule.
10.2(9) Helmets and vests. Any person on horseback on facility grounds shall wear a protective helmet and safety vest.
   a. A jockey participating in a race shall have a helmet that is not altered and complies with one of the following standards:
      (2) European Standards (EN-1384 or PAS-015 or VG1).
      (3) Australian/New Zealand Standards (AS/NZ 3838).
      (4) ARB HS 2012.
   b. A jockey participating in a race shall have a vest that is not altered and complies with one of the following minimum safety standards:
      (1) British Equestrian Trade Association (BETA) 2000 Level 1.
      (2) Euro Norm (EN) 13158:2000 Level 1.
      (3) American Society for Testing and Materials (ASTM) F2681-08 or F1937.
      (4) Shoe and Allied Trade Research Association (SATRA) Jockey Vest Document M6 Issue 3.

10.2(10) Racetrack.
   a. The surface of a racetrack, including cushion, subsurface, and base, must be designed, constructed, and maintained to provide for the safety of the jockeys and racing animals.
   b. Distances to be run shall be measured from the starting line at a distance three feet out from the inside rail.
   c. A facility shall provide an adequate drainage system for the racetrack.
   d. A facility shall provide adequate equipment and personnel to maintain the track surface in a safe training and racing condition. The facility shall provide backup equipment for maintaining the track surface. A facility that conducts races on a turf track shall:
      (1) Maintain an adequate stockpile of growing medium; and
      (2) Provide a system capable of adequately watering the entire turf course evenly.
   e. Rails.
      (1) Racetracks, including turf tracks, shall have inside and outside rails, including gap rails, designed, constructed, and maintained to provide for the safety of jockeys and horses. The design and construction of rails must be approved by the commission prior to the first race meeting at the track.
      (2) The top of the rail must be at least 38 inches but not more than 44 inches above the top of the cushion. The inside rail shall have no less than a 24-inch overhang with a continuous smooth cover.
      (3) All rails must be constructed of materials designed to withstand the impact of a horse running at a gallop.

10.2(11) Patrol films or video recordings. Each facility shall provide:
   a. A video recording system approved by the commission. Cameras must be located to provide clear panoramic and head-on views of each race. Separate monitors, which simultaneously display the images received from each camera and are capable of simultaneously displaying a synchronized view of the recordings of each race for review, shall be provided in the stewards’ stand. The location and construction of video towers must be approved by the commission.
   b. One camera, designated by the commission, to record the prerace loading of all horses into the starting gate and to continue to record until the field is dispatched by the starter.
   c. One camera, designated by the commission, to record the apparent winner of each race from the finish line until the horse has returned, the jockey has dismounted, and the equipment has been removed from the horse.
   d. At the discretion of the stewards, video camera operators to record the activities of any horses or persons handling horses prior to, during, or following a race.
   e. That races run on an oval track be recorded by at least three video cameras. Races run on a straight course must be recorded by at least two video cameras.
   f. Upon request of the commission, without cost, a copy of a video recording of a race.
g. That video recordings recorded prior to, during, and following each race be maintained by the facility for not less than six months after the end of the race meeting, or such other period as may be requested by the stewards or the commission.

h. A viewing room in which, on approval by the stewards, an owner, trainer, jockey, or other interested individual may view a video recording of a race.

i. Following any race in which there is an inquiry or objection, the video recorded replays of the incident in question which were utilized by the stewards in making their decision. The facility shall display to the public these video recorded replays on designated monitors.

10.2(12) Communications.

a. Each facility shall provide and maintain in good working order a communication system between:

(1) The stewards’ stand;
(2) The racing office;
(3) The tote room;
(4) The jockeys’ room;
(5) The paddock;
(6) The test barn;
(7) The starting gate;
(8) The weigh-in scale;
(9) The video camera locations;
(10) The clocker’s stand;
(11) The racing veterinarian;
(12) The track announcer;
(13) The location of the ambulances (equine and human); and
(14) Other locations and persons designated by the commission.

b. A facility shall provide and maintain a public address system capable of clearly transmitting announcements to the patrons and to the stable area.

[ARC 2468C, IAB 3/30/16, effective 5/4/16; ARC 4194C, IAB 12/19/18, effective 1/23/19; ARC 5423C, IAB 2/10/21, effective 3/17/21]

491—10.3(99D) Facility policies. It shall be the affirmative responsibility and continuing duty of each occupational licensee to follow and comply with the facility policies as published in literature distributed by the facility or posted in a conspicuous location.

491—10.4(99D) Racing officials.

10.4(1) General description. Every facility conducting a race meeting shall appoint at least the following officials:

a. One of the members of a three-member board of stewards;

b. Racing secretary;

c. Assistant racing secretary;

d. Paddock judge;

e. Horse identifier;

f. Starter;

g. Clocker/timer;

h. Three placing judges;

i. Jockey room custodian;

j. Mutuel manager;

k. Clerk of scales;

l. Minimum of two outriders;

m. Horsemen’s bookkeeper;

n. Any other person designated by the commission.

10.4(2) Officials’ prohibited activities. No racing official or racing official’s assistant(s) listed in 10.4(1) while serving in that capacity during any meeting may engage in any of the following:
a. Enter into a business or employment that would be a conflict of interest, interfere with, or conflict with the proper discharge of duties including a business that does business with a facility or a business issued a concession operator’s license;
b. Participate in the sale, purchase, or ownership of any horse racing at the meeting;
c. Be involved in any way in the purchase or sale of any contract on any jockey racing at the meeting;
d. Sell or solicit horse insurance on any horse racing at the meeting, or any other business sales or solicitation not a part of the official’s duties;
e. Wager on the outcome of any race under the jurisdiction of the commission;
f. Accept or receive money or anything of value for the official’s assistance in connection with the official’s duties;
g. Consume or be under the influence of alcohol or any prohibited substance while performing official duties.

10.4(3) Single official appointment. No official appointed to any meeting, except placing judges, may hold more than one official position listed in 10.4(1) unless, in the determination of the stewards or commission, the holding of more than one appointment would not subject the official to a conflict of interest or duties in the two appointments.

10.4(4) Stewards. (For practice and procedure before the stewards and the commission, see 491—Chapter 4.)

a. General authority.
   (1) General. The board of stewards for each racing meet shall be responsible to the commission for the conduct of the racing meet in accordance with the laws of this state and the rules adopted by the commission. The stewards shall have authority to regulate and to resolve conflicts or disputes between all other racing officials, licensees, and those persons addressed by 491—paragraph 4.6(5) ”e,” which are reasonably related to the conduct of a race or races and to discipline violators of these rules in accordance with the provisions of these rules.
   (2) Period of authority. The stewards’ authority as set forth in this subrule shall commence 30 days prior to the beginning of each racing meet and shall terminate 30 days after the end of each racing meet or with the completion of their business pertaining to the meeting.
   (3) Attendance. All three stewards shall be present in the stand during the running of each race.
   (4) Appointment of substitute. Should any steward be absent at race time, the state steward(s) shall appoint a deputy for the absent steward. If any deputy steward is appointed, the commission shall be notified immediately by the stewards.
   (5) Initiate action. The stewards shall take notice of questionable conduct or rule violations, with or without complaint, and shall initiate investigations promptly and render a decision on every objection and every complaint made to them.
   (6) General enforcement provisions. Stewards shall enforce the laws of Iowa and the rules of the commission. The laws of Iowa and the rules of racing apply equally during periods of racing. They supersede the conditions of a race and the regulations of a racing meet and, in matters pertaining to racing, the orders of the stewards supersede the orders of the officers of the facility. The decision of the stewards as to the extent of a disqualification of any horse in any race shall be final.

b. Other powers and authority.
   (1) The stewards shall have the power to interpret the rules and to decide all questions not specifically covered by them.
   (2) All questions within their authority shall be determined by a majority of the stewards.
   (3) The stewards shall have control over and access to all areas of the facility premises.
   (4) The stewards shall have the authority to determine all questions arising with reference to entries and racing. Persons entering horses to run at licensed facilities agree in so doing to accept the decision of the stewards on any questions relating to a race or racing. The stewards, in their sole discretion, are authorized to determine whether two or more individuals or entities are operating as a single financial interest or as separate financial interests. In making this determination, the stewards shall consider all relevant information including, but not limited to, the following:
1. Whether the parties pay bills from and deposit receipts in the same accounts.
2. Whether the parties share resources such as employees, feed, supplies, veterinary and farrier services, exercise and pony riders, tack, and equipment.
3. Whether the parties switch horses or owner/trainer for no apparent reason, other than to avoid restrictions of being treated as a single interest.
4. Whether the parties engage in separate racing operations in other jurisdictions.
5. Whether the parties have claimed horses, or transferred claimed horses after the fact, for the other’s benefit.
6. If owners, whether one owner is paying the expenses for horses not in the owner’s name as owner.
7. If trainers, whether the relationship between the parties is more consistent with that of a trainer and assistant trainer.

(5) The stewards shall have the authority to discipline, for violation of the rules, any person subject to their control and, in their discretion, to impose fines or suspensions or both for infractions.
(6) The stewards shall have the authority to order the exclusion or ejection from all premises and enclosures of the facility any person who is disqualified for corrupt practices on any race course in any country.

(7) The stewards shall have the authority to call for proof that a horse is itself not disqualified in any respect, or nominated by, or, wholly or in part, the property of, a disqualified person. In default of proof being given to their satisfaction, the stewards may declare the horse disqualified.
(8) The stewards shall have the authority at any time to order an examination of any horse entered for a race or which has run in a race.

(9) In order to maintain necessary safety and health conditions and to protect the public confidence in horse racing as a sport, the stewards have the authority to authorize a person(s) on their behalf to enter into or upon the buildings, barns, motor vehicles, trailers, or other places within the premises of a facility, to examine same, and to inspect and examine the person, personal property, and effects of any person within such place, and to seize any illegal articles or any items as evidence found.

(10) The stewards shall maintain a log of all infractions of the rules and of all rulings of the stewards upon matters coming before them during the race meet.

(11) The state stewards must give prior approval for any person other than the commissioners or commission representative to be allowed in the stewards’ stand.

c. Emergency authority.

(1) Substitute officials. When in an emergency, any official is unable to discharge the official’s duties, the stewards may approve the appointment of a substitute and shall report it immediately to the commission.

(2) Substitute jockeys. The stewards have the authority, in an emergency, to place a substitute jockey on any horse in the event the trainer does not do so. Before using that authority, the stewards shall in good faith attempt to inform the trainer of the emergency and to afford the trainer the opportunity to appoint a substitute jockey. If the trainer cannot be contacted, or if the trainer is contacted but fails to appoint a substitute jockey and inform the stewards of the substitution by 30 minutes prior to post time, then the stewards may appoint under this rule.

(3) Substitute trainer. The stewards have the authority in an emergency to designate a substitute trainer for any horse.

(4) Excuse horse. In case of accident or injury to a horse or any other emergency deemed by the stewards before the start of any race, the stewards may excuse the horse from starting.

(5) Exercise authority. No licensee may exercise a horse on the track between races unless upon the approval of the stewards.

(6) Nonstarter. At the discretion of the stewards, any horse(s) precluded from having a fair start may be declared a nonstarter, and any wagers involving said horse(s) may be ordered refunded.

d. Investigations and decisions.

(1) Investigations. The stewards may, upon direction of the commission, conduct inquiries and shall recommend to the commission the issuance of subpoenas to compel the attendance of witnesses...
and the production of reports, books, papers, and documents for any inquiry. The commission stewards have the power to administer oaths and examine witnesses. The stewards shall submit a written report to the commission of every such inquiry made by them.

(2) Form reversal. The stewards shall take notice of any marked reversal of form by any horse and shall conduct an inquiry of the horse’s owner, trainer, or other persons connected with the horse including any person found to have contributed to the deliberate restraint or impediment of a horse in order to cause it not to win or finish as near as possible to first.

(3) Foul.
1. Extent of disqualification. Upon any claim of foul submitted to them, the stewards shall determine the extent of any disqualification and place any horse found to be disqualified behind others in the race with which it interfered or may place the offending horse last in the race. The stewards at their discretion may determine if there was sufficient interference or intimidation to affect the outcome of the race and take the appropriate actions thereafter.
2. Jockey guilty of foul. The stewards may discipline any jockey whose horse has been disqualified as a result of a foul committed during the running of a race.

(4) Protests and complaints. The stewards shall investigate promptly and render a decision in every protest and complaint made to them. They shall keep a record of all protests and complaints and any rulings made by the stewards and shall file reports daily with the commission.
1. Involving fraud. Protests involving fraud may be made by any person at any time. The protest must be made to the stewards.
2. Not involving fraud. Protests, except those involving fraud, may be filed only by the owner of a horse, authorized agent, trainer, or the jockey of the horse in the race over which the protest is made. The protest must be made to the clerk of scales, the stewards, or a person designated by the stewards before the race is declared official. If the placement of the starting gate is in error, no protest may be made, unless entered prior to the start of the race.
3. Protest to clerk of scales. A jockey who intends to enter a protest following the running of any race, and before the race is declared official, shall notify the clerk of scales, or a person designated by the stewards, of this intention immediately upon the arrival of the jockey at the scales.
4. Prize money of protested horse. During the time of determination of a protest, any money or prize won by a horse protested or otherwise affected by the outcome of the race shall be paid to and held by the horsemen’s bookkeeper until the protest is decided.
5. Protest in writing. A protest, other than one arising out of the actual running of a race, must be in writing, signed by the complainant, and filed with the stewards not later than one hour before post time of the race out of which the protest arises.
6. Frivolous protests. No person shall make a frivolous protest nor may any person withdraw a protest without the permission of the stewards.
   e. Cancel wagering. The stewards have the authority to cancel wagering on an individual betting interest or on an entire race and also have the authority to cancel a pari-mutuel pool for a race or races if such action is necessary to protect the integrity of pari-mutuel wagering.

10.4(5) Racing secretary.
   a. General authority. The racing secretary is responsible for setting the conditions for each race of the meeting, regulating the nomination of entries, determining the amounts of purses to whom they are due, and recording of race results. The racing secretary shall permit no person other than licensed racing officials to enter the racing secretary’s office or work areas until such time as all entries are closed, drawn, and smoked. Exceptions to this rule must be approved by the stewards.
   b. Conditions. The racing secretary shall establish the conditions and eligibility for entering the races of the meeting and cause them to be published to owners, trainers, and the commission. Corrections to the conditions must be made before entries are taken.
   c. Posting of entries. Upon the closing of entries each day, the racing secretary shall post a list of entries in a conspicuous location in the office of the racing secretary and shall furnish that list to local newspaper, radio, and television stations.
d.  *Stakes and entrance money records.* The racing secretary shall be caretaker of the permanent records of all stakes, entrance moneys, and arrears paid or due in a race meeting and shall keep permanent records of the results of each race of the meeting.

e.  *Record of racing.* The racing secretary shall, no later than the day following each race, attach or endorse on the registration certificate of each horse winning in any race the fact of that winning performance and the distance, date of the race, and the type or conditions of the race.

f.  *Daily program.* The racing secretary shall publish the official daily program, ensuring the accuracy therein of the following information:

1. The sequence of races to be run and post time for the first race;
2. The purse, conditions and distance for each race, and current track record for such distance;
3. The name of licensed owners of each horse, indicated as leased, if applicable, and description of racing colors to be carried;
4. The name of the trainer and the name of the jockey named for each horse together with the weight to be carried;
5. The post position and saddle cloth number or designation for each horse if there is a variance with the saddle cloth designation;
6. The identification of each horse by name, color, sex, age, sire and dam;
7. A notice that all jockeys will carry approximately three pounds more than the published weight to account for safety equipment (vest and helmet) that is not included in required weighing-out procedures; and
8. Such other information as may be requested by the association or the commission.

g.  *Handicapping.* The racing secretary, or a handicapper assigned by the racing secretary, shall assign the weight to be carried by each horse in a handicap when weights are not stated in the condition of the race:

1. Scale of weights for age. The scale of weights for age hereinafter listed shall be carried when conditions of races do not otherwise specify:

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<thead>
<tr>
<th>Distance</th>
<th>Age</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Two Years</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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(2) Weights listed.
   1. In races of intermediate lengths, the weights for the shorter distance shall be carried.
   2. In a race exclusively for two-year-olds, the weight shall be 122 pounds.
   3. In a race exclusively for three-year-olds or four-year-olds, the weight shall be 126 pounds.

(3) Minimum weight.
   1. Thoroughbreds. In all overnight races for two-year-olds, three-year-olds, or four-year-olds and older, the minimum weight shall be 112 pounds, subject to sex and apprentice allowance. This rule shall not apply to handicaps or to races written for three-year-olds and older.
   2. Quarter horse and mixed races. In all overnight races for two-year-olds, the weight shall be 120 pounds; for three-year-olds, the weight shall be 122 pounds; and for four-year-olds and older, the weight shall be 124 pounds.
   3. Quarter horse and mixed races. In qualifying for a speed index, standard weight shall be 120 pounds. Should any horse carry less than this amount in a race, one-tenth of a second will be added to the official time for each four pounds or fraction thereof less than 120 pounds.

(4) Sex allowances. In thoroughbred racing, sex allowances are obligatory. Sex allowances shall be applied in all thoroughbred races unless the conditions of the race expressly state to the contrary. If the conditions of the race are silent as to sex allowances, a sex allowance shall be applied. Sex allowances may not be declined. Two-year-old fillies shall be allowed three pounds; mares three years old and older are allowed five pounds before September 1 and three pounds thereafter. Sex allowances are not applicable for quarter horse or mixed races.

(5) Iowa-foaled horse allowance. Iowa-foaled horses that are properly registered and whose papers are stamped, physically or digitally, by the Iowa department of agriculture and land stewardship shall be allowed an additional three pounds beyond the stated conditions of the race if the race is not limited to Iowa-foaled horses. This allowance does not apply to stakes races.

h. Penalties not cumulative. Penalties and weight allowances are not cumulative unless so declared in the conditions of a race by the racing secretary.

i. Winnings.

   (1) All inclusive. For the purpose of the setting of conditions by the racing secretary, winnings shall be considered to include all moneys and prizes won up to the time of the start of a race, including those races outside the United States. Foreign winnings shall be determined on the basis of the normal rate of exchange prevailing on the day of the win. The amount of purse money earned is credited in United States currency, and there shall be no appeal for any loss on the exchange rate at the time of transfer from United States currency to that of another country.

   (2) Winnings considered from January 1. Winnings during the year shall be reckoned by the racing secretary from the preceding January 1.

   (3) Winner of a certain sum. “Winner of a certain sum” means the winner of a single race of that sum, unless otherwise expressed in the condition book by the racing secretary. In determining the net value to the winner of any race, the sums contributed by its owner or nominator shall be deducted from the amount won. In all stakes races, the winnings shall be computed on the value of the gross earnings.

   (4) Winner’s award. Rescinded IAB 5/16/01, effective 6/20/01.

j. Cancellation of a race. The racing secretary has the authority to withdraw, cancel, or change any race which has not been closed. In the event the race is canceled, any and all fees paid in connection with the race shall be refunded.
10.4(6) Paddock judge.

a. General authority. The paddock judge shall:
   (1) Supervise the assembly of horses in the paddock no later than 15 minutes before the scheduled post time for each race;
   (2) Maintain a written record of all equipment, inspect all equipment of each horse saddled, and report any change thereof to the stewards;
   (3) Prohibit any change of equipment without the approval of the stewards;
   (4) Ensure that the saddling of all horses is orderly, open to public view, free from public interference, and that horses are mounted at the same time and leave the paddock for the post in proper sequence;
   (5) Supervise paddock schooling of all horses approved for such by the stewards;
   (6) Report to the stewards any observed cruelty to a horse; and
   (7) Ensure that only properly authorized persons are permitted in the paddock.

b. Paddock judge’s list.
   (1) The paddock judge shall maintain a list of horses which shall not be entered in a race because of poor or inconsistent behavior in the paddock that endangers the health or safety of other participants in racing.
   (2) At the end of each day, the paddock judge shall provide a copy of the list to the stewards.
   (3) To be removed from the paddock judge’s list, a horse must be schooled in the paddock and demonstrate to the satisfaction of the paddock judge and the stewards that the horse is capable of performing safely in the paddock.

10.4(7) Horse identifier. The horse identifier shall:

a. When required, ensure the safekeeping of registration certificates and racing permits for horses stabled or racing on facility premises;

b. Inspect documents of ownership, eligibility, registration, or breeding necessary to ensure the proper identification of each horse scheduled to compete at a race meeting;

c. Examine every starter in the paddock for sex, color, markings, microchip, lip tattoo, or digital tattoo for comparison with its registration certificate to verify the horse’s identity;

d. Supervise the tattooing, digital tattooing, microchipping or branding for identification of any horse located on facility premises; and

e. Report to the stewards any horse not properly identified or whose registration certificate is not in conformity with these rules.

10.4(8) Starter.

a. General authority. The starter shall:
   (1) Have complete jurisdiction over the starting gate, the starting of horses, and the authority to give orders not in conflict with the rules as may be required to ensure all participants an equal opportunity to a fair start;
   (2) Appoint and supervise assistant starters who have demonstrated they are adequately trained to safely handle horses in the starting gate. In emergency situations, the starter may appoint qualified individuals to act as substitute assistant starters;
   (3) Assign the starting gate stall positions to assistant starters and notify the assistant starters of their respective stall positions on race day before post time for each race;
(4) Assess the ability of each person applying for a jockey’s license in breaking from the starting gate and working a horse in the company of other horses, and make said assessment known to the stewards; and

(5) Load horses into the gate in any order deemed necessary to ensure a safe and fair start.

b. Assistant starters. With respect to an official race, the assistant starters shall not:

(1) Handle or take charge of any horse in the starting gate without the expressed permission of the starter;

(2) Impede the start of a race;

(3) Use excessive force, a whip or other device, with the exception of steward-approved tongs, to assist in loading a horse into the starting gate;

(4) Slap, boot, or otherwise dispatch a horse from the starting gate;

(5) Strike or use abusive language to a jockey; or

(6) Accept or solicit any gratuity or payment other than their regular salary, directly or indirectly, for services in starting a race.

c. Starter’s list. No horse shall be permitted to start in a race unless approval is given by the starter. The starter shall maintain a starter’s list of all horses which are ineligible to be entered in any race because of poor or inconsistent behavior or performance in the starting gate. Any horse on the starter’s list shall be refused entry until the horse has demonstrated to the starter that it has been satisfactorily schooled in the gate and can be removed from the starter’s list. Schooling shall be under the direct supervision of the starter.

10.4(9) Timer/clocker.

a. General authority—timer.

(1) The timer shall accurately record the official time.

(2) At the end of a race, the timer shall post the official running time on the infield totalizator board on instruction by the stewards.

(3) At a facility equipped with an appropriate infield totalizator board, the timer shall post the quarter times (splits) for thoroughbred races in fractions as a race is being run. For quarter horse races, the timer shall post the official times in hundredths of a second.

(4) For backup purposes, the timer shall also use a stopwatch to time all races. In time trials, the timer shall ensure that at least two stopwatches are used by the stewards or their representatives.

(5) The timer shall maintain, and make available for inspection by the stewards or the commission on request, a written record of fractional and finish times of each race.

b. General authority—clocker.

(1) The clocker shall be present during training hours at each track on facility premises which is open for training to identify each horse working out and to accurately record the distances and times of each horse’s workout.

(2) Each day, the clocker shall prepare a list of workouts that includes the name of each horse which worked along with the distance and time of each horse’s workout.

(3) At the conclusion of training hours, the clocker shall deliver a copy of the list of workouts to the stewards and the racing secretary.

10.4(10) Placing judges.

a. General authority. The placing judges shall determine the order of finish in a race as the horses pass the finish line and, with the approval of the stewards, may display the results on the totalizator board.

b. Photo finish.

(1) In the event the placing judges or the stewards request a photo of the finish, the photo finish sign shall be posted on the totalizator board.

(2) Following their review of the photo finish film strip, the placing judges shall, with the approval of the stewards, determine the exact order of finish for all horses participating in the race, and shall immediately post the numbers of the first four finishers on the totalizator board.

(3) In the event a photo was requested, the placing judges shall cause a photographic print of said finish to be produced. The finish photograph shall, when needed, be used by the placing judges as an aid in determining the correct order of finish.
(4) Upon determination of the correct order of finish of a race in which the placing judges have utilized a photographic print to determine the first four finishers, the placing judges shall cause prints of said photograph to be displayed publicly in the grandstand and clubhouse areas of the facility.

c. **Dead heats.**

(1) In the event the placing judges determine that two or more horses finished the race simultaneously and cannot be separated as to their order of finish, a dead heat shall, with the approval of the stewards, be declared.

(2) In the event one or more of the first four finishers of a race are involved in a dead heat, the placing judges shall post the dead heat sign on the totalizator board and cause the numbers of the horse or horses involved to blink on the totalizator board.

10.4(11) **Jockey room custodian.** The jockey room custodian shall:

- **a.** Supervise the conduct of the jockeys and their attendants while they are in the jockey room;
- **b.** Keep the jockey room clean and safe for all jockeys;
- **c.** Ensure all jockeys are in the correct colors and wearing the correct arm number before leaving the jockey room to prepare for mounting their horses;
- **d.** Keep a daily film list as dictated by the stewards and have it displayed in plain view for all jockeys;
- **e.** Keep a daily program displayed in plain view for the jockeys;
- **f.** Keep unauthorized persons out of the jockey room;
- **g.** Report to the stewards any unusual occurrences in the jockey room or infraction of the rules with respect to helmets and vests;
- **h.** Assist the clerk of scales as required;
- **i.** Supervise the care and storage of racing colors; and
- **j.** Assign to each jockey a locker for the use of storing the jockey’s clothing, equipment, and personal effects.

10.4(12) **Mutuel manager.** The mutuel manager is responsible for the operation of the mutuel department. The mutuel manager shall ensure that any delays in the running of official races caused by totalizator malfunctions are reported to the stewards. The mutuel manager shall submit a written report on any delay when requested by the state steward.

10.4(13) **Clerk of scales.** The clerk of scales shall:

- **a.** Verify the presence of all jockeys in the jockey room at the appointed time;
- **b.** Verify that each jockey has a current jockey’s license issued by the commission;
- **c.** Verify the correct weight of each jockey at the time of weighing out and weighing in and report any discrepancies to the stewards immediately;
- **d.** Oversee the security of the jockey room including the conduct of the jockeys and their attendants;
- **e.** Record all required data on the scale sheet and submit that data to the horsemen’s bookkeeper at the end of each race day;
- **f.** Maintain the record of applicable winning races on all apprentice certificates at the meeting;
- **g.** Release apprentice jockey certificates, upon the jockey’s departure or upon the conclusion of the race meet;
- **h.** Assume the duties of the jockey room custodian in the absence of such employee; and
- **i.** Promptly report to the stewards any infraction of the rules with respect to riding equipment; safety equipment, including, but not limited to, helmets and vests; riding crops; or conduct.

10.4(14) **Outrider.**

- **a.** The facility shall appoint a minimum of two outriders on the main track for each race of a performance and during workouts. The facility shall appoint one outrider on the training track during all workouts. The outriders must be neat in appearance, wear approved helmets with the chin straps securely fastened, and wear approved safety vests while on the main track or training track.
- **b.** The outriders shall:
  - **(1)** Accompany the field of horses from the paddock to the post;
(2) Ensure the post parade is conducted in an orderly manner, with all jockeys and pony riders conducting themselves in a manner in conformity with the best interests of racing as determined by the board of stewards;

(3) Assist jockeys with unruly horses;

(4) Render assistance when requested by a jockey;

(5) Be present during morning workouts to assist exercise riders as required by regulations;

(6) Promptly report to the stewards any unusual conduct which occurs while performing the duties of an outrider;

(7) Ensure individuals using the track(s) are appropriately licensed; and

(8) Promptly report jockey objections to the stewards after the finish of each race.

10.4(15) Horsemens' bookkeeper.

a. General authority. The horsemens' bookkeeper shall maintain the records and accounts and perform the duties described herein and maintain such other records and accounts and perform such other duties as the facility and commission may prescribe.

b. Records.

(1) The records shall include the name, mailing address, social security number or federal tax identification number, and the state or country of residence of each horse owner, trainer, or jockey participating at the race meeting who has funds due or on deposit in the horsemens' account.

(2) The records shall include a file of all required statements of partnerships, syndicates, corporations, assignments of interest, lease agreements, and registrations of authorized agents.

(3) All records of the horsemens' bookkeeper shall be kept separate and apart from the records of the facility.

(4) All records of the horsemens' bookkeeper including records of accounts and moneys and funds kept on deposit are subject to inspection by the commission at any time.

c. Moneys and funds on account.

(1) All moneys and funds on account with the horsemens' bookkeeper shall be maintained:

1. Separate and apart from moneys and funds of the facility;

2. In a trust account designated as “horsemens' trust account”; and

3. In an account insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation.

(2) The horsemens' bookkeeper shall be bonded.

d. Payment of purses.

(1) The horsemens' bookkeeper shall receive, maintain, and disburse the purses of each race and all stakes, entrance money, jockey fees, purchase money in claiming races, all applicable taxes, and other moneys that properly come into the horsemens' bookkeeper's possession in accordance with the provisions of commission rules.

(2) The horsemens' bookkeeper may accept moneys due, belonging to other organizations or recognized meetings, provided prompt return is made to the organization to which the money is due.

(3) The horsemens' bookkeeper shall disburse the purse of each race and all stakes, entrance money, and jockey fees, upon request, within two race days of the conclusion of the race day for all horses that were not selected for postrace drug testing.

(4) For horses that were selected for postrace drug testing, the horsemens' bookkeeper shall disburse the purse of such horses for each race and all stakes, entrance money, and jockey fees, upon request, within two race days of receipt of notification that all tests with respect to such horses have cleared the drug testing laboratory (commission chemist) as reported by the stewards. Minimum jockey mount fees may be disbursed prior to notification that the tests have cleared the testing laboratory.

(5) Absent a prior request, the horsemens' bookkeeper shall disburse moneys to the persons entitled to receive same within 15 days after the last race day of the race meeting, including purses for official races, provided that all tests with respect to such horses that have been selected for postrace drug testing have cleared the drug testing laboratory as reported by the stewards, and provided further that no protest or appeal has been filed with the stewards or the commission.
(6) In the event a protest or appeal has been filed with the stewards or the commission, the horsemens’s bookkeeper shall disburse the purse of such horses having been selected for postrace drug testing within two race days of receipt of dismissal or a final nonappealable order disposing of such protest or appeal.

e. No portion of purse money other than jockey fees shall be deducted by the facility for itself or for another, unless so requested in writing by the person to whom purse moneys are payable or the person’s duly authorized representative. The horsemens’s bookkeeper shall mail to each owner a duplicate of each record of all deposits, withdrawals, or transfers of funds affecting the owner’s racing account at the close of each race meeting.

f. Purse money presumption. The fact that purse money has been distributed prior to the issuance of a laboratory report shall not be deemed a finding that no chemical substance has been administered, in violation of these rules, to the horse earning the purse money.

10.4(16) Patrol judges.

a. General authority. A facility may employ patrol judges who shall observe the running of the race and report information concerning the running of the race to the stewards.

b. Duty stations. Each patrol judge shall have a duty station assigned by the stewards.


a. The veterinarians shall advise the commission and the stewards on all veterinary matters.

b. The commission veterinarians shall have supervision and control of the detention barn for the collection of test samples for the testing of horses for prohibited medication as provided in Iowa Code sections 99D.23(2) and 99D.25(9). The commission may employ persons to assist the commission veterinarians in maintaining the detention barn area and collecting test samples.

c. The commission veterinarians shall not buy or sell any horse under their supervision; wager on a race under their supervision; or be licensed to participate in racing in any other capacity.

d. The stewards or commission veterinarians may request any horse entered in a race to undergo an examination on the day of the race to determine the general fitness of the horse for racing. During the examination, all bandages shall be removed by the groom upon request and the horse may be exercised outside the stall to permit the examiner to determine the condition of the horse’s legs and feet. The examining veterinarian shall report any unsoundness in a horse to the stewards.

e. A commission veterinarian shall inspect all of the horses in a race at the starting gate and after the finish of a race shall observe the horses upon their leaving the track.

f. The commission veterinarian shall place any horse determined to be sick or too unsafe, unsound, or unfit to race on a veterinarian’s list that shall be posted in a conspicuous place available to all owners, trainers, and officials.

g. A horse placed on the veterinarian’s list in Iowa, bleeders exempt, may be allowed to enter only after it has been approved by the commission veterinarian. Any horse placed on the veterinarian’s list will be removed from any future race in which the horse has been entered. Requests for the removal of any horse from the veterinarian’s list will be accepted only after a minimum of three calendar days have elapsed from the placing of the horse on the veterinarian’s list. Removal from the list will be at the discretion of the commission veterinarian, who may require satisfactory workouts or examinations to adequately demonstrate that the problem that caused the horse to be placed on the list has been rectified. Horses that are entered to race and then placed on the veterinarian’s list for any reason will not be allowed to enter a race for a minimum of three calendar days beginning the day after the horse was scheduled to race.

Every confirmed bleeder, regardless of age, shall be placed on the bleeder list and be ineligible to race for the following time periods:

(1) First incident – 14 days.

(2) Second incident within 365-day period – 30 days.

(3) Third incident within 365-day period – 180 days.

(4) Fourth incident within 365-day period – barred for racing lifetime.

For the purposes of counting the number of days a horse is ineligible to run, the day the horse bled externally is the first day of the recovery period. The voluntary administration of furosemide without
an external bleeding incident shall not subject the horse to the initial period of ineligibility specified in subparagraph (1). A horse may be removed from the bleeder list only upon the direction of the official veterinarian, who shall certify in writing to the stewards the recommendation for removal. A horse which has been placed on a bleeder list in another jurisdiction pursuant to these rules shall be placed on a bleeder list in this jurisdiction.

h. The commission veterinarians shall supervise and ensure that the administration of furosemide and phenylbutazone is in compliance with Iowa Code section 99D.25A.


j. The commission veterinarian or commission representative shall take receipt of veterinary reports as required by Iowa Code section 99D.25(10).

[ARC 0734C, IAB 5/15/13, effective 6/19/13; see Delay note at end of chapter; ARC 1876C, IAB 2/18/15, effective 3/25/15; ARC 2468C, IAB 3/30/16, effective 5/4/16; ARC 2927C, IAB 2/1/17, effective 3/8/17; ARC 3608C, IAB 1/31/18, effective 3/7/18; ARC 4194C, IAB 12/19/18, effective 1/23/19; ARC 4378C, IAB 3/27/19, effective 5/1/19; ARC 4954C, IAB 2/26/20, effective 4/1/20; ARC 5423C, IAB 2/10/21, effective 3/17/21]

491—10.5(99D) Trainer, jockey, and jockey agent responsibilities.

10.5(1) Trainer.

a. Responsibility. The trainer is responsible for:

(1) The condition of horses entered in an official workout or race and, in the absence of substantial evidence to the contrary, for the presence of any prohibited drug, medication or other substance, including permitted medication in excess of the maximum allowable level, in such horses, regardless of the acts of third parties. A positive test for a prohibited drug, medication, or substance, including permitted medication in excess of the maximum allowable level, as reported by a commission-approved laboratory, is prima facie evidence of a violation of this rule or Iowa Code chapter 99D.

(2) Preventing the administration of any drug, medication, or other prohibited substance that may cause a violation of these rules. An “in-today” sign must be placed by 8 a.m. on race day next to the stall of a horse that is scheduled to race on that day. For horses shipping in on race day, the sign must be placed upon the horse’s arrival.

(3) Any violation of rules regarding a claimed horse’s participation in the race in which the trainer’s horse is claimed.

(4) The condition and contents of stalls, tack rooms, feed rooms, sleeping rooms, and other areas which have been assigned to the trainer by the facility and maintaining the assigned stable area in a clean, neat, and sanitary condition at all times.

(5) Ensuring that fire prevention rules are strictly observed in the assigned stable area.

(6) Being present to witness the administration of furosemide during the administration time and sign as the witness on the affidavit form. A licensed designee of the trainer may witness the administration of the furosemide and sign as the witness on the affidavit form; however, this designee may not be another practicing veterinarian or veterinary assistant. If the trainer or designee is not present or does not allow for the administration of furosemide to a horse to be run on furosemide, said horse will be placed on the steward’s list for a minimum of five days starting the day after the violation.

(7) The proper identity, custody, care, health, condition, and safety of horses in the trainer’s charge.

(8) Disclosure to the racing secretary of the true and entire ownership of each horse in the trainer’s care, custody, or control. Any change in ownership shall be reported immediately to, and approved by, the stewards and recorded by the racing secretary. The disclosure, together with all written agreements and affidavits setting out oral agreements pertaining to the ownership for or rights in and to a horse, shall be attached to the registration certificate for the horse and filed with the racing secretary.

(9) Training all horses owned wholly or in part by the trainer which are participating at the race meeting.

(10) Registering with the racing secretary each horse in the trainer’s charge within 24 hours of the horse’s arrival on facility premises.

(11) Ensuring that, at the time of arrival at the facility, each horse in the trainer’s care is accompanied by a valid health certificate which shall be filed with the racing secretary.
(12) Having each horse in the trainer’s care that is racing or stalled on facility premises tested for equine infectious anemia (EIA) in accordance with state law and for filing evidence of such negative test results with the racing secretary. The test must have been conducted within the previous 12 months and must be repeated upon expiration. The certificate must be attached to the foal certificate or otherwise accessible by the commission or racing association.

(13) Using the services of those veterinarians licensed by the commission to attend horses that are on facility premises.

(14) Properly recording the sex of the horses in the trainer’s care with the horse identifier and the racing secretary and immediately reporting the alteration of the sex of a horse in the trainer’s care to the horse identifier and the racing secretary.

(15) Promptly reporting to the racing secretary and the commission veterinarian any horse on which a posterior digital neurectomy (heel nerving) has been performed and ensuring that such fact is designated on its certificate of registration. See Iowa Code subsections 99D.25(1) to 99D.25(3).

(16) Promptly reporting to the stewards and the commission veterinarian the serious illness of any horse in the trainer’s charge.

(17) Promptly reporting the death of any horse in the trainer’s care on facility premises to the stewards, owner, and the commission veterinarian and complying with Iowa Code subsection 99D.25(5) governing postmortem examination.

(18) Maintaining a knowledge of the medication record and status of all horses in the trainer’s care.

(19) Immediately reporting to the stewards and the commission veterinarian if the trainer knows, or has cause to believe, that a horse in the trainer’s custody, care, or control has received any prohibited drugs or medication.

(20) Representing an owner in making entries and scratches and in all other matters pertaining to racing.

(21) Eligibility of horses entered and weight or other allowance claimed.

(22) Ensuring the fitness of a horse to perform creditably at the distance entered.

(23) Ensuring that the trainer’s horses are properly shod, bandaged, and equipped.

(24) Presenting the trainer’s horse in the paddock at least 20 minutes before post time or at a time otherwise appointed before the race in which the horse is entered. Any horse failing to report to the paddock will be placed on the steward’s list for a minimum of five days starting the day after the violation.

(25) Personally attending to the trainer’s horses in the paddock and supervising the saddling thereof, unless excused by the stewards.

(26) Instructing the jockey to give the jockey’s best effort during a race and instructing the jockey that each horse shall be ridden to win.

(27) Witnessing the collection of a urine, blood, or hair sample from the horse in the trainer’s charge or delegating a licensed employee or the owner of the horse to do so.

(28) Notifying horse owners upon the revocation or suspension of their trainer’s license. A trainer whose license has been suspended for more than 30 days, whose license has expired or been revoked, or whose license application has been denied must inform the horse owners that, until the license is restored, the trainer can no longer be involved with the training, care, custody or control of their horses, nor receive any compensation from the owners for the training, care, custody or control of their horses. Upon application by the horse owner, the stewards may approve the transfer of such horse(s) to the care of another licensed trainer, and upon such approved transfer, such horse(s) may be entered to race. Upon transfer of such horse(s), the inactive trainer shall not be involved in any arrangements related to the care, custody or control of the horse(s) and shall not benefit financially or in any other way from the training of the horse(s).

(29) Ensuring that all individuals in their employ are properly licensed by the commission.

b. Restrictions on wagering. A trainer with a horse(s) entered in a race shall be allowed to wager only on that horse(s) or that horse(s) in combination with other horses.

c. Assistant trainers.
1. Upon the demonstration of a valid need, a trainer may employ an assistant trainer as approved by the stewards. The assistant trainer shall be licensed prior to acting in such capacity on behalf of the trainer.
2. Qualifications for obtaining an assistant trainer’s license shall be prescribed by the stewards and the commission and may include requirements set forth in 491—Chapter 6.
3. An assistant trainer may substitute for and shall assume the same duties, responsibilities and restrictions as are imposed on the licensed trainer, in which case the trainer shall be jointly responsible for the assistant trainer’s compliance with the rules.
   d. Substitute trainers.
   1. A trainer absent for more than five days from responsibility as a licensed trainer, or on a day in which the trainer has a horse in a race, shall obtain another licensed trainer to substitute.
   2. A substitute trainer shall accept responsibility for the horses in writing and shall be approved by the stewards.
   3. A substitute trainer and the absent trainer shall be jointly responsible as absolute insurers of the condition of their horses entered in an official workout or race.

10.5(2) Jockey.
   a. Responsibility.
   1. A jockey shall give a best effort during a race, and each horse shall be ridden to win.
   2. A jockey shall not have a valet attendant except one provided and compensated by the facility.
   3. No person other than the licensed contract employer or a licensed jockey agent may make riding engagements for a rider, except that a jockey not represented by a jockey agent may make the jockey’s own riding engagements.
   4. A jockey shall have no more than one jockey agent.
   5. No revocation of a jockey agent’s authority is effective until the jockey notifies the stewards in writing of the revocation of the jockey agent’s authority.
   6. A jockey shall promptly report objections to the outrider(s) following the finish of the race.
   b. Jockey betting. A jockey shall be allowed to wager only on a race in which the jockey is riding. A jockey shall be allowed to wager only if:
   1. The owner or trainer of the horse that the jockey is riding makes the wager for the jockey;
   2. The jockey only wagers on the jockey’s own mount to win or finish first in combination with other horses in multiple-type wagers; and
   3. Records of such wagers are kept and available for presentation upon request by the stewards.
   c. Jockey’s spouse. A jockey shall not compete in any race against a horse that is trained or owned by the jockey’s spouse.
   e. Entitlement. Any apprentice or contract rider shall be entitled to the regular jockey fees, except when riding a horse owned in part or solely by the contract holder. An interest in the winnings only (such as trainer’s percent) shall not constitute ownership.
   f. Fee earned. A jockey’s fee shall be considered earned when the jockey is weighed out by the clerk of scales. The fee shall not be considered earned when injury to the horse or rider is not involved and jockeys, of their own free will, take themselves off their mounts. Any conditions or considerations not covered by the above shall be at the discretion of the stewards.
   g. Multiple engagements. If any owner or trainer engages two or more jockeys for the same race, the owner or trainer shall be required to pay each of the jockeys the appropriate fee whether the jockeys ride in the race or not.
   h. Dead heats. Jockeys finishing a race in a dead heat shall divide equally the totals they individually would have received had one jockey won the race alone. The owners of the horses finishing in the dead heat shall pay equal shares of the jockey fees.
   i. Apprentices subject to jockey rules. Unless excepted under these rules, apprentices are subject to all rules governing jockeys and racing.
   j. Conduct.
(1) Clothing and appearance. A jockey shall wear the racing colors furnished by the owner of the horse the jockey is to ride, plus solid white riding pants, top boots, and a number on the right shoulder on the saddlecloth corresponding to the mount’s number given as shown on the saddlecloth and in the daily program. The stewards, at their discretion, may allow a jockey to wear solid black riding pants during poor weather or track conditions. The Jockeys’ Guild logo, the Permanently Disabled Jockeys Fund logo, or the jockey’s name may be displayed on the pants. The size of the display of the jockey’s name on the pants is limited to a maximum of 32 square inches on each thigh of the pants on the outer sides between the hip and the knee, and 10 square inches on the rear at the base of the spine. A jockey shall not wear advertising or promotional material of any kind on clothing during a race, unless the following criteria are met:

1. A maximum of 32 square inches on each thigh of the pants on the outer side between the hip and knee and 10 square inches on the rear of the pant at the waistline at the base of the spine.
2. A maximum of 24 square inches on boots and leggings on the outside of each nearest the top of the boot.
3. A maximum of 6 square inches on the front center of the neck area (on a turtleneck or other undergarment).
4. Such advertising or promotional material does not compete with, conflict with, or infringe upon any current sponsorship agreement to the racing association race or race meet.
5. The stewards, at their discretion, may disallow any advertising that is not in compliance with this rule, any other rules of racing, or any advertising the stewards deem to be inappropriate, indecent, in poor taste, or controversial.

(2) Competing against contractor. No jockey may ride in any race against a starting horse belonging to the jockey’s contract employer unless the jockey’s mount and the contract employer’s horse are both trained by the same trainer.

(3) Confined to jockey room. Jockeys engaged to ride a race shall report to the jockey room on the day of the race at the time designated by the facility officials. The jockeys shall then report their engagements and any overweight to the clerk of scales. Thereafter, they shall not leave the jockey room, except by permission of the stewards, until all of their riding engagements of the day have been fulfilled. Once jockeys have fulfilled their riding engagements for the day and have left the jockeys’ quarters, they shall not be readmitted to the jockeys’ quarters until after the entire racing program for that day has been completed, except upon permission of the stewards. Jockeys are not allowed to communicate with anyone but the trainer while in the room during the performance except with approval of the stewards. On these occasions, they shall be accompanied by a security guard.

(4) Whip prohibited. Jockeys may not use a whip on a two-year-old horse before April 1 of each year, nor shall a jockey or other person engage in excessive or indiscriminate whipping of any horse at any time.

(5) Spurs prohibited. Jockeys shall not use spurs.

(6) Possessing drugs or devices. Jockeys shall not have in their care, control, or custody any drugs, prohibited substances, or electrical or mechanical device that could affect a horse’s racing performance.

k. Jockey effort. A jockey shall exert every effort to ride the horse to the finish in the best and fastest run of which the horse is capable. No jockey shall ease up or coast to a finish, without adequate cause, even if the horse has no apparent chance to win prize money.

l. Duty to fulfill engagements. Jockeys shall fulfill their duty scheduled riding engagements, unless excused by the stewards. Jockeys shall not be forced to ride a horse they believe to be unsound or over a racing strip they believe to be unsafe. If the stewards find a jockey’s refusal to fulfill a riding engagement is based on personal belief unwarranted by the facts and circumstances, the jockey may be subject to disciplinary action. Jockeys shall be responsible to their agent for any engagements previously secured by the agent.

m. Riding interference.

(1) When the way is clear in a race, a horse may be ridden to any part of the course; but if any horse swerves, or is ridden to either side, so as to interfere with, impede, or intimidate any other horse, it is a foul.
(2) The offending horse may be disqualified if, in the opinion of the stewards, the foul altered the finish of the race, regardless of whether the foul was accidental, willful, or the result of careless riding. When a horse causes interference under this rule, every horse in the same race entered by the same owner or trainer who benefited from the interference may be disqualified at the discretion of the stewards.

(3) If the stewards determine the foul was intentional, or due to careless riding, the jockey shall be held responsible.

(4) In a straightaway race, every horse must maintain position as nearly as possible in the lane in which it started. If a horse is ridden, drifts, or swerves out of its lane in such a manner that it interferes with, impedes, or intimidates another horse, it is a foul and may result in the disqualification of the offending horse.

n. Jostling. Jockeys shall not jostle another horse or jockey. Jockeys shall not strike another horse or jockey or ride so carelessly as to cause injury or possible injury to another horse in the race.

o. Partial fault/third-party interference. If a horse or jockey interferes with or jostles another horse, the aggressor may be disqualified, unless the interfered or jostled horse or jockey was partly at fault or the infraction was wholly caused by the fault of some other horse or jockey.

p. Careless riding. A jockey shall not ride carelessly or willfully permit the mount to interfere with, intimidate, or impede any other horse in the race. A jockey shall not strike at another horse or jockey so as to impede, interfere with, or injure the other horse or jockey. If a jockey rides in a manner contrary to this rule, the horse may be disqualified; or the jockey may be fined, suspended, or otherwise disciplined; or other penalties may apply.

q. Jockey weighed out.

(1) Jockeys must be weighed for their assigned horse not more than 30 minutes before the time fixed for the race.

(2) A jockey’s weight shall include the jockey’s clothing, boots, saddle and its attachments. A safety vest shall be mandatory, shall weigh no more than two pounds, and shall be designed to provide shock-absorbing protection to the upper body.

(3) All other equipment shall be excluded from the weight.

r. Overweight limited. No jockey may weigh more than two pounds or, in the case of inclement weather, four pounds over the weight the horse is assigned to carry unless with consent of the owner or trainer and unless the jockey has declared the amount of overweight to the clerk of scales at least 60 minutes before the scheduled post time of the first race. However, a horse shall not carry more than seven pounds overweight, except in inclement weather when nine pounds shall be allowed. The overweight shall be publicly announced and posted in a conspicuous place both prior to the first race of the day and before the running of the race.

(1) Weigh in. Upon completion of a race, jockeys shall ride promptly to the winner’s circle and dismount. Jockeys riding the first four finishers, or at the discretion of the stewards a greater number, shall present themselves to the clerk of scales to be weighed in. If a jockey is prevented from riding the mount to the winner’s circle because of accident or illness either to the jockey or the horse, the jockey may walk or be carried to the scales unless excused by the stewards.

(2) Unsaddling. Jockeys, upon completion of a race, must return to the unsaddling area and unsaddle their own horse, unless excused by the stewards.

(3) Removing horse’s equipment. No person except the valet attendant for each mount is permitted to assist the jockey in removing the horse’s equipment that is included in the jockey’s weight, unless the stewards permit otherwise. To weigh in, jockeys shall carry to the scales all pieces of equipment with which they weighed out. Thereafter they may hand the equipment to the valet attendant.

(4) Underweight. When any horse places first, second, or third in a race and thereafter the horse’s jockey is weighed in short by more than two pounds of the weight of which the jockey was weighed out, the mount may be disqualified and all purse moneys forfeited.

(5) Overweight. If the jockey is overweight, the jockey is subject to fine, suspension, or both.

s. Contracts. Rescinded IAB 5/16/01, effective 6/20/01.
t. Jockey fines and forfeitures. Jockeys shall pay any fine or forfeiture from their own funds within 48 hours of the imposition of the fine or at a time deemed proper by the stewards. No other person shall pay jockey fines or forfeitures for the jockey.

u. Competing claims. Whenever two or more licensees claim the services of one jockey for a race, first call shall have priority and any dispute shall be resolved by the stewards.

v. Jockey suspension.

1. Offenses involving fraud. Suspension of a licensee for an offense involving fraud or deception in racing shall begin immediately after the ruling unless otherwise ordered by the stewards or commission.

2. Offenses not involving fraud. Suspension for an offense not involving fraud or deception in racing shall begin on the third day after the ruling or at the stewards’ discretion.

3. Withdrawal of appeal. Withdrawal by the appellant of a notice of appeal filed with the commission, whenever imposition of the disciplinary action has been stayed or enjoined pending a final decision by the commission, shall be deemed a frivolous appeal and referred to the commission for further disciplinary action in the event the appellant fails to show good cause to the stewards why the withdrawal should not be deemed frivolous.

4. Riding suspensions of ten days or less and participating in designated races. The stewards appointed for a race meeting shall immediately, prior to the commencement of that meeting, designate the stakes, futurities, futurity trials, or other races in which a jockey will be permitted to compete, notwithstanding the fact that such jockey is under suspension for ten days or less for a careless riding infraction at the time the designated race is to be run.

1. Official rulings for riding suspensions of ten days or less shall state: “The term of this suspension shall not prohibit participation in designated races.”

2. A listing of the designated races shall be posted in the jockey room and any other such location deemed appropriate by the stewards.

3. A suspended jockey must be named at time of entry to participate in any designated race.

4. A day in which a jockey participated in one designated race while on suspension shall count as a suspension day. If a jockey rides in more than one designated race on a race card while on suspension, the day shall not count as a suspension day. Each designated trial race for a stake shall be considered one race. A jockey who rides in more than one designated race shall be allowed to be named to ride other races on a card, and such race card shall not count as a suspended race day.

10.5(3) Apprentice jockey. Upon completion of licensing requirements, the stewards may issue an apprentice jockey certificate allowing the holder to claim this allowance only in overnight races.

a. An apprentice jockey shall ride with a five-pound weight allowance beginning with the first mount and for one full year from the date of the jockey’s fifth winning mount.

b. If, after riding one full year from the date of the fifth winning mount, the apprentice jockey has not ridden 40 winners, the applicable weight allowance shall continue for one more year or until the fortieth winner, whichever comes first. In no event shall a weight allowance be claimed for more than two years from the date of the fifth winning mount, unless an extension has been granted.

c. The steward may extend the weight allowance of an apprentice jockey when, in the discretion of the steward, the apprentice provides proof of incapacitation for a period of seven or more consecutive days. The allowance may be claimed for a period not to exceed the period such apprentice was unable to ride.

d. The apprentice jockey must have the apprentice certificate with the jockey at all times and must keep an updated record of the first 40 winners. Prior to riding, the jockey must submit the certificate to the clerk of scales, who will record the apprentice’s winning mounts.

10.5(4) Jockey agent.

a. Responsibilities.

1. A jockey agent shall not make or assist in making engagements for a jockey other than the jockeys the agent is licensed to represent.

2. A jockey agent shall file written proof of all agencies and changes of agencies with the stewards.
(3) A jockey agent shall notify the stewards, in writing, prior to withdrawing from representation of a jockey and shall submit to the stewards a list of any unfulfilled engagements made for the jockey.

(4) All persons permitted to make riding engagements shall maintain current and accurate records of all engagements made. Such records shall be subject to examination by the stewards at any time.

(5) No jockey agent shall represent more than two jockeys and one apprentice jockey at the same time except:

1. A jockey agent may represent three jockeys at a “mixed” meeting so long as no more than two of the jockeys ride the same breed. In addition, a jockey agent may represent one apprentice jockey who may ride either breed.

2. A jockey agent may represent three jockeys at a race meeting exclusive of thoroughbred racing.

b. Prohibited areas. A jockey agent is prohibited from entering the jockey room, winner’s circle, racing strip, paddock, or saddling enclosure during the hours of racing.

c. A jockey agent shall not be permitted to withdraw from the representation of any jockey unless written notice to the stewards has been provided.

491—10.6(99D) Conduct of races.

10.6(1) Horses ineligible. Any horse ineligible to be entered for a race, or ineligible to start in any race, which competes in that race may be disqualified and the stewards may discipline the persons responsible for the horse competing in that race.

a. A horse is ineligible to enter a race when:

(1) The nominator has failed to identify the horse which is being entered for the first time, by name, color, sex, age, and the names of sire and dam as registered.

(2) A horse has been knowingly entered or raced in any jurisdiction under a different name, with an altered registration certificate, altered microchip, or altered lip or digital tattoo by a person having lawful custody or control of the horse for the purpose of deceiving any facility or regulatory agency.

(3) A horse has been allowed to enter or start by a person having lawful custody or control of the horse who participated in or assisted in the entry or racing of some other horse under the name of the horse in question.

(4) A horse is wholly or partially owned by a disqualified person or a horse is under the direct or indirect management of a disqualified person.

(5) A horse is wholly or partially owned by the spouse of a disqualified person or a horse is under the direct or indirect management of the spouse of a disqualified person. In such cases, a presumption which may be rebutted is that the disqualified person and spouse constitute a single financial entity with respect to the horse.

(6) A horse is owned in whole or in part by an undisclosed person or interest.

(7) A horse has been nerfed by surgical neurectomy.

(8) A horse has been trachea-tubed to artificially assist breathing.

(9) A horse has impaired eyesight in both eyes.

(10) A horse appears on the Iowa veterinarian’s list, notwithstanding a horse appearing on the veterinarian’s list as a “bleeder.” In addition, a horse appearing on any starter’s, stewards’, or paddock judge’s list, or the veterinarian’s list in another jurisdiction, is ineligible unless the horse is removed from the list by the day of the race and approved by the board of stewards to enter.

(11) A horse is barred from racing in any racing jurisdiction.

(12) A horse under four years of age has been injected with bisphosphonates. A horse four years of age or older may only be administered bisphosphonate if the bisphosphonate is Food and Drug Administration-approved for use in the horse and administered in accordance with the label requirements and only for diagnosed cases of navicular disease. If bisphosphonate is administered as permitted by rule, the commission shall be notified within 24 hours of the administration. If
bisphosphonate is detected in sampling or if a horse is administered bisphosphonate, the horse shall be placed on the veterinarian’s list for no less than six months.

(13) A horse has had any intra-articular joint injection within the past six days. For the purpose of counting the number of days a horse is ineligible to run following an intra-articular injection, the day of injection is the first day. The detection of two or more corticosteroids constitutes a stacking violation.

(14) A horse has been administered thyroxine and thyroid modulators/hormones including, but not limited to, those containing T4 (tetraiodothyronine/thyroxine), T3 (triiodothyronine), or combinations thereof. This excludes a horse that has been individually prescribed thyroxine and thyroid modulators/hormones.

b. A horse is ineligible to start a race when:

(1) The horse is not stabled on the premises of the facility by the time designated by the stewards.

(2) The horse’s breed registration certificate is not on file, physically or digitally, with the racing secretary, or horse identifier, except where the racing secretary has submitted the certificate to the breed registry for correction or transfer of ownership. The stewards may, in their discretion, waive the requirement provided the registration certificate is in the possession of another board of stewards, a copy of the registration certificate is on file with the racing secretary, and the horse is otherwise properly identified. For claiming races, if the claimed horse has been approved by the stewards to run without the registration certificate on file in the racing office, then the registration certificate must be provided to the racing office within seven business days for transfer to the new owner before claiming funds will be approved for transfer by the stewards.

(3) The horse is not fully identified by an official tattoo on the inside of the upper lip or digital tattoo or microchip.

(4) A horse is brought to the paddock and is not in the care of and saddled by a currently licensed trainer or assistant trainer unless excused by the stewards.

(5) No current negative Coggins test or current negative equine infectious anemia test certificate is attached to the horse’s registration certificate or otherwise accessible by the commission or racing association.

(6) The stakes or entrance money for the horse has not been paid.

(7) The horse appears on the starter list, stewards’ list, paddock list, or veterinarian’s list.

(8) The horse is a first-time starter not approved by the starter and does not have a minimum of two official workouts for quarter horses or a minimum of three official workouts for thoroughbreds.

(9) Within the past calendar year, the horse has started in a race that has not been reported in a nationally published monthly chartbook, unless, at least 48 hours prior to entry, the owner of the horse provides to the racing secretary performance records which show the place and date of the race, distance, weight carried, amount carried, and the horse’s finishing position and time.

(10) In a stakes race, a horse has been transferred with its engagements, unless prior to the start, the fact of transfer of the horse and its engagements has been filed with the racing secretary.

(11) A horse is subject to a lien which has not been approved by the stewards and filed with the horsemen’s bookkeeper.

(12) A horse is subject to a lease not filed with the stewards.

(13) A horse is not in sound racing condition.

(14) A horse has been blocked with alcohol or injected with any other foreign substance or drug to desensitize the nerves of the leg.

(15) A horse appears on the veterinarian’s list as a “bleeder.”

c. A horse is ineligible to start in a race when:

(1) A thoroughbred has shoes (racing plates) which have toe grabs with a height greater than two millimeters (0.07874 inches), bends, jars, caulk, stickers or any other traction device on the front hooves while racing or training on all racing surfaces.

(2) A quarter horse has front shoes which have toe grabs with a height greater than four millimeters (0.15748 inches), bends, jars, caulk, stickers or any other traction device worn on the front shoes.

10.6(2) Entries.
a. The facility shall provide forms for making entries and declarations with the racing secretary. Entries and declarations shall be in writing, or by telephone or fax subsequently confirmed in writing by the owner, trainer, or licensed designee. When any entrant or nominator claims failure or error in the receipt by a facility of any entry or declaration, the entrant or nominator may be required to submit evidence within a reasonable time of the filing of the entry or the declaration. Individuals who hold a jockey agent license, regardless of other licenses held, shall not be permitted to make entries after a time set by the stewards.

b. Upon the closing of entries the racing secretary shall promptly compile a list of entries and cause it to be conspicuously posted.

c. Coupling. There will be no coupled entries in any race. In races, excluding stakes races, that overfill, trainers must declare preference of runners with identical ownership at time of entry. Same-owner, second-choice horses will be least preferred. A trainer, owner or licensed designee may not enter more than three horses in a race unless the race is split or divided.

d. Split or divided races.
   (1) In the event a race is canceled or declared off, the facility may split any overnight race for which post positions have not been drawn.
   (2) Where an overnight race is split, forming two or more separate races, the racing secretary shall give notice of not less than 15 minutes before such races are closed to grant time for making additional entries to such split race.
   (3) A trainer shall be allowed to enter more than the maximum number of entries allowed under paragraph 10.6(2)“c” if the entries are declared at time of entry as “split entry only” and preference is given by the trainer for the trainer’s first three entries.
   (4) The racing secretary shall split an overnight race so that common ownership, identical ownership, or common trainer will divide as equally as possible between two or more races.

e. Entry weight. Owners, trainers, or any other duly authorized person who enters a horse for a race shall ensure that the entry is correct and accurate as to the weight allowances available and claimed for the horse under the conditions set for the race. After a horse is entered and has been assigned a weight to carry in the race, the assignment of weight shall not be changed except in the case of error and with the approval of the stewards. Weight allowances may be waived with the approval of the stewards.

f. Consecutive days. No horse shall be run twice within four consecutive calendar days. For the purpose of this rule, the day after the start shall count as the first day.

g. Foreign entries. For the purposes of determining eligibility, weight assignments, or allowances for horses imported from a foreign nation, the racing secretary shall take into account the “Pattern Race Book” published jointly by the Irish Turf Club, The Jockey Club of Great Britain, and the Société d’Encouragement.

h. Weight conversions. For the purpose of determining eligibility, weight assignments, or allowances for horses imported from a foreign nation, the racing secretary shall convert metric distances to English measures by reference to the following scale:

<table>
<thead>
<tr>
<th>Metric Measure</th>
<th>Equivalent in English Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 sixteenth</td>
<td>100 meters</td>
</tr>
<tr>
<td>1 furlong</td>
<td>200 meters</td>
</tr>
<tr>
<td>1 mile</td>
<td>1600 meters</td>
</tr>
</tbody>
</table>

i. Name. The “name” of a horse means the name reflected on the certificate of registration, racing permit, or temporary racing permit issued by the breed registry. Imported horses shall have a suffix, enclosed by brackets, added to their registered names showing the country of foaling. This suffix is derived from the international code of suffixes and constitutes part of the horse’s registered name. The registered names and suffixes, where applicable, shall be printed in the official program.

j. Bona fide entry. No person shall enter or attempt to enter a horse for a race unless that entry is a bona fide entry, made with the intention that the horse is to compete in the race for which the horse was entered.
k. Registration certificate to reflect correct ownership. Every breed registry foal certificate filed physically or digitally with the racing secretary to establish the eligibility of a horse to be entered for any race shall accurately reflect the correct and true ownership of the horse. The name of the owner that is printed on the official program for the horse shall conform to the ownership as declared on the certificate of registration or eligibility certificate unless a stable name has been registered with the commission for the owner or ownership.

l. Naming/engaging of riders. Riders must be named at the time of entry. If, at the conclusion of the draw of a race, a trainer does not have a rider, all riders who are available shall be made known to the trainer at that time via telephone or in person by the stewards or their designee. A trainer who does not name a rider prior to the conclusion of the draw of a race, and reasonable attempts have been employed to contact the trainer with no response, shall have an available rider engaged at the facility placed on the horse, determination of which shall be drawn by lot. Riders properly engaged as a first or second call in a race must fulfill their engagements as required in paragraph 10.5(2) “l.”

m. More than one race. No horse may be entered in more than one race, with the exception of stakes races, to be run on the same day on which pari-mutuel wagering is conducted.

n. Iowa-foaled horse. An Iowa-foaled horse shall not be entered in a race limited to Iowa-foaled horses unless the horse is registered with and the papers are either physically or digitally stamped by the department of agriculture and land stewardship. An Iowa-foaled horse would be allowed to run in an open race without the stamp but would be ineligible for Iowa-bred supplement, Iowa-bred breeders awards and Iowa-bred breeders supplement.

10.6(3) Sweepstakes entries.

a. Entry and withdrawal. The entry of a horse in a sweepstakes is a subscription to the sweepstakes. Before the time of closing, any entry or subscription may be altered or withdrawn.

b. Entrance money. Entrance money shall be paid by the nominator to a race. In the event of the death of the horse or a mistake made in the entry of an otherwise eligible horse, the nominator subscriber shall continue to be obligated for any stakes, and the entrance money shall not be returned.

c. Quarter horse scratches and qualifiers unable to participate in finals. If a horse should be scratched from the time trial finals, the horse’s owner will not be eligible for a refund of the fees paid. If a horse that qualified for the final should be unable to enter due to racing soundness, or scratched for any reason other than a positive drug test report or a rule violation, the horse shall be deemed to have earned and the owner will receive last place money. If more than one horse should be unable to enter due to racing soundness, or scratched for any reason other than a positive drug test report or a rule violation, then those purse moneys shall be added together and divided equally among the horse owners.

10.6(4) Closing of entries.

a. Overnight entries. Entries for overnight racing shall be closed at 10 a.m. by the racing secretary, unless a later closing is established by the racing secretary or unless approved by the stewards.

b. Sweepstakes entries. If an hour for closing is designated, entries and declarations for sweepstakes cannot be received thereafter. However, if a time for closing is not designated, entries and declarations may be mailed or faxed until midnight of the day of closing, if they are received in time to comply with all other conditions of the race. In the absence of notice to the contrary, entries and declarations for sweepstakes that close during or on the day preceding a race meeting shall close at the office of the racing secretary in accordance with any requirements the secretary shall make. Closing for sweepstakes not during race meetings shall be at the office of the facility.

c. Exception. Nominations for stakes races shall not close nor shall any eligibility payment be due on a day in which the United States Postal Service is not operating.

10.6(5) Prohibited entries.

a. Entry by disqualified person. An entry made by a disqualified person or the entry of a disqualified horse shall be void. Any money paid for the entry shall be returned, if the disqualification is disclosed at least 45 minutes before post time for the race. Otherwise, the entry money shall be paid to the winner.

b. Limited partner entry prohibited. No person other than a managing partner of a limited partnership or a person authorized by the managing partner may enter a horse owned by that partnership.
c. **Altering entries prohibited.** No alteration shall be made in any entry after the closing of entries, but the stewards may permit the correction of an error in an entry.

d. **Limitation on overnight entries.** If the number of entries to any purse or overnight race is in excess of the number of horses that may be accommodated due to the size of the track, the starters for the race and their post positions shall be determined by lot conducted in public by the racing secretary.

e. **Stake race entry limit.** In a stake race, the number of horses which may compete shall be limited only by the number of horses nominated and entered. In any case, the facility’s lawful race conditions shall govern.

f. **Stewards’ denial of entry.** The stewards may, after notice to the entrant, subscriber, or nominator, deny entry of any horse to a race if the stewards determine the entry to be in violation of these rules or the laws of this state or to be contrary to the interests of the commission in the regulation of pari-mutuel wagering or to public confidence in racing.

**10.6(6) Preferences and eligibles.**

a. **Also eligible.** A list of not more than eight names may be drawn from entries filed in excess of positions available in the race. These names shall be listed as “also eligible” to be used as entries if originally entered horses are withdrawn. Any owner, trainer, or authorized agent who has entered a horse listed as an “also eligible” and who does not wish to start shall file a scratch card with the secretary not later than the scratch time designated for that race. “Also eligibles” shall have preference to scratch.

b. **Preference system.** A system using dates or stars shall be used to determine preference for horses being entered in races. The system being used will be at the option of the racing secretary and approved by the stewards. A preference list will be kept current by the racing secretary and made available to horsemen upon request.

c. **Disputed decision.** When the decision of a race is in dispute, all horses involved in the dispute, with respect to the winner’s credit or earnings, shall be liable to all weights or conditions attached to the winning of that race until a winner has been finally adjudged.

**10.6(7) Post positions.** Post positions shall be determined by the racing secretary publicly and by lot. Post positions shall be drawn from “also eligible” entries at scratch time. In all races, horses drawn into the race from the “also eligible” list shall take the outside post positions, except in straightaway quarter horse racing. In straightaway quarter horse racing, the post position of the scratched horse shall be assigned to the horse “drawing in.” In the event there is more than one scratch, the post positions shall be assigned by lot.

**10.6(8) Scratch; declaring out.**

a. **Notification to the secretary.** No horse shall be considered scratched, declared out, or withdrawn from a race until the owner, agent, or other authorized person has given notice in writing to the racing secretary before the time set by the facility as scratch time. All scratches must be approved by the stewards.

b. **Declaration irrevocable.** Scratching or the declaration of a horse out of an engagement for a race is irrevocable.

c. **Limitation on scratches.** No horse shall be permitted to be scratched from a race if the horses remaining in the race number fewer than seven betting interests, unless the stewards permit a lesser number. When the number of requests to scratch would, if granted, leave a field of fewer than seven, the stewards shall determine by lot which entrants may be scratched and permitted to withdraw from the race. Veterinarian scratches will be preferred and accepted without regard to the number of entries.

d. **Scratch time.** Unless otherwise set by the stewards, scratch time shall be:

(1) Stakes races. Scratch time shall be at least 45 minutes before post time.

(2) Other races. Scratch time shall be set by the stewards prior to the start of the meet.

**10.6(9) Workouts.**

a. **Thoroughbreds, when required.**

(1) No horse shall be allowed to start unless the horse has raced in an official race or has had an approved official timed workout satisfactory to the stewards, and adheres to the following for horses that are not first-time starters:
1. A horse that has not started for a period of 60 days or more shall have had an official workout satisfactory to the stewards prior to the day of the race in which the horse started, and the horse must have had an official workout within the previous 30 days.

2. A horse that has not started for a period of 180 days or more shall have had two official workouts, one of which must have occurred within the previous 30 days prior to the day of the race in which the horse started.

3. A horse that has not started for a period of 365 days or more shall fulfill the following requirements before being allowed to start:
   - The horse must have had three official workouts.
   - One of the three official workouts must have been from the starting gate going at least one-half mile, within 60 days of starting.

   (2) No first-time starter shall be allowed to race unless it has had three official workouts, with one having occurred from the gate within the previous 60 days and is approved to start from the gate by the starter.

b. Quarter horses, when required.

   (1) No horse shall be allowed to start unless the horse has raced in an official race or has had an approved official timed workout satisfactory to the stewards, and adheres to the following for horses that are not first-time starters:

   1. A horse that has not started for a period of 60 days or more shall be ineligible to race until it has had an official workout satisfactory to the stewards prior to the day of the race in which the horse started, and the horse must have had an official workout within the previous 60 days.

   2. A horse that has not started for a period of 180 days or more shall have had two official workouts, one of which must have occurred within the previous 60 days.

   3. A horse that has not started for a period of 365 days or more shall fulfill the following requirements before being allowed to start:

      - The horse must have had two official workouts.
      - One of the two official workouts must have been from the starting gate within 60 days of starting.

   (2) No first-time starter shall be allowed to race unless it has had two official workouts, with one having occurred from the gate within the previous 60 days and is approved to start from the gate by the starter.

c. Counting of days. For the purpose of counting the number of days a horse is ineligible to start, the day after the workout shall be considered the first day.

d. Identification. The timer or the stewards may require licensees to identify a horse in their care being worked. The owner, trainer, or jockey may be required to identify the distance the horse is to be worked and the point on the track where the workout will start.

e. Information dissemination. If the stewards approve the timed workout so as to permit the horse to run in a race, they shall make it mandatory that this information be furnished to the public in advance of the race including, but not limited to, the following means:

   (1) Announcement over the facility’s public address system;
   (2) Transmission on the facility’s message board;
   (3) Posting in designated conspicuous places in the racing enclosure; and
   (4) Exhibit on track TV monitors at certain intervals if the track has closed circuit TV. If the workout is published prior to the race in either the Daily Racing Form or the track program, then it shall not be necessary to make the announcements set forth above.

f. Restrictions. No horse shall be taken onto the track for training or a workout except during hours designated by the facility.

10.6(10) Equipment.

a. Whip and bridle limitations. Unless permitted by the stewards, no whip or substitute for a whip shall exceed one pound or 30 inches and no bridle shall exceed two pounds.

b. Equipment change. No licensee may change the equipment used on a horse from that used in the horse’s last race, unless with permission of the stewards. No licensee may add blinkers or cheek pieces to a horse’s equipment or discontinue their use without the prior approval of the starter. First-time
starters must race with or without blinkers or cheek pieces in accordance with the gate approval card issued by the starter. In the paddock prior to a race, a horse’s tongue may be tied down with clean bandages, clean gauze, or with a tongue strap.

10.6(11) Racing numbers and silks.
   a. **Number display.** Each horse in a race shall carry a conspicuous saddle cloth number corresponding to the official number given that horse on the official program.
   b. **Field horses.** In a combined field of horses, each horse in the field shall carry a separate number.
   c. **Racing silks.** Racing silks shall be turned in to the racing office or jockey room custodian upon arrival to the facility.

(1) All horses running in a race are required to race in an owner’s silk or trainer’s silk.

(2) In the case of a partnership, the horse shall run with a managing partner’s silk or a trainer’s silk if no partnership silk is available.

(3) Under special circumstances, a horse may be permitted by the stewards to run in a house silk.

10.6(12) Valuation of purse money. Rescinded IAB 5/16/01, effective 6/20/01.

10.6(13) Dead heats.
   a. When two horses run a dead heat for first place, all purses or prizes to which first and second horses would have been entitled shall be divided equally between them; and this applies in dividing all purses or prizes whatever the number of horses running a dead heat and whatever places for which the dead heat is run.
   b. In the event of a dead-heat finish for second place and thereafter, when an objection to the winner of the race is sustained, the horses in the dead heat shall be considered to have run a dead heat for first place.
   c. If a prize includes a cup, plate, or other indivisible prize, owners shall draw lots for the prize in the presence of at least two stewards.

10.6(14) and 10.6(15) Rescinded IAB 3/27/19, effective 5/1/19.

10.6(16) Equine infectious anemia (EIA) test.
   a. **Certificate required.** No horse shall be allowed to start or be stabled on the premises of the facility unless a valid negative Coggins test or other laboratory-approved negative EIA test certificate is on file with the racing secretary.
   b. **Trainer responsibility.** In the event of claims, sales, or transfers, it shall be the responsibility of the new trainer to ascertain the validity of the certificate for the horse within 24 hours. If the certificate is either unavailable or invalid, the previous trainer shall be responsible for any reasonable cost associated with obtaining a negative EIA laboratory certificate.
   c. **Positive test reports.** Whenever any owner or trainer is furnished a positive Coggins test or positive EIA test result, the horse shall be removed by the owner or trainer from facility premises or approved farms within 24 hours of actual notice to the owner or trainer of the infection.

10.6(17) Race procedures.
   a. **Full weight.** Each horse shall carry the full weight assigned for that race from the paddock to the starting point, and shall parade past the stewards’ stand, unless excused by the stewards.
   b. **Touching and dismounting prohibited.** After the horses enter the track, jockeys may not dismount or entrust their horse to the care of an attendant unless due to an accident occurring to the jockey, the horse, or the equipment, and then only with the prior consent of the starter. During any delay during which a jockey is permitted to dismount, all other jockeys may dismount and their horses may be attended by others. After the horses enter the track, only the hands of the jockey, the starter, the assistant starter, the commission veterinarian, an outrider on a lead pony, or persons approved by the stewards may touch the horse before the start of the race. If a horse throws its jockey on the way from the paddock to the post, the horse must be returned to the point where the jockey was thrown, where the horse shall be remounted and then proceed over the route of the parade to the post. The horse must carry its assigned weight from paddock to post and from post to finish.
   c. **Jockey injury.** If a jockey is seriously injured on the way to the post, the horse shall be returned to the paddock, a replacement jockey obtained, and both the injured jockey and the replacement jockey will be paid by the owner.
d. Twelve-minute parade limit. After entering the track, all horses shall proceed to the starting post in not more than 12 minutes unless approved by the stewards. After passing the stewards’ stand in parade, the horses may break formation and proceed to the post in any manner. Once at the post, the horses shall be started without unnecessary delay. All horses must participate in the parade carrying their weight and equipment from the paddock to the starting post, and any horse failing to do so may be disqualified by the stewards. No lead pony leading a horse in the parade shall obstruct the public’s view of the horse being led except with permission of the stewards.

e. Striking a horse prohibited. In assisting the start of a race, no person other than the jockey, starter, assistant starter, or veterinarian shall strike a horse or use any other means to assist the start.

f. Loading of horses. Horses will be loaded into the starting gate in numerical order or in any other fair and consistent manner determined by the starter and approved by the stewards.

g. Delays prohibited. No person shall obstruct or delay the movement of a horse to the starting post.

10.6(18) Claiming races.

a. Eligibility.

(1) Registered to race or open claim. No person may file a claim for any horse unless the person:

1. Is a licensed owner at the meeting who either has foal paper(s) registered with the racing secretary’s office or has started a horse at the meeting; or
2. Is a licensed authorized agent, authorized to claim for an owner eligible to claim; or
3. Has a valid open claim certificate. Any person not licensed as an owner, or a licensed authorized agent for the account of the same, or a licensed owner not having foal paper(s) registered with the racing secretary’s office or who has not started a horse at the current meeting may request an open claim certificate from the commission. The person must submit a completed application for a prospective owner’s license to the commission. The applicant must have the name of the trainer licensed by the commission who will be responsible for the claimed horse. A nonrefundable fee must accompany the application along with any financial information requested by the commission. The names of the prospective owners shall be prominently displayed in the offices of the commission and the racing secretary. The application will be processed by the commission; and when the open claim certificate is exercised, an owner’s license will be issued; or

4. Is not a family member related within the second degree of affinity or consanguinity to the person or ownership entity who owns the horse. For the purpose of determining whether an ownership entity is excluded from claiming a horse or having a horse claimed, a family member within the second degree of affinity or consanguinity shall be defined as a parent, child, grandparent, grandchild, sibling, or in-law who owns or controls 5 percent or more of said entity.

(2) Number of claims.

1. An ownership entity (sole owner, partnership, limited liability partnership, racing stable, corporation, limited liability corporation, or owner/trainer acting as an owner) shall not claim more than one horse in a race. Any commonality of ownership prohibits more than one claim in a race by any of those entities.

2. An authorized agent or trainer acting on behalf of an ownership entity shall not submit more than two claims in a race with two separate ownership interests.

3. A trainer shall not receive more than two horses from any claiming race.

b. Procedure for claiming. To make a claim for a horse, an eligible person shall:

(1) Deposit to the person’s account with the horsemen’s bookkeeper the full claiming price and applicable taxes as established by the racing secretary’s conditions.

(2) File in a locked claim box maintained for that purpose by the stewards the claim filled out completely in writing and with sufficient accuracy to identify the claim on forms provided by the facility at least ten minutes before the time of the race.

c. Claim box.

(1) The claim box shall be approved by the commission and kept locked until ten minutes prior to the start of the race, when it shall be presented to the stewards or their representatives for opening and publication of the claims.
(2) The claim box shall also include a time clock which automatically stamps the time on the claim envelope prior to its being dropped in the box.

(3) No official of a facility shall give any information as to the filing of claims therein until after the race has been run.

d. **Claim irrevocable.** After a claim has been filed in the claim box, it shall not be withdrawn.

e. **Multiple claims on single horses.** If more than one claim is filed on a horse, the successful claim shall be determined by lot conducted by the stewards or their representatives.

f. **Successful claims; later races.**

(1) Sale or transfer. No successful claimant may sell or transfer a horse, except in a claiming race, for a period of 30 days from the date of claim.

(2) Eligibility price. A horse claimed may not start in a race in which the claiming price is less than the amount for which it was claimed. After 30 days, a horse may start for any claiming price. This provision shall not apply to starter handicaps in which the weight to be carried is assigned by the handicapper or for starter allowances. No right, title, or interest for any claimed horse shall be sold or transferred except in a claiming race for a period of 30 days following the date of claiming. The day claimed shall not count, but the following calendar day shall be the first day.

(3) Racing elsewhere. A horse that was claimed under these rules may not participate at a race meeting other than that at which it was claimed until the end of the meeting, except with written permission of the stewards. This limitation shall not apply to stakes races.

(4) Same management. A claimed horse shall not remain in the same stable or under the control or management of its former owner.

(5) When a horse is claimed out of a claiming race, the horse’s engagements are included.

g. **Transfer after claim.**

(1) Forms. Upon a successful claim, the stewards shall issue in triplicate, upon forms approved by the commission, an authorization of transfer of the horse from the original owner to the claimant. Copies of the transfer authorization shall be forwarded to and maintained by the commission, the stewards, and the racing secretary.

(2) No claimed horse shall be delivered by the original owner to the successful claimant until the claim is approved by the stewards. Every horse claimed shall race for the account of the original owner, but title to the horse shall be transferred to the claimant from the time the horse becomes a starter; and said successful claimant becomes the owner of the horse unless the claim is voided by the stewards under the provisions of this paragraph. Only a horse which is officially a starter in the race may be claimed. A subsequent disqualification of the horse by order of the stewards shall have no effect upon the claim.

(3) The stewards shall void the claim and return the horse to the original owner if:

1. The claimed horse suffers a fatality during the running of the race, dies, or is euthanized before leaving the track.

2. The commission veterinarian, during the veterinarian’s observation of the horse coming off the track or upon its arrival to the test barn, determines the horse will be placed on the veterinarian’s list as lame. The stewards shall not void the claim if, prior to the race in which the horse is claimed, the claimant elects to claim the horse regardless of whether the commission veterinarian determines the horse will be placed on the veterinarian’s list as lame. An election made under this rule shall be entered on the claim form.

3. The race is called off, canceled, or declared no contest.

(4) **Other-jurisdiction rules.** The commission will recognize and be governed by the rules of any other jurisdiction regulating title and claiming races when ownership of a horse is transferred or affected by a claiming race conducted in that other jurisdiction.

(5) **Determination of sex and age.** The claimant, within 48 hours, shall be responsible for determining the age and sex of the horse claimed notwithstanding any designation of sex and age appearing in the program or in any racing publication. Horses that are spayed or gelded shall be properly identified as such in the program. If the claimant finds that a mare is in fact spayed or that the status of a male horse is inaccurate as stated by the program, the claimant may return the horse for full refund of the claiming price.
(6) Affidavit by claimant. The stewards may, if they determine it necessary, require any claimant to execute a sworn statement that the claimant is claiming the horse for the claimant’s own account or as an authorized agent for a principal and not for any other person.

(7) Delivery required. No person shall refuse to deliver a properly claimed horse to the successful claimant. The claimed horse shall be disqualified from entering any race until delivery is made to the claimant.

(8) Obstructing the rules of claiming. No person or licensee shall obstruct or interfere with another person or licensee in claiming any horse, enter into any agreement with another to subvert or defeat the object and procedures of a claiming race, or attempt to prevent any horse entered from being claimed.

h. Elimination of stable. An owner whose stable has been eliminated by claiming may claim for the remainder of the meeting at which eliminated or for 30 racing days, whichever is longer. With the permission of the stewards, stables eliminated by fire or other casualty may claim under this rule.

i. Disallowance of claim. The stewards may cancel and disallow any claim within 24 hours after a race if they determine that a claim was made upon the basis of a lease, sale, or entry of a horse made for the purpose of fraudulently obtaining the privilege of making a claim; or if an eligible claimant improperly obtains information or access to horses by being present in the paddock during the claiming race unless the claimant has a horse in that claiming race, as determined solely by the stewards. In the event of a disallowance, the stewards may further order the return of a horse to its original owner and the return of all claim monies. To disallow a claim, it must be shown by clear and convincing evidence that there is a direct and substantial connection between the eligible claimant and the owner or owner’s trainer of the horse to be claimed wherein the eligible claimant improperly gained information about the horse to be claimed and the information was otherwise unavailable to other licensed owners or ownership entities. The mere appearance of impropriety is not a basis for disallowing a claim.

j. Protest of claim. A protest to any claim must be filed with the stewards before noon of the day following the date of the race in which the horse was claimed. Nonracing days are excluded from this rule. Should the stewards void a claim for reasons other than failure to follow the procedure for claiming, when there are multiple claims on a singular horse, said claim shall not be voided until after the determination by lot.

k. Waived claiming rule. At the time of entry into claiming races, the owner, trainer, or any authorized agent may opt to declare a horse ineligible to be claimed provided:

(1) The horse has not been an official starter at any racetrack for a minimum of 120 days since the horse’s last race as an official starter (at time of race);
(2) The horse’s last race as an official starter was one in which the horse was eligible to be claimed;
(3) The horse is entered for a claiming price equal to or greater than the claiming price at which the horse last started as an official starter;
(4) Failure of declaration of ineligibility at time of entry may not be remedied; and
(5) Ineligibility to be claimed shall apply only to the horse’s first start as an official starter following each such 120-day or longer layoff.

l. Eligibility of in-foal filly or mare. An in-foal filly or mare shall be eligible to be entered into a claiming race only if the following conditions are fulfilled:

(1) Full disclosure of such fact is on file with the racing secretary and such information is posted in the secretary’s office;
(2) The stallion service certificate has been deposited with the racing secretary’s office before the horse runs;
(3) All payments due for the service in question and for any live progeny resulting from that service are paid in full;
(4) The release of the stallion service certificate to the successful claimant at the time of claim is guaranteed; and
(5) The cutoff for racing is 150 days of gestation.

10.6(19) Quarter horse time trial races.

a. Except in cases where the starting gate physically restricts the number of horses starting, each time trial shall consist of no more than ten horses.
b. The time trials shall be raced under the same conditions as the finals. If the time trials are conducted on the same day, the horses with the ten fastest times shall qualify to participate in the finals. If the time trials are conducted on two days, the horses with the five fastest times on the first day and the horses with the five fastest times on the second day shall qualify to participate in the finals. When time trials are conducted on two days, the racing office should make every attempt to split owners with more than one entry into separate days so that the owner’s horses have a chance at all ten qualifying positions.

c. If the facility’s starting gate has fewer than ten stalls, then the maximum number of qualifiers will correspond to the maximum number of starting gate post positions.

d. If only 11 or 12 horses are entered to run in time trials from a gate with 12 or more stalls, the facility may choose to run finals only. If 11 or 12 horses participate in the finals, only the first 10 finishers will receive purse money.

e. In the time trials, horses shall qualify on the basis of time and order of finish. The times of the horses in the time trial will be determined to the limit of the timer. The only exception is when two or more horses have the same time in the same trial heat. Then the order of finish shall also determine the preference in the horses’ qualifying for the finals. Should two or more horses in different time trials have the same qualifying time to the limit of the timer for the final qualifying position(s), then a draw by public lot shall be conducted as directed by the stewards. Under no circumstances should stewards or placing judges attempt to determine horses’ qualifying times in separate trials beyond the limit of the timer by comparing or enlarging a photo finish picture.

f. Except in the case of disqualification, under no circumstances shall a horse qualify ahead of a horse that finished ahead of that horse in the official order of finish in a time trial.

g. Should a horse be disqualified for interference during the running of a time trial, it shall receive the time of the horse it is immediately placed behind plus one hundredth of a second, or the maximum accuracy of the electronic timing device. No adjustments will be made in the times recorded in the time trials to account for headwind, tailwind, and off track. In the case where a horse is disqualified for interference with another horse causing loss of rider or the horse not to finish the race, the disqualified horse may be given no time plus one hundredth of a second, or the maximum accuracy of the electronic timing device.

h. Should a malfunction occur with an electronic timer on any time trial, finalists from that time trial will then be determined by official hand times operated by three official and disinterested persons. The average of the three hand times will be utilized for the winning time, unless one of the hand times is clearly incorrect. In such cases, the average of the two accurate hand times will be utilized for the winning time. The other horses in that race will be given times according to the order and margins of finish with the aid of the photo finish strip, if available.

i. When there is a malfunction of the timer during the time trials, but the timer operates correctly in other time trials, under no circumstances should the accurate electronic times be discarded and the average of the hand times used for all time trials. (The only exemption may be if the conditions of the stakes race so state, or state that, in the case of a malfunction of the timer in trials, finalists will be selected by order of finish in the trials.)

j. In the case where the accuracy of the electronic timer or the average of the hand times is questioned, the video of a time trial may be used to estimate the winning time by counting the number of video frames in the race from the moment the starting gate stall doors are fully open parallel to the racing track. This method is accurate to approximately .03 seconds. Should the case arise where the timer malfunctions and there are no hand times, the stewards have the option to select qualifiers based on the video time.

k. Should there be a malfunction of the starting gate and one or more stall doors not open or open after the exact moment when the starter dispatches the field, the stewards may declare the horses in stalls with malfunctioning doors to be nonstarters. The stewards should have the option, however, to allow any horse whose stall door opened late but still ran a time fast enough to qualify to be declared a starter for qualifying purposes. In the case where a horse breaks through the stall door or the stall door opens prior to the exact moment the starter dispatches the field, the horse must be declared a nonstarter and all entry fees refunded. In the case where one or more, but not all, stall doors open at the exact moment the
starter dispatches the field, these horses should be considered starters for qualifying purposes, and placed according to their electronic times. If the electronic timer malfunctions in this instance, the average of the hand times, or, if not available, the video time, should be utilized for the horses that were declared starters.

l. There will be an also eligible list only in the case of a disqualification for a positive drug test report, ineligibility of the horse according to the conditions of the race, or a disqualification by the stewards for a rule violation. Should a horse be disqualified for a positive drug test report, ineligibility of the horse according to the conditions of the race, or a disqualification by the stewards for a rule violation, the next fastest qualifier shall assume the disqualified horse’s position in the finals.

m. If a horse should be scratched from the time trials, the horse’s owner will not be eligible for a refund of the fees paid, and that horse will not be allowed to enter the finals under any circumstances. If a horse that qualified for the finals is unable to enter due to racing soundness or is scratched for any reason other than a positive drug test report or a rule violation, the horse shall be deemed to have earned, and the owner will receive, last place purse money. If more than one horse if scratched from the finals for any reason other than a positive drug test report or a rule violation, then the purse moneys shall be added together and divided equally among the owners.

[ARC 7757B, IAB 5/6/09, effective 6/10/09; ARC 9987B, IAB 2/8/12, effective 3/14/12; ARC 1876C, IAB 2/18/15, effective 3/25/15; ARC 2468C, IAB 3/30/16, effective 5/4/16; ARC 2927C, IAB 2/1/17, effective 3/8/17; ARC 3608C, IAB 1/31/18, effective 3/7/18; ARC 4378C, IAB 3/27/19, effective 5/1/19; ARC 4954C, IAB 2/26/20, effective 4/1/20; ARC 5423C, IAB 2/10/21, effective 3/17/21; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—10.7(99D) Medication and administration, sample collection, chemists, and practicing veterinarian.

10.7(1) Medication and administration.

a. No horse, while participating in a race, shall carry in its body any medication, drug, foreign substance, or metabolic derivative thereof, which is a narcotic or which could serve as a local anesthetic or tranquilizer or which could stimulate or depress the circulatory, respiratory, or central nervous system of a horse, thereby affecting its speed.

b. Also prohibited are any drugs or foreign substances that might mask or screen the presence of the prohibited drugs, or prevent or delay testing procedures.

c. Proof of detection by the commission chemist of the presence of a medication, drug, foreign substance, or metabolic derivative thereof, prohibited by paragraph 10.7(1) “a” or “b,” in a saliva, urine, blood, or hair sample duly taken under the supervision of the commission veterinarian from a horse immediately prior to or promptly after running in a race shall be prima facie evidence that the horse was administered, with the intent that it would carry or that it did carry in its body while running in a race, a prohibited medication, drug, or foreign substance in violation of this rule.

d. Administration or possession of drugs.

(1) No person shall administer, cause to be administered, or participate or attempt to participate in any way in the administration of any medication, drug, foreign substance, or treatment by any route to a horse registered for racing on the day of the race prior to the race in which the horse is entered.

(2) No person except a veterinarian shall have in the person’s possession any prescription drug. Prescriptions shall be written or dispensed or both only by duly licensed veterinarians in the context of a valid veterinarian-client-patient relationship and based upon a specific medical diagnosis. However, a person may possess a noninjectable prescription drug for animal use if:

1. The person actually possesses, within the racetrack enclosure, documentary evidence that a prescription has been issued to said person for such a prescription drug.

2. The prescription contains a specific dosage for the particular horse or horses to be treated by the prescription drug.

3. The horse or horses named in the prescription are then in said person’s care within the racetrack enclosure.

(3) No veterinarian or any other person shall have in their possession or administer to any horse within any racetrack enclosure any chemical or biological substance which:
1. Has not been approved for use on equines by the Food and Drug Administration pursuant to the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. Section 301 et seq., and implementing regulations, without the prior written approval from a commission veterinarian, after consulting with the board of stewards.

2. Is on any of the schedules of controlled substances as prepared by the Attorney General of the United States pursuant to 21 U.S.C. Sections 811 and 812, without the prior written approval from a commission veterinarian after consultation with the board of stewards. The commission veterinarian shall not give such approval unless the person seeking the approval can produce evidence in recognized veterinary journals or by recognized equine experts that such chemical substance has a beneficial therapeutic use in horses.

(4) No veterinarian or any other person shall dispense, sell, or furnish any feed supplement, tonic, veterinary preparation, medication, or any other substance that can be administered or applied to a horse by any route, to any person within the premises of the facility unless it is labeled in conformance with this rule or is otherwise labeled as required by law. A substance does not comply with this rule if the label is missing, illegible, tampered with, or altered.

1. Labels for all substances must include the name of the substance dispensed; the name of the dispensing person; the name of the horse or horses for which the substance is dispensed; the purpose for which the substance is dispensed; the dispensing veterinarian’s recommendations for withdrawal before racing, if applicable; and the name of the person to whom dispensed.

2. Labels for medications or other prescribed substances must include all items from subparagraph 10.7(1)“d”(1) and, in addition, the date the prescription was filled; the name of the trainer or owner of the horse for whom the product was dispensed; dose; dosage; route of administration; duration of treatment of the prescribed product; and expiration date.

(5) No person shall have in the person’s possession or in areas under said person’s responsibility on facility premises any feed supplement, tonic, veterinary preparation, medication, or any substance that can be administered or applied to a horse by any route unless it complies with the labeling requirements in 10.7(1)“d”(4).

6) No person shall possess, use, or distribute a compounded medication within the premises of the facility if there is a Food and Drug Administration-approved equivalent of that substance available for purchase unless approved by the commission veterinarian. Veterinary drugs shall be compounded in accordance with all applicable state and federal laws. Compounded medication shall be dispensed only by prescription issued by a licensed veterinarian to meet the medical needs of a specific horse and for use only in that specific horse. All compound medications must be labeled as required by law.

(7) Any drug or medication for horses which is used or kept on facility premises and which requires a prescription must be prescribed in compliance with applicable state law and regulations by a veterinarian who is duly licensed by the commission, the Iowa veterinary board, or the state in which the horse was located at the time of the examination, diagnosis and prescription.

e. Any person found to have administered, or caused, participated in, or attempted to participate in any way in the administration of a medication, drug, or foreign substance that caused or could have caused a violation of this rule shall be subject to disciplinary action.

f. The owner, trainer, groom, or any other person having charge, custody, or care of the horse is obligated to protect the horse properly and guard it against the administration or attempted administration of a substance in violation of this rule. If the stewards find that any person has failed to show proper protection and guarding of the horse, or if the stewards find that any owner, lessee, or trainer is guilty of negligence, they shall impose discipline and take other action they deem proper under any of the rules including referral to the commission.

g. In order for a horse to be placed on the bleeder list in Iowa through reciprocity, that horse must be certified as a bleeder in another state or jurisdiction. A certified bleeder is a horse that has raced with furosemide in another state or jurisdiction in compliance with the laws governing furosemide in that state or jurisdiction.

h. The possession or use of blood doping agents, including but not limited to those listed below, on the premises of a facility under the jurisdiction of the commission is forbidden:
(1) Erythropoietin;
(2) Darbepoetin;
(3) Oxyglobin®; and
(4) Hemopure®.

i. The use of extracorporeal shock wave therapy or radial pulse wave therapy shall not be permitted unless the following conditions are met:

(1) Any treated horse shall not be permitted to race for a minimum of ten days following treatment;
(2) The use of extracorporeal shock wave therapy or radial pulse wave therapy machines shall be limited to veterinarians licensed to practice by the commission;
(3) Any extracorporeal shock wave therapy or radial pulse wave therapy machines on the association grounds must be registered with and approved by the commission or its designee before use;

(4) All extracorporeal shock wave therapy or radial pulse wave therapy treatments must be reported to the official veterinarian on the prescribed form not later than the time prescribed by the official veterinarian.

j. The use of a nasogastric tube (a tube longer than six inches) for the administration of any substance within 24 hours prior to the post time of the race in which the horse is entered is prohibited without the prior permission of the official veterinarian or designee.

k. Non-steroidal anti-inflammatory drugs (NSAIDs).

(1) The use of one of three approved NSAIDs shall be permitted under the following conditions:

1. The level does not exceed the following permitted serum or plasma threshold concentrations which are consistent with administration by a single intravenous injection at least 24 hours before the post time for the race in which the horse is entered:
   - Phenylbutazone (or its metabolite oxyphenylbutazone) – 2 micrograms per milliliter;
   - Flunixin – 20 nanograms per milliliter;
   - Ketoprofen – 2 nanograms per milliliter.

2. The NSAIDs listed in numbered paragraph “1” or any other NSAIDs are prohibited from being administered within the 24 hours before post time for the race in which the horse is entered.

3. The presence of more than one of the three approved NSAIDs, with the exception of phenylbutazone in a concentration below 0.3 micrograms per milliliter, flunixin in a concentration below 3 nanograms per milliliter, or ketoprofen in a concentration below 1 nanogram per milliliter of serum or plasma, or the presence of any unapproved NSAID in the post-race serum or plasma sample is not permitted. The use of all but one of the approved NSAIDs shall be discontinued at least 48 hours before the post time for the race in which the horse is entered.

(2) Any horse to which an NSAID has been administered shall be subject to having a blood sample(s), urine sample(s) or both taken at the direction of the official veterinarian to determine the quantitative NSAID level(s) or the presence of other drugs which may be present in the blood or urine sample(s).

10.7(2) Sample collection.

a. Under the supervision of the commission veterinarian, urine, blood, hair, and other specimens shall be taken and tested from any horse that the stewards, commission veterinarian, or the commission’s representatives may designate. The samples shall be collected by the commission veterinarian or other person or persons the commission may designate. Each sample shall be marked or numbered and bear information essential to its proper analysis; but the identity of the horse from which the sample was taken or the identity of its owners or trainer shall not be revealed to the official chemist or the staff of the chemist. The container of each sample shall be sealed as soon as the sample is placed therein.

b. A facility shall have a detention barn under the supervision of the commission veterinarian for the purpose of collecting body fluid samples for any tests required by the commission. The building, location, arrangement, furnishings, and facilities including refrigeration and hot and cold running water must be approved by the commission. A security guard, approved by the commission, must be in attendance at each access to the detention barn during the hours designated by the commission.
c. No unauthorized person shall be admitted at any time to the building or the area utilized for the purpose of collecting the required body fluid samples or the area designated for the retention of horses pending the obtaining of body fluid samples.

d. During the taking of samples from a horse, the owner, responsible trainer, or a representative designated by the owner or trainer may be present and witness the taking of the sample and so signify in writing. Failure to be present and witness the collection of the samples constitutes a waiver by the owner, trainer, or representative of any objections to the source and documentation of the sample.

e. The commission veterinarian, the board of stewards, agents of the division of criminal investigation, or commission representative may take samples of any medicine or other materials suspected of containing improper medication, drugs, or other substance which could affect the racing condition of a horse in a race, which may be found in barns or elsewhere on facility premises or in the possession of any person connected with racing, and the same shall be delivered to the official chemist for analysis.

f. Nothing in these rules shall be construed to prevent:

   1. Any horse in any race from being subjected by the order of a steward or the commission veterinarian to tests of body fluid samples for the purpose of determining the presence of any foreign substance.

   2. The state steward or the commission veterinarian from authorizing the splitting of any sample.

   3. The commission or commission veterinarian from requiring body fluid samples to be stored in a frozen state for future analysis.

   g. Before leaving the racing surface, the trainer shall ascertain the testing status of the horse under the trainer’s care from the commission veterinarian or designated detention barn representative.

10.7(3) Chemists.

a. Tests are to be under the supervision of the commission, which shall employ one or more chemists or contract with one or more qualified chemical laboratories to determine by chemical testing and analysis of body fluid samples whether a foreign substance, medication, drug or metabolic derivative thereof is present.

b. All body fluid samples taken by or under direction of the commission veterinarian or commission representative shall be delivered to the laboratory of the official chemist for analysis.

c. The commission chemist shall be responsible for safeguarding and testing each sample delivered to the laboratory by the commission veterinarian.

d. The commission chemist shall conduct individual tests on each sample, screening them for prohibited substances, and conducting other tests to detect and identify any suspected prohibited substance or metabolic derivative thereof with specificity. Pooling of samples shall be permitted only with the knowledge and approval of the commission.

e. Upon the finding of a test negative for prohibited substances, the remaining portions of the sample may be discarded. Upon the finding of a test suspicious or positive for prohibited substances, the test shall be reconfirmed and the remaining portion, if available, of the sample shall be preserved and protected for one year following close of meet.

f. The commission chemist shall submit to the commission a written report as to each sample tested, indicating by sample tag identification number, whether the sample was tested negative or positive for prohibited substances. The commission chemist shall report test findings to no person other than the administrator or commission representative, with the exception of notifying the state stewards of all positive tests.

   1. In the event the commission chemist should find a sample suspicious for a prohibited medication, additional time for test analysis and confirmation may be requested.

   2. In reporting to the state steward a finding of a test positive for a prohibited substance, the commission chemist shall present documentary or demonstrative evidence acceptable in the scientific community and admissible in court in support of the professional opinion as to the positive finding.

   i. No action shall be taken by the state steward until an official report signed by the chemist properly identifying the medication, drug, or other substance as well as the horse from which the sample was taken has been received.
f. The cost of the testing and analysis shall be paid by the commission to the official chemist. The commission shall then be reimbursed by each facility on a per-sample basis so that each facility shall bear only its proportion of the total cost of testing and analysis. The commission may first receive payment from funds provided in Iowa Code chapter 99D, if available.

10.7(4) Practicing veterinarian.

a. Prohibited acts.
   (1) Ownership. A licensed veterinarian practicing at any meeting is prohibited from possessing any ownership, directly or indirectly, in any racing animal racing during the meeting.
   (2) Wagering. Veterinarians licensed by the commission as veterinarians are prohibited from placing any wager of money or other thing of value directly or indirectly on the outcome of any race conducted at the meeting at which the veterinarian is furnishing professional service.
   (3) Prohibition of furnishing injectable materials. No veterinarian shall within the facility premises furnish, sell, or loan any hypodermic syringe, needle, or other injection device, or any drug, narcotic, or prohibited substance to any other person unless with written permission of the stewards.
   b. The use of other than single-use disposable syringes and infusion tubes on facility premises is prohibited. Whenever a veterinarian has used a hypodermic needle or syringe, the veterinarian shall destroy the needle and syringe and remove the needle and syringe from the facility premises.
   c. Veterinarians must submit daily to the commission veterinarian on a prescribed form a report of all procedures, medications and other substances which the veterinarian prescribed, administered, or dispensed for racing animals registered at the current race meeting as provided in Iowa Code section 99D.25(10). Reports shall be submitted not later than noon the day following the treatments’ being reported. Reports shall include the racing animal, trainer, procedure, medication or other substance, dosage or quantity, route of administration, date and time administered, dispensed, or prescribed. Reports shall be signed by the practicing veterinarian.
   d. Practicing veterinarians shall not have contact with an entered horse within 24 hours before the scheduled post time of the race in which the horse is scheduled to compete unless approved by the state veterinarian except in the case of emergency. In case of an emergency, the state veterinarian must be notified prior to entering the stall. A documented attempt to contact the state veterinarian prior to entering the stall shall comply with the notification requirements pursuant to this rule. Any unauthorized contact may result in the horse’s being scratched from the race in which it was scheduled to compete and may result in further disciplinary action by the stewards.
   e. Each veterinarian shall report immediately to the commission veterinarian any illness presenting unusual or unknown symptoms in a racing animal entrusted into the veterinarian’s care.
   f. Practicing veterinarians may have employees licensed as veterinary assistants working under their direct supervision. Activities of these employees shall not include direct treatment or diagnosis of any animal. The practicing veterinarian must be present if a veterinary assistant is to have access to injection devices or injectables. The practicing veterinarian shall assume all responsibility for a veterinary assistant.
   g. Equine dentistry is considered a function of veterinary practice by the Iowa veterinary practice Act. Any dental procedures performed at the facility must be performed by a licensed veterinarian or a licensed veterinary assistant.

These rules are intended to implement Iowa Code chapter 99D.

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0 Two or more ARCs
1 Effective date (1/4/89) of 10.4(14), 10.4(19) “b” and 10.6 delayed by the Administrative Rules Review Committee until January 9, 1989, at its December 13, 1988, meeting; effective date of January 4, 1989, delayed seventy days by this Committee at its January 5, 1989, meeting. Effective date delay lifted by the Committee at its February 13, 1989, meeting.
2 Effective date of 10.6(2)“g”(3) second paragraph delayed until adjournment of the 1997 Session of the General Assembly by the Administrative Rules Review Committee at its meeting held October 8, 1996.
3 June 19, 2013, effective date of 10.4(4)“a”(6) and 10.4(4)“d”(3)“1” [Items 17 and 18 of ARC 0734C, respectively] delayed until the adjournment of the 2014 General Assembly by the Administrative Rules Review Committee at its meeting held June 11, 2013.
CHAPTER 11
GAMBLING GAMES

491—11.1(99F) Definitions.

“Administrator” means the administrator of the racing and gaming commission or the administrator’s designee.

“Coin” means tokens, nickels, and quarters of legal tender.

“Commission” means the racing and gaming commission.

“Currency” means any coin or paper money of legal tender and paper forms of cashless wagering.

“Discount rate” means either the current prime rate as published in the Wall Street Journal or a blended rate computed by obtaining quotes for the purchase of qualified investments at least three times per month.

“Distributor’s license” means a license issued by the administrator to any entity that sells, leases, or otherwise distributes gambling games or implements of gambling to any entity licensed to conduct gambling games pursuant to Iowa Code chapter 99F.

“Facility” means an entity licensed by the commission to conduct gaming operations in Iowa.

“Facility grounds” means all real property utilized by the facility in the conduct of its gaming activity, including the grandstand, concession stands, offices, parking lots, and any other areas under the jurisdiction of the commission.

“Gambling game” means any game of chance approved by the commission for wagering, including, but not limited to, gambling games authorized by this chapter.

“Government sponsored enterprise debt instrument” means a negotiable, senior, noncallable debt obligation issued by an agency of the United States or an entity sponsored by an agency of the United States that on the date of funding possesses an issuer credit rating equivalent to the highest investment grade rating given by Standard & Poor’s or Moody’s Investment Services.

“Implement of gambling” means any device or object determined by the administrator to directly or indirectly influence the outcome of a gambling game; collect wagering information while directly connected to a gambling game; facilitate the operation of an electronic wagering account as defined by rule 491—12.1(99F); or be integral to the conduct of a commission-authorized gambling game.

“Independent financial institution” means a bank approved to do business in the state of Iowa or an insurance company admitted to transact insurance in the state of Iowa with an A.M. Best insurance rating of “A” or other equivalent rating.

“Manufacturer’s license” means a license issued by the administrator to any entity that assembles, fabricates, produces, or otherwise constructs a gambling game or implement of gambling used in the conduct of gambling games pursuant to Iowa Code chapter 99F.

“Present value” means the current value of a future payment or series of payments, discounted using the discount rate.

“Qualified investment” means an Iowa state issued debt instrument, a United States Treasury debt instrument or a government sponsored enterprise debt obligation.

“Reserve” means an account with an independent financial institution or brokerage firm consisting of cash, qualified investments, or other secure funding method approved by the administrator used to satisfy periodic payments of prizes.

“Slot machine” means a mechanical or electronic gambling game device into which a player may deposit currency or forms of cashless wagering and from which certain numbers of credits are awarded when a particular configuration of symbols or events is displayed on the machine.

“Storage media” means EPROMs, ROMs, flash-ROMs, DVDs, CD-ROMs, compact flashes, hard drives and any other types of program storage device.

491—11.2(99F) Conduct of all gambling games.

11.2(1) Commission policy. It is the policy of the commission to require that all facilities conduct gambling games in a manner suitable to protect the public health, safety, morals, good order, and general
welfare of the state. Responsibility for the employment and maintenance of suitable methods of operation rests with the facility. Willful or persistent use or toleration of methods of operation deemed unsuitable in the sole discretion of the commission will constitute grounds for disciplinary action, up to and including license revocation.

11.2(2) Activities prohibited. A facility is expressly prohibited from the following activities:

a. Failing to conduct advertising and public relations activities in accordance with decency, dignity, good taste, and honesty.

b. Permitting persons who are visibly intoxicated to participate in gaming activity.

c. Failing to comply with or make provision for compliance with all federal, state, and local laws and rules pertaining to the operation of a facility including payment of license fees, withholding payroll taxes, and violations of alcoholic beverage laws or regulations.

d. Possessing, or permitting to remain in or upon any facility grounds, any associated gambling equipment which may have in any manner been marked, tampered with, or otherwise placed in a condition or operated in a manner which might affect the game and its payouts.

e. Permitting, if the facility was aware of, or should have been aware of, any cheating.

f. Possessing or permitting to remain in or upon any facility grounds, if the facility was aware of, or should have been aware of, any cheating device whatsoever; or conducting, carrying on, operating, or dealing any cheating or thieving game or device on the grounds.

g. Possessing or permitting to remain in or upon any facility grounds, if the facility was aware of, or should have been aware of, any gambling device which tends to alter the normal random selection of criteria which determines the results of the game or deceives the public in any way.

h. Failing to conduct gaming operations in accordance with proper standards of custom, decorum, and decency; or permitting any type of conduct that reflects negatively on the state or acts as a detriment to the gaming industry.

i. Denying a commissioner or commission representative, upon proper and lawful demand, information or access to inspect any portion of the gaming operation.

11.2(3) Gambling aids. No person shall use, or possess with the intent to use, any calculator, computer, or other electronic, electrical, or mechanical device that:

a. Assists in projecting the outcome of a game.

b. Keeps track of cards that have been dealt.

c. Keeps track of changing probabilities.

11.2(4) Wagers. Wagers may only be made:

a. By a person present at a facility.

b. In the form of chips, coins, or other cashless wagering.

c. By persons 21 years of age or older.

[ARC 8029B, IAB 8/12/09, effective 9/16/09]

491—11.3(99F) Gambling games approved by the commission. The commission may approve a gambling game by administrative rule, resolution, or motion.

491—11.4(99F) Approval for distribution, operation, or movement of gambling games and implements of gambling.

11.4(1) Approval. Prior to distribution, a distributor shall request that the administrator inspect, investigate, and approve a gambling game or implement of gambling for compliance with commission rules and the standards required by a commission-designated independent testing facility. The distributor, at its own expense, must provide the administrator and independent testing facility with information and product sufficient to determine the integrity and security of the product, including independent testing conducted by a designated testing facility. The commission shall designate up to two independent testing facilities for the purpose of certifying electronic gambling games or implements of gambling.

11.4(2) Trial period. Prior to or after commission approval and after completing a review of a proposed gambling game, the administrator may require a trial period of up to 180 days to test the
gambling game in a facility. During the trial period, minor changes in the operation or design of the gambling game may be made with prior approval of the administrator. During the trial period, a gambling game distributor shall not be entitled to receive revenue of any kind from the operation of that gambling game.

11.4(3) Gambling game submissions. Prior to conducting a commission-authorized gambling game or for a trial period, a facility shall submit proposals for game rules, procedures, wagers, shuffling procedures, dealing procedures, cutting procedures, and payout odds. The gambling game submission, or requests for modification to an approved submission, shall be in writing and approved by the administrator or a commission representative prior to implementation.

11.4(4) Public notice. The public shall have access to the rules of play, payout schedules, and permitted wagering amounts. Signage shall be conspicuously posted on the gaming floor to direct patrons to the gaming floor area where this information can be viewed. All participants in all licensed gambling games are required to know and follow the rules of play. No forms of cheating shall be permitted.

11.4(5) Operation. Each gambling game shall operate and play in accordance with the representation made to the commission and the public at all times. The administrator or commission representative may order the withdrawal of any gambling game suspected of malfunction or misrepresentation, until all deficiencies are corrected. The administrator or commission representative may require additional testing by an independent testing facility at the expense of the licensee or distributor for the purpose of complying with this subrule.

11.4(6) Distribution, movement and disposal.
   a. Except as otherwise authorized by the administrator, written notice, submitted by facsimile or electronic mail, shall be filed with the commission when a gambling game or implement of gambling is shipped, moved or disposed of. The written notice shall be provided as follows:
   (1) At least five calendar days prior to arrival of a gambling game or implement of gambling at a licensed facility, the licensed distributor shall provide notice.
   (2) At least one day before a gambling game is removed from or disposed of by a licensed facility, the licensed facility or the owner shall provide notice. All methods of disposal for gambling games or implements of gambling are subject to administrator approval.
   b. The administrator may approve licensee transfers of gambling games or implements of gambling among subsidiaries of the licensee’s parent company.

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491—11.5(99F) Gambling games authorized.

11.5(1) Craps, roulette, twenty-one (blackjack), baccarat, big six and poker are authorized as table games. The administrator is authorized to approve multiplayer electronic devices simulating these games, subject to the requirements of rule 491—11.4(99F) and subrule 11.5(3).

11.5(2) Slot machines, video poker, and other video games of chance, both progressive and nonprogressive, shall be allowed as slot machine games, subject to the administrator’s approval of individual slot machine prototypes and game variations. For racetrack enclosures without a table games license, video machines which simulate table games of chance shall not be allowed.

11.5(3) The administrator is authorized to approve variations of approved gambling games and bonus features or progressive wagers associated with approved gambling games, subject to the requirements of rule 491—11.4(99F). Features utilizing a controller or a system linked to gambling games that do not require direct monetary consideration and are not otherwise integrated within a slot machine game theme may be allowed as bonus features. Payouts from these bonus features may be included in winnings for the calculation of wagering tax adjusted gross receipts when the following conditions are met:
   a. The only allowable nonmonetary consideration to be expended by a participant shall be active participation in a gambling game with a bonus feature or use of a player’s club card, or both.
   b. The actual bonus payout deductible in any month from all qualified system bonuses requiring no additional direct monetary consideration shall be:
(1) No more than 2 percent of the coin-in for all slot machines linked to any system bonuses for that month if slot machines linked to system bonuses exceed 20 percent of the total number of slot machines; or

(2) No more than 3 percent of the coin-in for all slot machines linked to any system bonuses for that month if slot machines linked to system bonuses are less than or equal to 20 percent of the total number of slot machines; or

(3) No more than 3 percent of the amount wagered on the qualifying bets for all table games linked to any system bonus for that month.

c. The probability of winning a system bonus award shall be the same for all persons participating in the bonus feature.

11.5(4) Gambling games of chance involving prizes awarded to participants through promotional activities at a facility may be conducted by the licensee providing the following:

a. Rules shall be made available to participants for review prior to registering. Rules shall include, at a minimum, all conditions registered players must meet to qualify to enter or participate in the event, available prizes or awards, and distribution of prizes or awards based on specific outcomes.

b. All gambling games are conducted in a fair and honest manner, and all rules are followed.

Changes to rules shall not be made after participants have registered.

c. Results shall be made available for the registered players to review at the same location at which or in the same manner in which players registered. Results shall include, at a minimum, name of the event, date of the event, total number of entries, total prize pool, and amount paid for each winning category.

d. No entry fees shall be permitted.

e. All employees of the facility shall be prohibited from participation.

f. Such games shall be limited to participants 21 years of age or older.

g. There is compliance with all other federal, state and local laws and rules outside of the commission’s jurisdiction.

h. Outcomes for gambling games shall be determined on the designated gaming floor, approved pursuant to 491—subrule 5.4(17), and outcomes shall be immediately or simultaneously displayed by a device or devices on the designated gaming floor.

i. In determining adjusted gross receipts pursuant to Iowa Code section 99F.11, the facility may consider all nonmonetary consideration expended by a participant and the nonmonetary consideration shall at least equal the value of prizes awarded.

11.5(5) Mechanical devices employing kickers or plates to direct coins, tokens or chips to fall over an edge into a payout hopper may be authorized as gambling games, subject to the following conditions:

a. All devices are subject to the requirements of rule 491—11.4(99F).

b. Devices shall accept no more than one coin, token or chip per play, unless otherwise authorized by the administrator.

c. Tokens or chips used in devices shall have a value defined by the facility. Each assigned value must be displayed on the device. Values are subject to approval by the administrator.

d. Merchandise, coins, tokens, chips or other legal tender may be added to the device at the discretion of the facility:

(1) Anything of value added to a device must be in accordance with the approval of the device under the requirements of rule 491—11.4(99F); and

(2) Anything of value added to a device shall be documented, and documentation shall be retained in accordance with the retention requirements of 491—subrule 5.4(14).

e. Any coins, tokens or chips collected by the facility or not returned to individuals wagering on a device shall be included as gross receipts for the calculation of wagering tax on adjusted gross receipts:

(1) When a device is removed from play, coins, tokens, chips or other legal tender that were added to the device may be used to offset gross receipts for the calculation of wagering tax on adjusted gross receipts; and

(2) Merchandise or other items of value added to a device shall not be considered in the calculation of wagering tax on adjusted gross receipts.
f. Merchandise, coins, tokens, chips or other legal tender shall not be removed from a device while it remains in operation, except as winnings to an individual from a wager, or as the result of internal mechanisms of the device for collecting revenue, approved in accordance with rule 491—11.4(99F).

g. Anything of value in the machine shall not be tampered with or adjusted while a device remains in operation, except as required to return a malfunctioning device to operation.

[ARC 8029B, IAB 8/12/09, effective 9/16/09; ARC 9015B, IAB 8/25/10, effective 9/29/10; ARC 9987B, IAB 2/8/12, effective 3/14/12; ARC 0734C, IAB 5/15/13, effective 6/19/13; ARC 4378C, IAB 3/27/19, effective 5/1/19; ARC 4954C, IAB 2/26/20, effective 4/1/20; ARC 5422C, IAB 2/10/21, effective 3/17/21; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—11.6(99F) Gambling game-based tournaments.

11.6(1) Proposals. Proposals for terms, game rules, entry fees, prizes, dates, and procedures must be submitted in writing and approved by a commission representative before a facility conducts any tournament. Any changes to approved tournaments must be submitted to the commission representative for review and approval prior to being implemented. The written proposal or change shall be submitted to a commission representative at least 14 days in advance of the planned activity. Rules, fees, and a schedule of prizes must be made available to the player prior to entry.

11.6(2) Limits. Tournaments must be based on gambling games authorized by the commission. Entry fees, less prizes paid, are subject to the wagering tax pursuant to Iowa Code section 99F.11. In determining adjusted gross receipts, to the extent that prizes paid out exceed entry fees received, the facility shall be deemed to have paid the fees for the participants.

11.6(3) Tournament chips. Tournament chips used as wagers in table game tournament proposals approved pursuant to this rule shall be imprinted with a number representing the value of the chip or shall be assigned a value. The facility shall provide that:

a. The assigned value of tournament chips be conspicuously displayed in the tournament area.

b. Internal controls which account for all tournament chips and include reconciliation, handling and variance procedures are approved by a commission representative.

[ARC 8029B, IAB 8/12/09, effective 9/16/09; ARC 9987B, IAB 2/8/12, effective 3/14/12]

491—11.7(99F) Table game requirements.

11.7(1) Devices that determine or affect the outcome of wagers or are used in the collection of wagers on table games are subject to the requirements of rule 491—11.4(99F) and subrule 11.5(3). Removable storage media shall be sealed with tamper-evident tape by a commission representative prior to implementation.

11.7(2) Wagers.

a. All wagers at table games shall be made by placing gaming chips or coins on the appropriate areas of the layout or by making a cashless wager using an approved wagering device.

b. Information pertaining to the minimum and maximum allowed at the table shall be posted on the game.

c. A facility may impose an aggregate payout limit on a per round basis for approved table game odds payouts that are greater than 50 to 1. If imposed, aggregate limits shall be at least the highest available award at the posted minimum bet, or $25,000, whichever amount is greater, and the amount shall be posted on the game. When applying the aggregate payout limit to multiple players’ wins, facilities shall calculate each player’s win as a pro rata share of the aggregate payout limit. Alternate aggregate or individual player payout limits may be established, as determined by the administrator.

d. Any other fee collected to participate in a table game shall be subject to the wagering tax pursuant to Iowa Code section 99F.11.

11.7(3) Craps.

a. Wagers must be made before the dice are thrown. “Call bets,” or the calling out of bets between the time the dice leave the shooter’s hand and the time the dice come to rest, not accompanied by the placement of gaming chips, are not allowed. A wager made on any bet may be removed or reduced at any time prior to a roll that decides the outcome of such wager unless the wager is a “Pass” or “Come” bet and a point has been established with respect to such bet or the wager is a proposition bet contingent on multiple rolls.
b. The shooter shall make a “Pass” or “Don’t Pass” bet and shall handle the two selected dice with one hand before throwing the dice in a simultaneous manner.

c. Each die used shall be transparent.

11.7(4) Twenty-one.

a. Before the first card is dealt for each round of play, each player shall make a wager against the dealer. Once the first card of any hand has been dealt by the dealer, no player shall handle, remove, or alter any wagers that have been made until a decision has been rendered and implemented with respect to that wager. Once a wager on the insurance line, a wager to double down, or a wager to split pairs has been made and confirmed by the dealer, no player shall handle, remove, or alter the wagers until a decision has been rendered and implemented with respect to that wager, except as explicitly permitted. A facility or licensee shall not permit any player to engage in conduct that violates this paragraph.

b. At the conclusion of a round of play, all cards still remaining on the layout shall be picked up by the dealer in a prescribed order and in such a way that they can be readily arranged to indicate each player’s hand in case of question or dispute. The dealer shall pick up the cards beginning with those of the player to the far right and moving counterclockwise around the table. The dealer’s hand will be the last hand collected. The cards will then be placed on top of the discard pile. No player or spectator shall remove or alter any cards used to game at twenty-one or be permitted to do so by a casino employee.

c. Each player at the table shall be responsible for correctly computing the point count of the player’s hand. No player shall rely on the point counts announced by the dealer without checking the accuracy of such announcement.

11.7(5) Roulette.

a. No person at a roulette table shall be issued or permitted to game with nonvalue gaming chips that are identical in color and design to value gaming chips or to nonvalue gaming chips being used by another person at that same table.

b. Each player shall be responsible for the correct positioning of the player’s wager on the roulette layout, regardless of whether the player is assisted by the dealer. Each player must ensure that any instructions the player gives to the dealer regarding the placement of the player’s wager are correctly carried out.

c. Each wager shall be settled strictly in accordance with its position on the layout when the ball falls to rest in a compartment of the wheel.

11.7(6) Big six.

a. Wagers must be made before the spin of the wheel.

b. Each player shall be responsible for the correct positioning of the player’s wager on the layout regardless of whether that player is assisted by the dealer.

c. The wheel may be spun in either direction, but must complete at least three revolutions to be considered a valid spin.

d. Each wager shall be settled strictly in accordance with its position on the layout when the wheel stops with the winning indicator in a compartment of the wheel. In accordance with subrule 11.4(3), the rules shall include procedures addressing wheel stops that land between two compartments of the wheel. These procedures shall be posted at the game.

11.7(7) Poker.

a. When a facility conducts poker with an imprest dealer gaming chip bank, the rules in 491—Chapter 12 for closing and distributing or removing gaming chips to or from gaming tables do not apply. The entire amount of the table rake is subject to the wagering tax pursuant to Iowa Code section 99F.11. Proposals for imprest dealer gaming chip banks must be submitted in writing and approved by a commission representative prior to use and must include, but not be limited to, controls to regularly monitor, investigate, and report table bank variances.

b. All games shall be played according to table stakes game rules as follows:

(1) Only gaming chips or coins on the table at the start of a deal shall be in play for that pot.

(2) Concealed gaming chips or coins shall not play.

(3) A player with gaming chips may add additional gaming chips between deals, provided that the player complies with any minimum buy-in requirement.
(4) A player is never obliged to drop out of contention because of insufficient gaming chips to call the full amount of a bet, but may call for the amount of gaming chips the player has on the table. The excess part of the bet made by other players is either returned to the players or used to form a side pot.

   c. Each player in a poker game is required to act only in the player’s own best interest. The facility has the responsibility of ensuring that any behavior designed to assist one player over another is prohibited. The facility may prohibit any two players from playing in the same game.

   d. Poker games where winning wagers are paid by the facility according to specific payout odds or pay tables are permitted.

   e. The facility shall comply with and receive approval pursuant to subrule 11.4(3) for each type of poker game offered.

   f. The facility may elect to offer a jackpot award generated from pot contributions at a table or group of tables for predesignated high-value poker hands, subject to the following requirements:

      (1) Approval of the jackpot award rules must be obtained from a commission representative prior to play.

      (2) Jackpot award rules and jackpot award amounts shall be posted in a conspicuous location within the poker room. Jackpot award amounts shall be updated no less than once per day.

      (3) The facility shall divide pot contributions for any single qualifying award circumstance or event into no more than three jackpot award pools.

      (4) The jackpot award pool containing the highest monetary value amount shall be the amount posted in the poker room and awarded to a qualifying player or players.

      (5) If additional jackpot award pools are in use, the award pool containing the highest monetary value shall be used to seed the primary jackpot award pool.

   (6) All moneys collected as pot contributions to a jackpot award payout shall be distributed in their entirety to the players; no facility shall charge an administration fee for distribution of a jackpot award.

11.7(8) Baccarat. Before the first card is dealt for each round of play, each player is permitted to make a wager on the Banker’s Hand, Player’s Hand, Tie Bet, and any proposition bet if offered. All wagers shall be made by placing gaming chips on the appropriate areas of the layout. Once the first card has been dealt by the dealer, no player shall handle, remove, or alter any wagers that have been made until a decision has been rendered and implemented with respect to that wager.

11.7(9) Preverified cards. Cards that are verified prior to arrival at the facility may be approved by the administrator for use in table games authorized by this rule. Preverified cards may be shuffled or sequenced according to the licensee’s specifications. Each manufacturer of preverified cards shall request approval of its cards, pursuant to subrule 11.4(1), and is subject to the following additional requirements:

   a. Each device used to verify or automate the randomization of the cards before they are shipped to a licensee shall be certified by a commission-designated independent testing facility.

   b. The manufacturer shall develop and submit to the administrator a process for producing, shuffling, and packaging preverified cards that includes the following:

      (1) A visual inspection of the back of each card, ensuring the cards are not flawed or marked in any way that might compromise the integrity of the gambling game.

      (2) A verification that each package of cards contains the correct number of suits and cards in accordance with the commission-approved rules of the game for the game with which the package of cards is intended for use.

      (3) Insertion of the cards in a package with a tamper-evident seal that bears conspicuous indication if the package has been opened. The exterior of the package shall indicate:

         1. The total number of decks contained within the package.

         2. The commission-authorized game with which the cards are intended for use.

         3. The color of the cards within the package.

      (4) Generation of a receipt in the package or a label on the sealed package to include the following information:

         1. The total number of cards and decks contained within the package.

         2. The date and time the cards were shuffled, verified and packaged.
3. Information sufficient to determine the specific details regarding any persons or devices involved in the production, verification or packaging of the cards.

11.7(10) Wide area progressive table game systems. A wide area progressive table game system is a method of linking table game progressives, approved in accordance with subrule 11.5(3), by a secured data communication as part of a network that connects participating facilities. The purpose of a wide area progressive table game system is to offer a common progressive jackpot at all participating locations within Iowa or in multiple states. The operation of the wide area progressive table game system (multilink) is permitted, subject to the following conditions:

a. The provider of the multilink (provider) shall be an entity licensed as a manufacturer, a distributor, or an operator of gambling games within the state of Iowa or be the qualified parent company of an operator within the state of Iowa. No entity shall be licensed for the sole purpose of providing a multilink.

b. Prior to operation of a multilink, the provider shall submit to the administrator for review and approval information sufficient to determine the integrity and security of the multilink. The information must include, but is not limited to, the following:

   (1) Central system site location, specifications, and operational procedures. Central site facilities must be monitored whenever the multilink is operational at any participatory licensee.

   (2) Encryption and method of secured communication over the multilink and between facilities.

   (3) Method and process for obtaining and updating contribution data from table games on the multilink.

   (4) Jackpot contribution rates, including information sufficient to determine contributions to the jackpot are consistent across all entities participating in the multilink. Any subsequent changes to the contribution rate of a multilink jackpot must be submitted to the administrator for review and approval.

   (5) Jackpot verification procedures.

c. Prior to inclusion in a multilink, a licensee shall submit to a gaming representative for review and approval information sufficient to determine the integrity of the multilink processes. The information must include, but is not limited to, the following:

   (1) Rules of the game, in accordance with subrule 11.4(3).

   (2) Controls and procedures which govern the process of determining and verifying jackpots on a multilinked table game.

   (3) The process to report jackpots to the multilink provider.

   (4) The process to pay the jackpot to the winner or winners.

   d. The provider of the multilink shall, upon request, supply reports and information to the administrator which detail the contributions and economic activity of the system, subject to the following requirements:

   (1) Aggregate and detail reports that show both the economic activity of the entire multilink, as well as details of each table game on the multilink.

   (2) Upon invoicing a facility, details regarding each machine at the facility and each table game’s contribution to the multilink for the period of the invoice shall be supplied, as well as any other details required by the administrator.

   e. Concurrent jackpots which occur before the multilink jackpot meters show reset and updated jackpot amounts will be deemed to have occurred simultaneously. Each winner shall receive the full amount shown on the system jackpot meter.

   f. The provider must suspend play on the multilink if a communication failure of the system cannot be corrected within 24 consecutive hours.

   g. A meter that shows the amount of the jackpot must be conspicuously displayed at the table games to which the jackpot applies. Jackpot meters may show amounts that differ from the actual system jackpot, due to delays in communication between sites and the central system, but meters shall not display an incorrect amount for an awarded jackpot.

   h. In calculating adjusted gross receipts, a facility may deduct only its pro rata share of the present value of any system jackpots awarded. Such deduction shall be listed on the detailed accounting records supplied by the provider. A facility’s pro rata share is based on the amount wagered in conjunction with
the rules for that table game progressive from that facility’s table games on the multilink compared to the total amount wagered in conjunction with the rules for that table game progressive on the whole system for the time period between awarded jackpots.

i. In the event a facility ceases operations and a progressive jackpot is awarded subsequent to the last day of the final month of operation, the facility may not file an amended wagering tax submission or make a claim for a wagering tax refund based on its contributions to that particular progressive prize pool.

j. Any jackpot on the multilink shall be paid immediately upon verification of the jackpot. The responsibility for the immediate payment rests with the facility in which the jackpot is awarded, but is subject to reimbursement requirements from the provider, in accordance with the collection procedures agreed to between the provider and the facility.

k. A reserve shall be established and maintained by the provider in an amount not less than the present value of all multilink jackpots offered by the provider and the present value of one additional reset (start amount) for each multilink jackpot offered by the provider.

(1) Upon becoming aware of an event of noncompliance with the terms of the reserve requirement mandated by this paragraph, the provider must immediately notify the administrator.

(2) On a quarterly basis, the provider must deliver to the administrator a calculation of system reserves required under this paragraph. The calculation shall come with a certification of financial compliance signed by a duly authorized financial officer of the provider, on a form prescribed by the administrator, validating the calculation.

l. Multilinks to be offered in conjunction with jurisdictions in other states within the United States are permitted. Multistate multilinks are subject to the requirements of this subrule; in addition, any multistate plans or controls are subject to administrator review and approval.

[ARC 9987B, IAB 2/8/12, effective 3/14/12; ARC 2927C, IAB 2/1/17, effective 3/8/17; ARC 3608C, IAB 1/31/18, effective 3/7/18; ARC 5422C, IAB 2/10/21, effective 3/17/21; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—11.8(99F) Keno.

11.8(1) Keno shall be conducted using an automated ticket writing and redemption system where a game’s winning numbers are selected by a random number generator.

11.8(2) Each game shall consist of the selection of 20 numbers out of 80 possible numbers, 1 through 80.

11.8(3) For any type of wager offered, the payout must be at least 70 percent.

11.8(4) Multigame tickets shall be limited to 20 games.

11.8(5) Writing or voiding tickets for a game after that game has closed is prohibited.

11.8(6) All winning tickets shall be valid up to a maximum of one year from the date of purchase. All expired, unclaimed winning tickets shall be subject to the requirements in 491—paragraph 12.11(2)”b.”

11.8(7) The administrator shall determine minimum hardware and software requirements to ensure the integrity of play. An automated keno system must be proven to accurately account for adjusted gross receipts to the satisfaction of the administrator.

11.8(8) Adjusted gross receipts from keno games shall be the difference between dollar value of tickets written and dollar value of winning tickets as determined from the automated keno system. The wagering tax pursuant to Iowa Code section 99F.11 shall apply to adjusted gross receipts of keno games.

11.8(9) An area of a facility shall not be designated as gaming floor for the sole purpose of keno runners, who accept patron wagering funds remotely from the keno game location.

[ARC 9018B, IAB 8/25/10, effective 9/29/10]

491—11.9(99F) Slot machine requirements.

11.9(1) Payout percentage. A slot machine game must meet the following maximum and minimum theoretical percentage payouts during the expected lifetime of the game.

a. A slot machine game’s theoretical payout must be at least 80 percent and no more than 100 percent of the amount wagered. The theoretical payout percentage is determined using standard methods of probability theory. Slot machine games with a bonus feature that is available with varying payouts based on the player’s ability shall be allowed if the difference between the minimum and maximum
payout for all ability-based outcomes does not exceed a 4 percent contribution to the overall theoretical payout of the slot machine game.

b. A slot machine game shall have a probability of obtaining the highest single advertised payout, which must statistically occur at least once in 50 million games.

11.9(2) Features. Unless otherwise authorized by the administrator, each slot machine in a casino shall have the following features:

a. A casino number at least two inches in height permanently imprinted, affixed, or impressed on the outside of the machine so that the number may be observed by the surveillance camera.

b. A clear description displayed on the slot machine of any merchandise or thing of value offered as a payout including the cash equivalent value of the merchandise or thing of value offered, the dates the merchandise or thing of value will be offered if the facility establishes a time limit upon initially offering the merchandise or thing of value, and the availability or unavailability to the patron of the optional cash equivalent value. A cash equivalent value shall be at least 75 percent of the fair market value of the merchandise or thing of value offered.

c. Devices, equipment, features, and capabilities, as may be required by the commission, that are specific to each slot machine after the prototype model is approved by the commission.

11.9(3) Storage media. Hardware media devices which contain game functions or characteristics, including but not limited to pay tables and random number generators, shall be verified and sealed with evidence tape by a commission representative prior to being placed in operation, as determined by the administrator.

11.9(4) Posting of the actual aggregate payout percentage. The actual aggregate payout percentage to the nearest one-tenth of 1 percent (0.1%) of all slot machine games in operation during the preceding three calendar months shall be posted at the main casino entrance, cashier cages, and slot booths by the fifteenth day of each calendar month. For the purpose of this calculation, the actual aggregate payout percentage shall be the slot revenue reported to the commission during the preceding three calendar months divided by the slot coin-in reported to the commission during the preceding three calendar months subtracted from 100 percent.

11.9(5) Communication equipment. Equipment must be installed in each slot machine that allows for communication to an online monitoring and control system accessible, with read-only access, to the commission representatives using a communications protocol provided to each licensed manufacturer by the commission for the information and control programs approved by the administrator.

11.9(6) Meter clears. Prior to the clearing of electronic accounting meters detailed in paragraph 11.10(2) “c,” a licensee must notify a commission representative. All meters recorded by the game must be retained according to the requirements in 491—subrule 5.4(14).

[ARC 8029B, IAB 8/12/09, effective 9/16/09; ARC 9018B, IAB 8/25/10, effective 9/29/10]

491—11.10(99F) Slot machine hardware and software specifications.

11.10(1) Hardware specifications.

a. Electrical and mechanical parts and design principles shall not subject players to physical hazards.

b. The battery backup, or an equivalent, for the electronic meters must be capable of maintaining accuracy of all required information for 30 days after power is discontinued from a slot machine. The backup shall be kept within the locked logic board compartment.

c. An identification badge permanently affixed by the manufacturer to the exterior of the cabinet shall include the following information:

(1) The manufacturer;
(2) A unique serial number;
(3) The gaming device model number; and
(4) The date of manufacture.

d. The operations and outcomes of each slot machine must not be adversely affected by influences from outside the device.
e. The internal space of a slot machine shall not be readily accessible when the front door is both closed and locked.

f. Logic boards and software storage media which significantly influence the operation of the game must be in a locked compartment within the slot machine.

g. The currency drop container must be in a locked compartment within or attached to the slot machine. Access to the currency storage areas shall be secured by separate locks which shall be fitted with sensors that indicate door open/closed or stacker removed.

h. No hardware switches may be installed that alter the pay tables or payout percentages in the operation of a slot machine. Hardware switches may be installed to control graphic routines, speed of play, and sound.

i. A display which automatically illuminates when a player has won a jackpot or other award not paid automatically and totally by the slot machine and which advises players that they will be paid by an attendant shall be located conspicuously on the slot machine.

j. A payglass/video display shall be clearly identified and shall accurately state the rules of the game and the award that will be paid to the player when the player obtains a specific combination of symbols or other criteria. All information required in this paragraph must be available and readable at all times the slot machine is in service.

k. A light that automatically illuminates when a player has won an amount or is redeeming credits that the machine cannot automatically pay, an error condition has occurred, or a “Call attendant” condition has been initiated by the player shall be located conspicuously on top of the gaming device. At the discretion of the administrator, tower lights may be shared among certain machines or substituted by an audible alarm.

l. If credits are collected and the total credit value is unable to be paid automatically by the gaming device, the device shall lock up until the credits have been paid and the amount collected has been cleared by an attendant handpay or normal operation has been restored.

11.10(2) Software specifications.

a. Random number generator. Each slot machine must have a random number generator to determine the results of the game symbol selections or production of game outcomes. The selection shall:

(1) Be statistically independent.
(2) Conform to the desired random distribution.
(3) Pass various recognized statistical tests.
(4) Be unpredictable.
(5) Have a testing confidence level of 99 percent.

b. Continuation of game after malfunction is cleared. Each slot machine must be capable of continuing the current game with all current game features after a malfunction is cleared. This paragraph does not apply if a slot machine is rendered totally inoperable; however, the current wager and all credits appearing on the screen prior to the malfunction must be returned to the player.

c. Electronic accounting meters. Each slot machine must maintain electronic accounting meters at all times, regardless of whether the slot machine is being supplied with power. For each meter recording values, the slot machine must be capable of maintaining no fewer than ten digits. For each meter recording occurrences, the slot machine must be capable of maintaining no fewer than eight digits. No slot machine may have a mechanism that will cause the electronic accounting meters to automatically clear due to an error. The electronic meters must record, at a minimum, the following:

(1) Coin-in.
(2) Coin-out.
(3) Drop.
(4) Attendant-paid jackpots.
(5) Currency in.
(6) Currency out.
(7) External door.
(8) Bill validator door.
(9) Machine-paid external bonus payout.
(10) Attendant-paid external bonus payout.
(11) Attendant-paid progressive payout.
(12) Machine-paid progressive payout.

d. Error conditions. Each slot machine shall display and report error conditions to the online monitoring system. For machines that display only a code, definitions for all codes must be permanently affixed to the interior of the slot machine. Error conditions that must be displayed and reported include but are not limited to:
   (1) Currency in.
   (2) Currency out.
   (3) Door open.
   (4) RAM.
   (5) Low battery.
   (6) Program authentication.
   (7) Reel spin.
   (8) Power reset.

11.10(3) Previous slot machine models. Subject to administrator approval of specific gaming devices, slot machines may be used that do not meet the requirements of subrules 11.10(1) and 11.10(2) but have been certified under previously approved specifications by a commission-designated independent testing facility and maintain a current certification.

[ARC 8029B, IAB 8/12/09, effective 9/16/09]

491—11.11(99F) Slot machine specifications. Rescinded IAB 8/12/09, effective 9/16/09.

491—11.12(99F) Progressive slot machines.

11.12(1) Meter required. A progressive machine is a slot machine game with an award amount that increases based on a function of credits bet on the slot machine and that is awarded when a particular configuration of symbols or events is displayed on the slot machine. Random events generating awards independent of the base slot machine game and not dependent on any specific slot machine game shall be considered bonus features. A progressive slot machine or group of linked progressive slot machines must have a meter showing the progressive jackpot payout.

11.12(2) Progressive controllers. The reset or base value and the rate of increment of a progressive jackpot game must be filed with a commission representative prior to implementation. A reset or base value must equal or exceed the equivalent nonprogressive jackpot payout.

11.12(3) Limits. A facility may impose a limit on the progressive jackpot payout of a slot machine if the limit imposed is greater than the progressive jackpot payout at the time the limit is imposed. The facility must prominently display a notice informing the public of the limit. No progressive meter may be turned back to a lesser amount unless one of the following circumstances occurs:
   a. The amount shown on the progressive meter is paid to a player as a jackpot.
   b. It is necessary to adjust the progressive meter to prevent it from displaying an amount greater than the limit imposed by the facility.
   c. It is necessary to change the progressive indicator because of game malfunction.

11.12(4) Transfer of jackpots. In the event of malfunction, replacement, or other reason approved by the commission, a progressive jackpot that is removed shall be transferred, less the reset value, to other progressive slot machine jackpots of similar progressive wager and probability at the same facility within 30 days from the removal date. In the event a similar progressive jackpot at the same facility is unavailable, other transfers shall be allowed. A commission representative shall be notified in writing prior to a removal or transfer.

11.12(5) Records required. Records must be maintained that record the amount shown on a progressive jackpot meter. Supporting documents must be maintained to explain any reduction in the payoff amount from a previous entry. The records and documents must be retained for a period of three years unless permission to destroy them earlier is given in writing by the administrator.
11.12(6) **Transfer of progressive slot machines.** A progressive slot machine, upon permission of the administrator, may be moved to a different facility if a bankruptcy, loss of license, or other good cause warrants.

11.12(7) **Linked machines.** Each machine on the link shall have the same probability of winning the progressive jackpot, adjusted for the total amount wagered. The probability of winning the progressive jackpot multiplied by the maximum amount wagered shall be within the maximum allowable tolerance for all games on the link. For the purpose of this calculation, the maximum allowable tolerance when linked with any other game shall be the product of the probability of winning the progressive jackpot, adjusted for amount wagered, multiplied by:

a. 1 percent (0.01) for games where the probability of winning the progressive jackpot is less frequent than or equal to 1 in 100,000; or

b. 5 percent (0.05) for games where the probability of winning the progressive jackpot is more frequent than 1 in 100,000.

11.12(8) **Wide area progressive systems.** A wide area progressive system is a method of linking progressive slot machines or electronic gaming machines by secured data communication as part of a network that connects participating facilities. The purpose of a wide area progressive system is to offer a common progressive jackpot (system jackpot) at all participating locations within Iowa or in multiple states. The operation of a wide area progressive system (multilink) is permitted, subject to the following conditions:

a. The provider of a multilink (provider) shall be an entity licensed as a manufacturer, a distributor, or an operator of gambling games within the state of Iowa or be the qualified parent company of an operator of gambling games within the state of Iowa. No entity shall be licensed for the sole purpose of providing a multilink.

b. Prior to operation of a multilink, the provider shall submit to the administrator for review and approval information sufficient to determine the integrity and security of the multilink. The information must include, but is not limited to, the following:

(1) Central system site location, specifications, and operational procedures.

(2) Encryption and method of secured communication over the multilink and between facilities.

(3) Method and process for obtaining meter data from slot machines on the multilink.

(4) Disbursement options for jackpot payoffs, including information for periodic payments. Periodic payment information, including number of payments and time between payments must be displayed as part of the slot machine pay table or prominently displayed on the face of the slot machine.

(5) Jackpot contribution rates, including information sufficient to determine contributions to the jackpot are consistent across all entities participating in the multilink. Any subsequent changes to the contribution rate of a multilink jackpot must be submitted to the administrator for review and approval.

(6) Jackpot verification procedures.

(7) Jackpot discontinuation procedures, including procedures for distribution of contributions to another jackpot or return of pro rata shares to participating facilities.

c. The provider of the multilink shall, upon request, supply reports and information to the administrator which detail the contributions and economic activity of the system, subject to the following requirements:

(1) Aggregate and detail reports that show both the economic activity of the entire multilink, as well as details of each machine on the multilink.

(2) Upon invoicing a facility, details regarding each machine at the facility and each machine’s contribution to the multilink for the period of the invoice shall be supplied, as well as any other details required by the administrator.

(3) Concurrent jackpots which occur before the multilink jackpot meters show reset and updated jackpot amounts will be deemed to have occurred simultaneously. Each winner shall receive the full amount shown on the system jackpot meter.

c. The provider must suspend play on the multilink if a communication failure of the system cannot be corrected within 24 consecutive hours.
f. A meter that shows the amount of the system jackpot must be conspicuously displayed at or near the machines to which the jackpot applies. Jackpot meters may show amounts that differ from the actual system jackpot, due to delays in communication between sites and the central system, but meters shall not display an incorrect amount for an awarded jackpot.

g. In calculating adjusted gross receipts, a facility may deduct its pro rata share of the present value of any system jackpots awarded. Such deduction shall be listed on the detailed accounting records supplied by the provider. A facility’s pro rata share is based on the amount of coin-in from that facility’s machines on the multilink, compared to the total amount of coin-in on the whole system for the time period between awarded jackpots.

h. In the event a facility ceases operations and a progressive jackpot is awarded subsequent to the last day of the final month of operation, the facility may not file an amended wagering tax submission or make a claim for a wagering tax refund based on its contributions to that particular progressive prize pool.

i. The payment of any system jackpot offered on a multilink shall be administered by the provider, and the provider shall have sole liability for payment of any system jackpot the provider administers.

j. The provider shall comply with the following:

   (1) A reserve shall be established and maintained by the provider in an amount of not less than the sum of the following amounts:

   1. The present value of the amount currently reflected on the jackpot meters of the multilink.
   2. The present value of one additional reset (start amount) of the multilink.

   (2) For system jackpots disbursed in periodic payments, a provider shall fund the periodic payments within 90 days of the notice of the jackpot award with:

   1. Purchase of a qualified investment. A copy of such qualified investment shall be provided to the administrator within 30 days of purchase. Any qualified investment shall have a surrender value at maturity, excluding any interest paid before the maturity date, equal to or greater than the value of the corresponding periodic jackpot payment and shall have a maturity date prior to the date the periodic jackpot payment is required to be made; or

   2. A surety bond or an irrevocable letter of credit with an independent financial institution which provides periodic payments to a winner should the establishment default for any reason. The written agreement establishing a surety bond or irrevocable letter of credit shall be submitted to the administrator within 30 days of purchase; or

   3. An irrevocable trust with an independent financial institution in accordance with a written trust agreement approved by the administrator which provides periodic payments from an unallocated pool of assets to a group of winners and which shall expressly prohibit the winner from encumbering, assigning or otherwise transferring in any way the winner’s right to receive the deferred portion of the winnings except to the winner’s estate. The assets of the trust shall consist of federal government securities including but not limited to treasury bills, treasury bonds, savings bonds or other federally guaranteed securities in an amount sufficient to meet the periodic payments as required; or

   4. Another irrevocable method of providing the periodic payments to a winning player consistent with the purpose of this subparagraph, and which is approved by the administrator prior to implementation.

   (3) The provider shall not be permitted to sell, trade, or otherwise dispose of any periodic payment funding unless approval to do so is first obtained from the administrator.

   (4) Upon becoming aware of an event of noncompliance with the terms of the reserve requirement mandated by subparagraph 11.12(8)“j”(1) above, or in the event of nonpayment of a periodic payment directly by the provider, the provider must immediately notify the administrator. An event of noncompliance includes a nonpayment of a jackpot periodic payment or a circumstance which may cause the provider to be unable to fulfill, or which may otherwise impair the provider’s ability to satisfy, the provider’s jackpot payment obligations.

   (5) On a quarterly basis, the provider must deliver to the administrator a calculation of system reserves required under subparagraph 11.12(8)“j”(1) above. The calculation shall come with a
certification of financial compliance signed by a duly authorized financial officer of the provider, on a form prescribed by the administrator, validating the calculation.

(6) On an annual basis, the provider must deliver to the administrator updated information sufficient to determine compliance with the funding requirements of all outstanding periodic payments. This shall include an updated listing of all winners showing outstanding periodic payment amounts and any updates to funding documents and agreements. The updated information shall come with a certification of compliance signed by a duly authorized financial officer of the provider.

(7) The reserve required under subparagraph 11.12(8) "j’’(1) must be examined by an independent certified public accountant according to procedures approved by the administrator. Two copies of the report must be submitted to the administrator within 90 days after the conclusion of the provider’s fiscal year.

(8) The administrator may require additional information or audits at any time to ensure compliance with this paragraph.

k. For system jackpots disbursed in periodic payments, subsequent to the date of the win, a winner may be offered the option to receive, in lieu of periodic payments, a discounted single cash payment in the form of a “qualified prize option,” as that term is defined in Section 451(h) of the Internal Revenue Code. The provider shall calculate the single cash payment based on the discount rate. Until the new discount rate becomes effective, the discount rate selected by the provider shall be used to calculate the single cash payment for all qualified prizes that occur subsequent to the date of the selected discount rate.

l. Multilinks to be offered in conjunction with jurisdictions in other states within the United States are permitted. Multistate multilinks are subject to the requirements of this subrule; in addition, any multistate plans or controls are subject to administrator review and approval.

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491—11.13(99F) Licensing of manufacturers and distributors of gambling games or implements of gambling.

11.13(1) Impact on gambling. In considering whether a manufacturer or distributor applicant will be licensed or a specific product will be distributed, the administrator shall give due consideration to the economic impact of the applicant’s product, the willingness of a licensed facility to offer the product to the public, and whether its revenue potential warrants the investigative time and effort required to maintain effective control over the product.

11.13(2) Licensing standards. Standards which shall be considered when determining the qualifications of an applicant shall include, but are not limited to, financial stability; business ability and experience; good character and reputation of the applicant as well as all directors, officers, partners, and employees; integrity of financial backers; and any effect on the Iowa economy.

11.13(3) Application procedure. Application for a manufacturer’s or a distributor’s license shall be made to the commission for approval by the administrator. In addition to the application, the following must be completed and presented when the application is filed:

a. Disclosure of ownership interest, directors, or officers of licensees.

(1) An applicant or licensee shall notify the administrator of the identity of each director, corporate officer, owner, partner, joint venture participant, trustee, or any other person who has any beneficial interest of 5 percent or more, direct or indirect, in the business entity. For any of the above, as required by the administrator, the applicant or licensee shall submit background information on forms supplied by the division of criminal investigation and any other information the administrator may require.

For purposes of this rule, beneficial interest includes all direct and indirect forms of ownership or control, voting power, or investment power held through any contract, lien, lease, partnership, stockholding, syndication, joint venture, understanding, relationship (including family relationship), present or reversionary right, title or interest, or otherwise.

(2) For ownership interests of less than 5 percent, the administrator may request a list of these interests. The list shall include names, percentages owned, addresses, social security numbers, and
dates of birth. The administrator may request the same information required of those individuals in subparagraph (1) above.

b. Investigative fees.

(1) Advance payment. The department of public safety may request payment of the investigative fee in advance as a condition to beginning investigation.

(2) Payment required. The administrator may withhold final action with respect to any application until all investigative fees have been paid in full.

c. A bank or cashier’s check made payable to the Iowa Racing and Gaming Commission for the annual license fee as follows:

(1) A manufacturer’s license shall be $250.
(2) A distributor’s license shall be $1,000.

d. A copy of each of the following:

(1) Articles of incorporation and certificate of incorporation, if the business entity is a corporation.
(2) Partnership agreement, if the business entity is a partnership.
(3) Trust agreement, if the business entity is a trust.
(4) Joint venture agreement, if the business entity is a joint venture.
(5) List of employees of the aforementioned who may have contact with persons within the state of Iowa.

e. A copy of each of the following types of proposed distribution agreements, where applicable:

(1) Purchase agreement(s).
(2) Lease agreement(s).
(3) Bill(s) of sale.
(4) Participation agreement(s).

f. Supplementary information. Each applicant shall promptly furnish the administrator with all additional information pertaining to the application or the applicant which the administrator may require. Failure to supply the information requested within five days after the request has been received by the applicant shall constitute grounds for delaying consideration of the application.

g. Any and all changes in the applicant’s legal structure, directors, officers, or the respective ownership interests must be promptly filed with the administrator.

h. The administrator may deny, suspend, or revoke the license of an applicant or licensee in which a director, corporate officer, or holder of a beneficial interest includes or involves any person or entity which would be, or is, ineligible in any respect, such as through want of character, moral fitness, financial responsibility, professional qualifications, or due to failure to meet other criteria employed by the administrator, to participate in gaming regardless of the percentage of ownership interest involved. The administrator may order the ineligible person or entity to terminate all relationships with the licensee or applicant, including divestiture of any ownership interest or beneficial interest at acquisition cost.

i. Disclosure. Disclosure of the full nature and extent of all beneficial interests may be requested by the administrator and shall include the names of individuals and entities, the nature of their relationships, and the exact nature of their beneficial interest.

j. Public disclosure. Disclosure is made for the benefit of the public, and all documents pertaining to the ownership filed with the administrator shall be available for public inspection.

11.13(4) Temporary license certificates.

a. A temporary license certificate may be issued at the discretion of the administrator.

b. Temporary licenses—period valid. Any certificate issued at the discretion of the administrator shall be valid for a maximum of 120 calendar days from the date of issue.

Failure to obtain a permanent license within the designated time may result in revocation of the license eligibility, fine, or suspension.

11.13(5) Withdrawal of application. A written notice of withdrawal of application may be filed by an applicant at any time prior to final action. No application shall be permitted to be withdrawn unless the administrator determines the withdrawal to be in the public interest. No fee or other payment relating to any application shall become refundable by reason of withdrawal of the application.
11.13(6) Record keeping.
   a. Record storage required. Distributors and manufacturers shall maintain adequate records of
      business operations, which shall be made available to the administrator upon request. These records
      shall include:
      (1) All correspondence with the administrator and other governmental agencies on the local, state,
          and federal level.
      (2) All correspondence between the licensee and any of its customers who are applicants or
          licensees under Iowa Code chapter 99F.
      (3) A personnel file on each employee of the licensee, including sales representatives.
      (4) Financial records of all transactions with facilities and all other licensees under these
          regulations.
   b. Record retention. The records listed in 11.13(6)“a” shall be retained as required by
      491—subrule 5.4(14).

11.13(7) Violation of laws or regulations. Violation of any provision of any laws of the state or of
the United States of America or of any rules of the commission may constitute an unsuitable method
of operation, subjecting the licensee to limiting, conditioning, restricting, revoking or suspending the
license, or fining the licensee, or any combination of the above.

11.13(8) Consent to inspections, searches, and seizures. Each manufacturer or distributor licensed
under this chapter shall consent to inspections, searches, and seizures deemed necessary by the
administrator and authorized by law in order to enforce licensing requirements.

These rules are intended to implement Iowa Code chapter 99F.

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CHAPTER 13
SPORTS WAGERING

491—13.1(99F) Definitions. As used in these rules, unless the context otherwise requires, the following definitions apply:

“Administrator” means the administrator of the racing and gaming commission or the administrator’s designee.

“Advance deposit sports wagering” means a method of sports wagering in which an eligible individual may, in an account established with a licensee under Iowa Code section 99F.7A, deposit moneys into the account and use the account balance to pay for sports wagering. Prior to January 1, 2021, an account must be established by an eligible individual in person with a licensee.

“Advance deposit sports wagering operator” means an advance deposit sports wagering operator licensed by the commission who has entered into an agreement with a licensee under Iowa Code section 99F.7A to provide advance deposit sports wagering.

“Authorized sporting event” means a professional sporting event, collegiate sporting event, international sporting event, or professional motor race event. “Authorized sporting event” does not include a race as defined in Iowa Code section 99D.2, a fantasy sports contest as defined in Iowa Code section 99E.1, minor league sporting event, or any athletic event or competition of an interscholastic sport as defined in Iowa Code section 9A.102.

“Collegiate sporting event” means an athletic event or competition of an intercollegiate sport as defined in Iowa Code section 9A.102.

“Commission” means the racing and gaming commission created under Iowa Code section 99D.5.

“Designated sports wagering area” means an area, as designated by a licensee and approved by the commission, in which sports wagering is conducted.

“Eligible individual” means an individual who is at least 21 years of age or older who is located within this state.

“Facility” means an entity licensed by the commission to conduct pari-mutuel wagering, gaming or sports wagering operations in Iowa.

“International sporting event” means an international team or individual sporting event governed by an international sports federation or sports governing body, including but not limited to sporting events governed by the international Olympic committee and the International Federation of Association Football.

“Licensee” means any person licensed under Iowa Code section 99F.7 or 99F.7A.

“Minor league sporting event” means a sporting event conducted by a sports league which is not regarded as the premier league in the sport as determined by the commission.

“Professional sporting event” means an event, excluding a minor league sporting event, at which two or more persons participate in sports or athletic events and receive compensation in excess of actual expenses for their participation in such event.

“Sports wagering” means the acceptance of wagers on an authorized sporting event by any system of wagering as authorized by the commission. “Sports wagering” does not include placing a wager on the performance or nonperformance of any individual athlete participating in a single game or match of a collegiate sporting event in which a collegiate team from this state is a participant, or placing a wager on the performance of athletes in an individual international sporting event governed by the international Olympic committee in which any participant in the international sporting event is under 18 years of age.

“Sports wagering net receipts” means the gross receipts less winnings paid to wagerers on sports wagering.

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491—13.2(99F) Conduct of all sports wagering.

13.2(1) Commission policy. It is the policy of the commission to require that all industry participants conduct sports wagering in a manner suitable to protect the public health, safety, morals, good order, and general welfare of the state. Responsibility for selecting, implementing, and maintaining suitable methods of operation rests with the facility, vendor, and advance deposit sports wagering operator.
Willful or persistent use or toleration of methods of operation deemed unsuitable in the sole discretion of the commission will constitute grounds for disciplinary action, up to and including revocation.

13.2(2) Activities prohibited. A facility, vendor, or advance deposit sports wagering operator is expressly prohibited from the following activities:
   a. Failing to conduct advertising and public relations activities in accordance with decency, dignity, good taste, and honesty.
   b. Failing to comply with or make provision for compliance with all federal, state, and local laws and rules pertaining to the operation of a facility or advance deposit sports wagering operation including, but not limited to, payment of license fees, withholding payroll taxes, and violations of alcoholic beverage laws or regulations.
   c. Permitting cheating, failing to discover cheating that should have been discovered with reasonable inquiry, or failing to take action to prevent cheating.
   d. Failing to conduct sports wagering operations in accordance with proper standards of custom, decorum, and decency; or permitting any type of conduct that reflects negatively on the state or commission or acts as a detriment to the sports wagering industry.
   e. Performing any type of sports wagering activity, at any time, that is contrary to the representation made to the commission, commission representatives, or the public.
   f. Denying a commissioner or commission representative, upon proper and lawful demand, information, documents, or access to inspect any portion of the sports wagering operation.

13.2(3) Wagers. Wagers may only be made by persons 21 years of age or older and on activities authorized pursuant to Iowa Code chapter 99F which are approved by the commission.

13.2(4) Public notice. The public shall have access to the sports wagering rules, available wagers, odds or payouts, the payout period, and the source of the information used to determine the outcome of a sports wager. All licensees and advance deposit sports wagering operators shall require participants to follow the rules of play. The sports wagering rules shall be:
   a. Displayed in the licensee’s sports wagering area.
   b. Posted on the internet site or mobile application used to conduct advance deposit sports wagering.
   c. Included in any terms and conditions disclosure statements of the advance deposit sports wagering system.

13.2(5) Bond. A licensee shall post a bond or irrevocable letter of credit, at an amount determined by the commission, to the state of Iowa to guarantee that the licensee and any vendor or advance deposit sports wagering operator licensed in conjunction with the licensee faithfully makes the payments, keeps its books and records and makes reports, and conducts its gambling games and sports wagering in conformity with Iowa Code chapter 99F and the rules adopted by the commission.

13.2(6) Reserve. A reserve in the form of cash or cash equivalents segregated from operational funds, an irrevocable letter of credit, payment processor reserves and receivables, a bond, or a combination thereof shall be maintained in the amount necessary to cover the outstanding vendor sports wagering liability and advance deposit sports wagering liability. An accounting of this reserve shall be made available for inspection to the commission upon request.
   a. The method of reserve shall be submitted to and approved by the administrator prior to implementation.
   b. Reserve calculation shall include the following: patron accounts, future wagers liability, unpaid wagers and pending withdrawals.
   c. If, at any time, the licensee’s total reserve is less than the amount required by the reserve calculation, the licensee shall notify the commission of this deficiency within 72 hours.
   d. The controller or an employee of higher authority shall file a monthly attestation to the commission that the reserve funds have been safeguarded pursuant to this subrule.

13.2(7) Internal controls. Licensees and advance deposit sports wagering operators shall submit a description of internal controls to the administrator. The submission shall be made at least 30 days before sports operations are to commence unless otherwise approved by the administrator. All internal controls must be approved by the administrator prior to commencement of sports operations. The operator shall
submit to the administrator any changes to the internal controls previously approved at least 15 days before the changes are to become effective unless otherwise directed by the administrator. It shall be the affirmative responsibility and continuing duty of each licensee and advance deposit sports wagering operator and their employees to follow and comply with all internal controls. The submission shall include controls and reasonable methods that provide for the following:

a. To prohibit wagering by coaches, athletic trainers, officials, players, or other individuals who participate in an authorized sporting event in which wagers may be accepted.

b. To prohibit wagering by persons who are employed in a position with direct involvement with coaches, players, athletic trainers, officials, athletes or participants in an authorized sporting event in which wagers may be accepted.

c. To promptly report to the commission any criminal or disciplinary proceedings commenced against the licensee or its employees.

d. To promptly report to the commission any abnormal wagering activity or patterns that may indicate a concern about the integrity of an authorized sporting event or events, and any other conduct with the potential to corrupt a wagering outcome of an authorized sporting event for purposes of financial gain, including but not limited to match fixing, and suspicious or illegal wagering activities, including the use of funds derived from illegal activity, wagers to conceal or launder funds derived from illegal activity, use of agents to place wagers, or use of false identification. Integrity-monitoring procedures shall also provide for the sharing of information with other licensees, other governing authorities, and accredited sports governing entities by participating in an integrity-monitoring association or group or by another method as approved by the administrator.

e. Written notification to the commission for any incident where there is a violation involving criminal activity, Iowa Code chapter 99F, a commission rule or order, or an internal control within 72 hours of detection. The licensee or advance deposit sports wagering operator shall provide a written report detailing the violation as required by the administrator.

f. The segregation of incompatible functions so that no employee is in a position to perpetrate and conceal errors or irregularities in the normal course of the employee’s duties.

g. User access controls for all sensitive and secure, physical and virtual, areas and systems within a sports wagering operation.

h. Treatment of problem gambling by:

(1) Identifying problem gamblers.

(2) Complying with the process established by the commission pursuant to Iowa Code section 99F.4(22) and 491—subrule 5.4(12).

(3) Cooperating with the Iowa gambling treatment program in creating and establishing controls.

(4) Including information on the availability of the gambling treatment program in a substantial number of the licensee’s advertisements and printed materials.

i. Setoff winnings of customers who have a valid lien established under Iowa Code chapter 99F.

13.2(8) Revenue reporting. Reports generated from the sports wagering system shall be made available as determined by the commission. The reporting system shall be capable of issuing reports by wagering day, wagering month, and wagering year. Wagering data shall not be purged unless approved by the commission. The reporting system shall provide for a mechanism to export the data for the purposes of data analysis and auditing or verification. The reporting system shall be able to provide, at a minimum, the following sports wagering information:

a. The date and time each event started and ended.

b. Total amount of wagers collected.

c. Total amount of winnings paid to players.

d. Total amount of wagers canceled, voided, and expired.

e. Commission or fees collected.

f. Total value of promotional play or free play used to purchase or execute a sports wager.

g. Event status.

h. Total amount held by the operator for the player accounts.

i. Total amount of wagers placed on future events.
j. Total amount of winnings owed but unpaid by the operator on winning wagers.

13.2(9) Unclaimed winnings and abandoned accounts. Unclaimed winnings and abandoned accounts are subject to the following requirements:

a. Abandoned player accounts under this rule are subject to Iowa Code chapter 556.

b. Player accounts are considered abandoned if no activity by the account holder has occurred for three years. Player activity includes making a wager, making an account deposit, or withdrawing funds.

c. No licensee or advance deposit sports wagering operator shall charge an administration fee or maintenance fee for any inactive player account derived from state of Iowa residents at any time for any reason.

13.2(10) Annual audit. If a vendor is conducting sports wagering for a casino licensee, an audit of the sports wagering operations for the vendor or parent company of the vendor shall be conducted by certified public accountants authorized to practice in the state of Iowa, and the audit shall be provided to the commission within 90 days of the vendor’s fiscal year and meet the following conditions:

a. Inclusion of an internal control letter, audited balance sheet, and audited profit-and-loss statement including a breakdown of expenditures and subsidiaries of sports wagering activities.

b. Inclusion of a supplement schedule indicating financial activities on a calendar-year basis if the vendor’s fiscal year does not correspond to the calendar year.

c. Inclusion of a supplement schedule for all Iowa locations in which the vendor operates.

d. Report of any material errors, irregularities that may be discovered during the audit, or notice of any audit adjustments.

e. Availability, upon request, of an engagement letter for the audit between the vendor or parent company of the vendor and the auditing firm.

13.2(11) Revenue reports. Licensees and advance deposit sports wagering operators shall provide additional reports, as determined necessary by the administrator, that detail the revenue submission required by 491—paragraph 5.4(10)”d.” Reports shall be provided to the commission in a format approved by the administrator. The administrator shall provide written notice to any licensee if additional reports are determined necessary. In addition, the administrator shall provide adequate time to any licensee if a report needs to be created to satisfy this requirement.

13.2(12) Ticket payouts. A method shall be available for players to collect at any time during the facility’s hours of operation winnings from wagers made in person at a facility. Winnings required to be reported on Internal Revenue Service Form W-2G are exempt from this requirement.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; see Suspension note at end of chapter; ARC 5016C, IAB 4/8/20, effective 5/13/20; see Delay note at end of chapter; ARC 5422C, IAB 2/10/21, effective 3/17/21; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—13.3(99F) Approval of sports wagers.

13.3(1) Approval. Prior to offering a sports wager, a facility or advance deposit sports wagering operator shall request that the administrator investigate and approve the sports wager for compliance with commission rules and any other standards as required by the commission. The administrator may require the facility or advance deposit sports wagering operator, at the facility’s or operator’s own expense, to provide additional information as deemed necessary to make a determination. Prior to approval, the administrator may require a trial period of any sports wager offering. Once a sports wager is approved by the administrator, unless it is subsequently disapproved for any reason deemed appropriate by the administrator, the sports wager is available for all operators under the conditions approved and subject to subrule 13.3(2).

13.3(2) Sports wager submissions. Prior to conducting a sports wager approved pursuant to subrule 13.3(1), a licensee or advance deposit sports wagering operator shall submit proposals for the wager, including but not limited to wagering rules, payout information, source of the information used to determine the outcome of the sports wager, and any restrictive features of the wager. The sports wager submission, or requests for modification to an approved wager, shall be submitted in writing and approved by the administrator prior to implementation.
13.3(3) Sports promotional contests, tournaments, or promotional activities. Sports promotional contests, tournaments, or promotional activities may be permitted by the licensee, vendor, or advance deposit sports wagering operator providing the following:

a. Rules shall be made available to participants for review prior to registering. Rules shall include, at a minimum: all conditions registered players must meet to qualify to enter or advance through the event, available prizes or awards, fees, and distribution of prizes or awards based on specific outcomes.

b. Rules are followed. Changes to rules shall not be made after participants have registered.

c. Results shall be made available for the registered players to review at the same location at which or in the same manner in which players registered. Results shall include, at a minimum: name of the event, date of the event, total number of entries, amount of entry fees, total prize pool, and amount paid for each winning category.

d. Fees collected, less cash prizes paid, are subject to the wagering taxes pursuant to Iowa Code section 99F.11(4). In determining sports wagering net receipts, to the extent that cash prizes paid out exceed fees collected, the licensee or advance deposit sports wagering operator shall be deemed to have paid the fees for the participants.

e. Rules include terms and conditions. All emails or digital advertisements promoting contests, tournaments, and promotional activities shall include a link or other easily obtainable source that includes rules or terms and conditions.

f. There is compliance with all other federal, state, and local laws and rules outside of the commission’s jurisdiction.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 5422C, IAB 2/10/21, effective 3/17/21]

491—13.4(99F) Designated sports wagering area. A floor plan identifying the designated sports wagering area, including the location of any device used to assist in the placement, resolution or collection of any sports wager, shall be filed with the administrator for review and approval. Modification to a previously approved plan must be submitted for approval at least ten days prior to implementation. Designated wagering areas shall contain conspicuous signage which denotes that an individual must be at least 21 years of age to wager on sports. Exceptions to this rule must be approved in writing by the administrator. The sports wagering area is subject to compliance with 491—subrule 5.4(7).

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—13.5(99F) Advance deposit sports wagering.

13.5(1) Authorization to conduct advance deposit sports wagering. A licensee or advance deposit sports wagering operator shall receive specific authorization from the commission to conduct advance deposit sports wagering prior to conducting advance deposit sports wagering. The granting of an advance deposit sports wagering license or approval of any agreements between a licensee and an advance deposit sports wagering operator to conduct advance deposit sports wagering does not constitute authorization. Any entity authorized to conduct advance deposit sports wagering is expected to comply with all requirements of this chapter, except for rule 491—13.4(99F), and all other applicable federal, state, local, and commission requirements.

13.5(2) Account registration. A person must have an established account in order to place advance deposit sports wagers. The process for establishing an account is subject to the administrator’s approval. Prior to January 1, 2021, an account shall be established at the facility as required by Iowa Code section 99F.9(4). On or after January 1, 2021, an account may be established through on-site registration under procedures previously approved by the administrator, or through remote registration. To establish an account, an application for an account shall be signed or otherwise authorized in a manner approved by the administrator and shall include the applicant’s full legal name, principal residential address, date of birth, and any other information required by the administrator. The account registration process shall also include:

a. Age verification to prevent persons under the legal age for sports wagering from establishing an account.
b. Player verification of legal name, physical address, and age to correctly identify account holders.

c. Verification that the player is not on the statewide self-exclusion list set forth in Iowa Code section 99F.4(22) prior to establishing an account.

d. Availability and acceptance of a set of terms and conditions that is also readily accessible to the player before and after registration and noticed when updated. Notices shall include, at a minimum, the following:

1. Explanation of rules in which any unrecoverable malfunctions of hardware/software are addressed including, but not limited to, if the unrecoverable malfunction, wagering event cancellation, or other catastrophic malfunction results in the voiding of any wagers.

2. Procedures to deal with interruptions caused by the suspension of data flow from the network server during an event.

3. Specifications advising players to keep their account credentials secure.

4. Statement that no underage individuals are permitted to participate in wagering.

5. Explanation of conditions under which an account is declared inactive and actions undertaken on the account once this declaration is made.

e. Availability and acceptance of a privacy policy that is also readily accessible to the player before and after registration and noticed when updated and that includes, at a minimum, the following:

1. Statement of information that is collected, the purpose for information collection, and the conditions under which information may be disclosed.

2. Statement that any information obtained in respect to player registration or account establishment must be done in compliance with the privacy policy.

3. Requirement that any information about player accounts which is not subject to disclosure pursuant to the privacy policy must be kept confidential, except where the release of that information is required by law.

4. Requirement that all player information must be securely erased from hard disks, magnetic tapes, solid state memory, and other devices before the device is properly disposed of by the licensee. If erasure is not possible, the storage device must be destroyed.

f. If an advance deposit sports wagering operator has an agreement with more than one licensee, the advance deposit sports wagering operator shall submit an agreement to the administrator that indicates the manner in which customer net receipts shall be assigned with its licensee partners. The agreement shall include all partnering licensees and their respective qualified sponsoring organizations, and the net receipts shall be allocated using one of the following methods:

1. Make available an option for new remotely registered customers to select the licensee at which net receipts are assigned.

2. Allocate new remotely registered customer net receipts to the licensee which is located nearest to the customer’s principal residential address.

3. Distribute all customer receipts evenly between all licensees for which an agreement exists.

4. Another allocation agreement that complies with local, state and federal law.

The agreement shall be made available for public inspection.

13.5(3) Operation of an account. The advance deposit sports wagering operator or a licensee shall submit controls, approved by the commission, that include the following for operating an account:

a. Specific procedures and technology partners to fulfill the requirements set forth in subrule 13.5(2).

b. Location detection procedures to reasonably detect and dynamically monitor the location of a player attempting to place any wager. A player outside the permitted boundary shall be rejected, and the player shall be notified. The confidence radius shall be entirely located within the permitted boundary.

c. Specific controls set forth in subrule 13.2(7).

d. Limitation of one active account, per individually branded website, at a time unless otherwise authorized by the commission.
e. Authentication for log in through a username and password or other secure alternative means as authorized by the commission. Processes for retrieving lost usernames and passwords shall be available, secure, and clearly disclosed to the player. Players shall be allowed to change their passwords.

f. Immediate notification to the player when changes are made to any account used for financial transactions or to registration information or when financial transactions are made unless other notification preferences are established by the player.

g. Process to immediately notify a player following an unusual login attempt. In the event that suspicious activity is detected, an account shall be locked. A multifactor authentication process must be employed for the account to be unlocked.

h. Process for players to easily impose limitations or notifications for wagering parameters including, but not limited to, deposits and wagers. Self-imposed limitations must be applied automatically, take effect immediately, and be implemented as indicated by the player. No changes can be made reducing the severity of the self-imposed limitations for at least 24 hours.

i. Process for players to easily self-exclude from wagering for a specified period of time and indefinitely. Self-exclusions must be applied automatically, take effect immediately, and be implemented as indicated by the player. No changes can be made to reduce the severity of the self-exclusion limitations for at least 24 hours. In the event of indefinite self-exclusion, the advance deposit sports wagering operator or licensee must ensure that the player is paid in full for the player’s account balance within a reasonable time provided that the advance deposit sports wagering operator or licensee acknowledges that the funds have cleared. Players must be easily and obviously directed via a link to exclude themselves pursuant to Iowa Code section 99F.4(22). This control does not supersede the requirements set forth in Iowa Code section 99F.4(22).

j. Process to review and deactivate accounts of newly enrolled participants of the statewide self-exclusion program set forth in Iowa Code section 99F.4(22). The operator must ensure that players are paid in full for their account balance within a reasonable time provided that the operator acknowledges that the funds have cleared.

k. Provide for an easy and obvious method for a player to make a complaint and to enable the player to notify the commission if such complaint has not been or cannot be addressed by the advance deposit sports wagering operator or licensee.

13.5(4) Account funds. The following requirements apply to the maintenance of funds associated with a player account:

a. Positive player identification, including any personal identification number (PIN) entry or other approved secure methods, must be completed before the withdrawal of any moneys held by the advance deposit sports wagering operator or licensee can be made.

b. Payments from an account are to be paid directly to an account with a financial institution in the name of the player or made payable to the player and forwarded to the player’s address or through another method that is not prohibited by state or federal law.

c. An advance deposit sports wagering operator or licensee must have in place security or authorization procedures to ensure that only authorized adjustments can be made to player accounts and that changes are auditable.

d. It shall not be possible to transfer funds between two player accounts.

e. An advance deposit sports wagering operator or licensee shall provide a transaction log or account statement history at no cost to players upon request. Information provided shall include sufficient information to allow players to reconcile the statement or log against their own financial records.

f. Requests for withdrawals shall not be unreasonably withheld and shall be completed in a timely manner.

g. An advance deposit sports wagering operator or licensee shall provide a fee-free method for players to deposit or withdraw funds from player accounts.

h. An advance deposit sports wagering operator or licensee shall segregate player account funds from operational funds.

13.5(5) Annual audit. An audit of the advance deposit sports wagering operations for the advance deposit sports wagering operator or licensee or parent company of the advance deposit sports wagering
operator or licensee shall be conducted by certified public accountants authorized to practice in the state of Iowa and provided to the commission within 90 days of the licensee’s fiscal year and meet the following conditions:

a. Inclusion of an internal control letter, audited balance sheet, and audited profit-and-loss statement including a breakdown of expenditures and subsidiaries of advance deposit sports wagering activities.

b. Inclusion of a supplement schedule indicating financial activities on a calendar-year basis if the advance deposit sports wagering operator’s or licensee’s fiscal year does not correspond to the calendar year.

c. Report of any material errors, irregularities that may be discovered during the audit, or notice of any audit adjustments.

d. Availability, upon request, of an engagement letter for the audit between the advance deposit sports wagering operator or licensee or parent company of the advance deposit sports wagering operator or licensee and the auditing firm.

e. Inclusion of a supplemental schedule for Iowa operations. A supplemental schedule shall include a breakdown of advance deposit sports wagering activities by each Iowa casino in which there is an agreement. The supplemental schedule provided to satisfy this requirement may be unaudited; however, the top financial officer of the company shall provide a statement attesting to the accuracy of the information provided to the commission.

13.5(6) Wagers. An advance deposit sports wagering operator shall display a player’s wagers in a readily accessible manner.

13.5(7) Expiration or termination of an Iowa Code section 99F.7A operating agreement. In the event an advance deposit sports wagering operating agreement between a licensee under Iowa Code section 99F.7A and another entity expires, terminates, or is no longer valid, notice of termination must be given to the commission and all customers affiliated with the licensee. A customer shall be given an opportunity to close an account. If the advance deposit sports wagering operator has an operating agreement with other licensees in the state of Iowa, the customer shall have the option to select another partner licensee to which their net receipts shall be assigned, or the customer’s net receipts shall be assigned to any remaining partner licensees in accordance with an agreement submitted to the administrator pursuant to paragraph 13.5(2)”f.”

[ARC 4618C; IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 5422C, IAB 2/10/21, effective 3/17/21; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—13.6(99F) Testing.

13.6(1) Initial testing. All equipment and systems integral to the conduct of sports wagering and advance deposit sports wagering shall be tested and certified for compliance with commission rules and the standards required by a commission-designated independent testing laboratory. Certification and commission approval must be received prior to the use of any equipment or system to conduct sports wagering. The commission may designate more than one independent testing laboratory.

13.6(2) Change control. The licensees and advance deposit sports wagering operators shall submit change control processes that detail evaluation procedures for all updates and changes to equipment and systems to the administrator for approval. These processes shall include details for identifying criticality of updates and determining of submission of updates to an independent testing laboratory for review and certification.

13.6(3) Annual testing.

a. A system integrity and security risk assessment shall be performed annually on the advance deposit sports wagering system.

(1) The testing organization must be independent of the licensee and shall be qualified by the administrator.

(2) The system integrity and security risk assessment shall be completed no later than March 31 of each year.
(3) Results from the risk assessment shall be submitted to the administrator no later than 30 days after the assessment is completed. Results shall include a remediation plan to address any risks identified during the risk assessment.

(4) The risk assessment shall be conducted in accordance with current and accepted industry standard review requirements for risk assessments.

(5) The risk assessment shall include a review of licensee controls. Review of controls shall include but not be limited to a comparison of licensee controls to industry standard and best practice controls, and an audit of the licensee processes for compliance with those controls.

b. At the discretion of the administrator, additional assessments or specific testing criteria may be required.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—13.7(99F) Licensing.

13.7(1) Application and payment of fee. The commission shall, upon payment of an initial license fee of $45,000 and submission of an application consistent with the requirements of Iowa Code section 99F.6, issue a license to conduct sports wagering to a facility.

13.7(2) Application procedure for a facility. Application for a license for a facility to conduct sports wagering shall be made to the commission. In addition to the application, the following must be completed and presented when the application is filed:

a. Name of the entity to be licensed by the commission to conduct sports wagering operations in Iowa.

b. Disclosure of agreements with entities to manage or operate sports wagering with or on behalf of the facility.

c. Disclosure of operating agreements for up to two, or three if authorized by the commission, individually branded internet sites to conduct advance deposit wagering for the facility.

d. Compliance with Iowa Code section 99F.6(4)“a”(2) and (3) requirements for qualified sponsoring organizations or horse racing purses.

e. A bond or irrevocable letter of credit on behalf of the facility in an amount to be determined by the commission.

f. A bank check, cashier’s check, or wire transfer made payable to Iowa Racing and Gaming Commission for $45,000 for an initial license or $10,000 for a renewal license.

13.7(3) Application procedure for an advance deposit sports wagering operator. Application for a license for an advance deposit sports wagering operator with an agreement with a facility shall be made to the commission for approval by the administrator. In addition to the application, the following must be completed and presented when the application is filed:

a. Disclosure of ownership interest, directors, or officers of applicant.

1. An applicant or licensee shall notify the administrator of the identity of each director, corporate officer, owner, partner, joint venture participant, trustee, or any other person who has any beneficial interest of 5 percent or more, direct or indirect, in the business entity. For any of the above, as required by the administrator, the applicant or licensee shall submit background information on forms supplied by the division of criminal investigation and any other information the administrator may require.

For purposes of this rule, the term “beneficial interest” includes all direct and indirect forms of ownership or control, voting power, or investment power held through any contract, lien, lease, partnership, stockholding, syndication, joint venture, understanding, relationship (including family relationship), present or reversionary right, title or interest, or otherwise.

2. For ownership interests of less than 5 percent, the administrator may request a list of these interests. The list shall include names, percentages owned, addresses, social security numbers, and dates of birth. The administrator may request the same information required of those individuals in subparagraph 13.7(3)“a”(1) above.

b. Investigative fees.

1. Advance payment. The department of public safety may request payment of the investigative fee in advance as a condition to beginning investigation.
(2) Payment required. The administrator may withhold final action with respect to any application until all investigative fees have been paid in full.

c. A copy of each of the following:
   1. List of employees of the aforementioned who may have contact with persons within the state of Iowa.
   2. Agreement with facility to operate or manage the advance deposit sports wagering operation.
   d. Any and all changes in the applicant’s legal structure, directors, officers, or the respective ownership interests must be promptly filed with the administrator.
   e. The administrator may deny, suspend, or revoke the license of an applicant or licensee in which a director, corporate officer, or holder of a beneficial interest includes or involves any person or entity which would be, or is, ineligible in any respect, such as through want of character, moral fitness, financial responsibility, or professional qualifications, or due to failure to meet other criteria employed by the administrator, to participate in gaming regardless of the percentage of ownership interest involved. The administrator may order the ineligible person or entity to terminate all relationships with the licensee or applicant, including divestiture of any ownership interest or beneficial interest at acquisition cost.
   f. Disclosure of the full nature and extent of all beneficial interests may be requested by the administrator and shall include the names of individuals and entities, the nature of their relationships, and the exact nature of their beneficial interest.
   g. Public disclosure is made for the benefit of the public, and documents pertaining to the ownership filed with the administrator shall be available for public inspection in accordance with 491—Chapter 3.

13.7(4) Supplementary information. Each applicant shall promptly furnish the administrator with all additional information pertaining to the application or the applicant which the administrator may require. Failure to supply the requested information within five days after the request has been received by the applicant shall constitute grounds for delaying consideration of the application.

13.7(5) Temporary license certificates.
   a. A temporary license certificate may be issued at the discretion of the administrator.
   b. Any temporary license certificate issued at the discretion of the administrator shall be valid for a maximum of 120 calendar days from the date of issue. Failure to obtain a permanent license within the designated time may result in revocation of license eligibility, fine, or suspension.

13.7(6) Withdrawal of application. A written notice of withdrawal of application may be filed by an applicant at any time prior to final action. No application shall be permitted to be withdrawn unless the administrator determines the withdrawal to be in the public interest. No fee or other payment relating to any application shall become refundable by reason of withdrawal of the application.

13.7(7) Record keeping.
   a. Record storage required. Licensees and advance deposit sports wagering operators shall maintain adequate records of business operations, which shall be made available to the administrator upon request. These records shall include:
      1. All correspondence with the administrator and other governmental agencies on the local, state, and federal level.
      2. All correspondence between the licensee and advance deposit sports wagering operators and any of their customers who are applicants or licensees under Iowa Code chapter 99F.
      3. A personnel file on each employee of the licensee and advance deposit sports wagering operator, including sales representatives.
      4. Financial records of all transactions with facilities and all other licensees and advance deposit sports wagering operators under these rules.
   b. Record retention. Records other than those listed in subrule 13.2(8) shall be retained as required by 491—subrule 5.4(14).

13.7(8) Violation of laws or regulations. Violation of any provision of any laws of the state or of the United States of America or of any rules of the commission may constitute an unsuitable method of operation, subjecting the licensee to limiting, conditioning, restricting, revoking or suspending the license, or fining the licensee or advance deposit sports wagering operator, or any combination of the
above. The commission has the discretion to suspend mobile gaming operations of its licensees by written order if necessary.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 5422C, IAB 2/10/21, effective 3/17/21]

These rules are intended to implement Iowa Code chapters 99D and 99F.

[Filed Emergency ARC 4618C, IAB 8/28/19, effective 7/31/19][1]

[Filed ARC 5016C (Amended Notice ARC 4807C, IAB 12/18/19; Notice ARC 4617C, IAB 8/28/19), IAB 4/8/20, effective 5/13/20][2]

[Filed ARC 5422C (Notice ARC 5269C, IAB 11/18/20), IAB 2/10/21, effective 3/17/21]

[Filed ARC 6169C (Notice ARC 6056C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]

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1 Applicability of paragraph 13.2(7)”i” suspended until the adjournment of the 2020 session of the General Assembly by the Administrative Rules Review Committee at its meeting held August 12, 2019. Suspension superseded by adoption of paragraph 13.2(7)”i” in ARC 5016C, effective 5/13/20.

2 Applicability of paragraph 13.2(7)”i” delayed until the adjournment of the 2021 session of the General Assembly by the Administrative Rules Review Committee at its meeting held May 8, 2020.
CHAPTER 14
FANTASY SPORTS CONTESTS

491—14.1(99E) Definitions. As used in these rules, unless the context otherwise requires, the following definitions apply:

“Administrator” means the administrator of the racing and gaming commission or the administrator’s designee.

“Applicant” means an internet fantasy sports contest service provider applying for a license to conduct internet fantasy sports contests under this chapter.

“Commission” means the state racing and gaming commission created under Iowa Code section 99D.5.

“Entry fee” means cash or cash equivalent that is required to be paid by an internet fantasy sports contest player to an internet fantasy sports contest service provider in order to participate in a fantasy sports contest.

“Fantasy sports contest” or “contest” means a fantasy or simulated game or contest in which:
1. The fantasy sports contest operator is not a participant in the game or contest;
2. The value of all prizes and awards offered to winning participants are established and made known to the participants in advance of the contest;
3. All winning outcomes reflect the relative knowledge and skill of the participants;
4. The outcome shall be determined by accumulated statistical results of the performance of individuals, including athletes in the case of sporting events; and
5. No winning outcome is solely based on the score, point spread, or any performance or performances of any single actual team or solely on any single performance of an individual athlete or player in any single actual event. However, until May 1, 2020, “fantasy sports contest” does not include any fantasy or simulated game or contest in which any winning outcomes are based on statistical results from a collegiate sporting event as defined in Iowa Code section 99F.1.

“Fantasy sports contest service provider” means a person, including a licensee under Iowa Code chapter 99D, 99E or 99F, who conducts an internet fantasy sports contest as authorized by this chapter.

“Highly experienced player” means a person who has entered more than 1,000 contests conducted by a single fantasy sports contest service provider or has won more than three fantasy sports contest prizes of $1,000 or more from a single fantasy sports contest service provider. A fantasy sports contest provider may declare other players a “highly experienced player” so long as the provider’s criteria for declaration would include players previously declared a “highly experienced player” by the provider.

“Internal controls” means the fantasy sports contest service provider’s system of internal controls.

“Licensee” means any person licensed under Iowa Code section 99E.5 to conduct internet fantasy sports contests.

“Location percentage” means, for each internet fantasy sports contest, the percentage, rounded to the nearest tenth of a percent, equal to the total charges and fees collected from all internet fantasy sports contest players located in this state divided by the total charges and fees collected from all participants in the internet fantasy sports contest.

“Net revenue” means an amount equal to the total entry and administrative fees collected from all participants entering fantasy sports contests less winnings paid to participants in the contest, multiplied by the location percentage.

“Player” or “customer” means a person who is at least 21 years of age and participates in an internet fantasy sports contest operated by an internet fantasy sports contest service provider.

“Prize” means anything of value, including cash or a cash equivalent, contest credits, merchandise or entry to another contest in which a prize may be awarded.

“Script” means a list of commands that a fantasy sports-related computer program can execute and is created by fantasy sports players, or by third parties for the use of all players, to automate processes on a fantasy sports contest internet platform.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]
491—14.2(99E) Application for fantasy sports contest service provider license and licensing. A fantasy sports contest service provider must be licensed by the commission to offer an internet fantasy sports contest under Iowa Code chapter 99E. Any individuals who are required to be occupationally licensed by the commission shall comply with the license requirements of Iowa Code section 99E.5 and rules 491—6.2(99D,99E,99F,252J) to 491—6.13(99D,99F,272D). Occupational licensees are also subject to 491—Chapter 4.

14.2(1) Licensing standards. Standards which shall be considered when determining the qualifications of an applicant shall include, but are not limited to, financial stability; business ability and experience; good character and reputation of the applicant as well as all directors, officers, partners, and employees and integrity of financial backers. For the purposes of this rule, the term “applicant” includes each member of the board of directors or other governing body of an applicant.

a. The commission shall not grant a license to an applicant if there is substantial evidence that any of the following apply:

1. A license issued to the applicant to conduct internet fantasy sports contests in another jurisdiction has been revoked, or a request for a license to conduct internet fantasy sports contests in another jurisdiction has been denied, by an entity licensing persons to conduct such contests in that jurisdiction.

2. The applicant has not demonstrated financial responsibility sufficient to adequately meet the requirements of the enterprise proposed.

3. The applicant does not adequately disclose the true owners of the enterprise proposed.

4. The applicant has knowingly made a false statement of a material fact to the commission.

5. The applicant has failed to meet a monetary obligation in connection with conducting an internet fantasy sports contest.

6. The applicant is not of good repute and moral character or the applicant has pled guilty to, or has been convicted of, a felony.

7. Any member of the board of directors or governing body of the applicant is not 21 years of age or older.

b. A person who knowingly makes a false statement on the application is guilty of an aggravated misdemeanor.

14.2(2) Application procedure. Application for an internet fantasy sports contest service provider license shall be made to the commission on the form prescribed and published by the commission. In addition to the application, the following must be completed and presented when the application is filed:

a. Disclosure of ownership interest, directors, or officers of applicant.

b. The identity and date of birth of each member of the board of directors or other governing body of the applicant.

c. The identity of each director, corporate officer, owner, partner, joint venture participant, trustee, or any other person who has any beneficial interest of 5 percent or more, direct or indirect, in the business entity. For any of the above, as required by the administrator, the applicant or licensee shall submit background information on forms supplied by the division of criminal investigation and any other information the administrator may require. For purposes of this rule, the term “beneficial interest” includes all direct and indirect forms of ownership or control, voting power, or investment power held through any contract, lien, lease, partnership, stockholding, syndication, joint venture, understanding, relationship (including family relationship), present or reversionary right, title or interest, or otherwise.

d. For ownership interests of less than 5 percent, the administrator may request a list of these interests. At a minimum, the list shall include names, percentages owned, addresses, social security numbers, and dates of birth. The administrator may request the same information required of those individuals in subrule 14.2(1).

e. A list of employees of the aforementioned who may be conducting business directly or indirectly on behalf of the applicant in the state of Iowa.

f. A bond or irrevocable letter of credit on behalf of the applicant or other satisfactory evidence, as determined by the commission, of a safe and reliable means of fulfilling the applicant’s obligations to customers and the state of Iowa in an amount determined by the commission.
14.2(3) Investigative fee.
   a. Advance payment. The department of public safety may request payment of the investigative
      fee in advance as a condition to beginning the investigation.
   b. Payment required. The administrator may withhold final action with respect to any application
      until all investigative fees have been paid in full.

14.2(4) Application fee. A bank or cashier’s check shall be made payable to Iowa Racing and
Gaming Commission for $5,000.

14.2(5) Reporting of changes. Any and all changes in the applicant’s legal structure, directors,
oficers, or the respective ownership interests must be promptly filed with the administrator.

14.2(6) Ineligibility. The administrator may deny, suspend, or revoke the license of an applicant or
licensee in which a director, corporate officer, or holder of a beneficial interest includes or involves
any person or entity which would be, or is, ineligible in any respect, such as through want of character,
moral fitness, financial responsibility, or professional qualifications, or due to failure to meet other criteria
employed by the administrator, to participate in gaming regardless of the percentage of ownership interest
involved. The administrator may order the ineligible person or entity to terminate all relationships
with the licensee or applicant, including divestiture of any ownership interest or beneficial interest at
acquisition cost.

14.2(7) Disclosure. Disclosure of the full nature and extent of all beneficial interests may be
requested by the administrator and shall include the names of individuals and entities, the nature of
their relationships, and the exact nature of their beneficial interest.

14.2(8) Public disclosure. Disclosure is made for the benefit of the public, and all documents
pertaining to the ownership filed with the administrator shall be available for public inspection.

14.2(9) Supplementary information. Each applicant shall promptly furnish the administrator with all
additional information pertaining to the application or the applicant which the administrator may require.
Failure to supply the requested information within five days after the request has been received by the
applicant shall constitute grounds for delaying consideration of the application.

14.2(10) Requirements placed upon applicants and licensees. For purposes of this chapter, the
requirements placed upon an applicant shall become a requirement to the licensee once a license
has been granted. Every license is granted upon the condition that the license holder shall accept,
observe, and enforce the rules and regulations of the commission. It is the affirmative responsibility
and continuing duty of each officer, director, and employee of said license holder to comply with the
requirements of the application and conditions of license and to observe and enforce the rules. The
holding of a license is a privilege. The burden of proving qualifications for the privilege to receive any
license is on the licensee at all times. A licensee must accept all risks of adverse public notice or public
opinion, embarrassment, criticism, or financial loss that may result from action with respect to a license.
Licensees further covenant and agree to hold harmless and indemnify the Iowa racing and gaming
commission from any claim arising from any action of the commission in connection with that license.
[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—14.3(99E) Temporary license certificates.

14.3(1) A temporary license certificate may be issued at the discretion of the administrator.

14.3(2) Any temporary license certificate issued at the discretion of the administrator shall be valid
for a maximum of 120 calendar days from the date of issue. Failure to obtain a permanent license within
the designated time may result in revocation of license eligibility, fine, or suspension.
[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—14.4(99E) Withdrawal of application. A written notice of withdrawal of application may be filed
by an applicant at any time prior to final action. No application shall be permitted to be withdrawn unless
the administrator determines the withdrawal to be in the public interest. No fee or other payment relating
to any application shall become refundable by reason of withdrawal of the application.
[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—14.5(99E) Fees.
14.5(1) *Initial license.* Once the commission is satisfied that the requirements of this chapter have been met, an applicant will be granted an initial license for up to three years.

14.5(2) *Annual license fee.* After the initial licensing period, a licensee shall pay an annual fee of $1,000 for licensees with a yearly adjusted gross revenue under $150,000 or $5,000 for licensees with a yearly adjusted gross revenue of $150,000 or greater. The administrator shall set the time period for determining a licensee’s adjusted gross revenue. Licenses must be renewed annually in a manner established by the commission.

[ARC 4618C; IAB 8/28/19, effective 7/31/19; ARC 5016C; IAB 4/8/20, effective 5/13/20]

491—-14.6(99E) *Taxes.*

14.6(1) The licensee shall pay a tax rate pursuant to Iowa Code section 99E.6 on adjusted revenue from fantasy sports contests. “Adjusted revenue” means the amount equal to the total charges and fees collected from all participants entering the fantasy sports contest less winnings paid to participants in the contest, multiplied by the location percentage defined in Iowa Code section 99E.1. Charges and fees returned to participants due to a participant withdrawing the participant’s entry from a fantasy sports contest shall not be considered when calculating the adjusted revenue. Contests resulting in negative adjusted revenue shall be considered promotional in nature and cannot be used to offset taxes owed pursuant to Iowa Code section 99E.6.

14.6(2) Voided and canceled transactions are not considered receipts for the purpose of this calculation.

14.6(3) Any offering used to directly participate in a contest shall be considered receipts for the purpose of this calculation.

14.6(4) Any other fee collected to participate in a fantasy sports contest shall be subject to the wagering tax pursuant to Iowa Code section 99E.6.

14.6(5) All moneys collected for and owed to the state of Iowa under Iowa Code chapter 99E for the payment of fantasy sports contests shall be accounted for and itemized on a monthly basis, in a format approved by the commission, by noon on Wednesday following a gaming week’s end as defined by 491—subparagraph 5.4(10) ‘b ’(1) in which the completed gaming week includes the last day of the month. All fantasy sports contest fees owed shall be received in the treasurer’s office by 11 a.m. on the Thursday after accounting and itemization is due in the commission office.

14.6(6) Fantasy sports operators shall provide additional reports, as determined necessary by the administrator, that detail the taxes collected in accordance with this rule. Reports shall be provided to the commission in a format approved by the administrator. The administrator shall provide written notice to any licensee if additional reports are determined necessary. In addition, the administrator shall provide adequate time to any licensee if a report needs to be created to satisfy this requirement.

[ARC 4618C; IAB 8/28/19, effective 7/31/19; ARC 5016C; IAB 4/8/20, effective 5/13/20; ARC 5422C; IAB 2/10/21, effective 3/17/21]

491—14.7(99E) *Account registration.* A person must have an established account in order to participate in fantasy sports contests. To establish an account, an application for an account shall be authorized in a manner approved by the administrator and shall include the applicant’s full legal name, principal residential address, date of birth and any other information required by the commission. The account registration process shall also include:

14.7(1) Age verification to prevent persons under the legal age from participating in fantasy sports contests and establishing an account.

14.7(2) Customer verification of legal name, physical address and age to correctly identify account holders.

14.7(3) Verification that the customer is not on the statewide self-exclusion list set forth in Iowa Code section 99F.4(22) prior to establishing an account.

14.7(4) Availability and acceptance of a set of terms and conditions that are also readily accessible to the customer before and after registration and noticed when updated. Notices shall include, at a minimum, the following:
a. Explanation of rules in which any unrecoverable malfunctions of hardware/software are addressed including, but not limited to, if the unrecoverable malfunction, fantasy sports event cancellation, or any other catastrophic malfunction results in the voiding of any contests.
b. Procedures to deal with interruptions caused by the suspension of data flow from the network server during a contest.

c. Specifications advising customers to keep their account credentials secure.
d. Statement that no underage individuals are permitted to participate in contests. 14.7(5) Availability and acceptance of a privacy policy that is also readily accessible to the customer before and after registration and noticed when updated that includes, at a minimum, the following:
a. Statement of information that is collected, the purpose for information collection and the conditions under which information may be disclosed.
b. Statement that any information obtained in respect to customer registration or account establishment must be done in compliance with the privacy policy.
c. Requirement that any information about customer accounts which is not subject to disclosure pursuant to the privacy policy must be kept confidential, except where the release of that information is required by law.
d. Requirement that all customer information must be securely erased from hard disks, magnetic tapes, solid state memory and other devices before the device is properly disposed of by the licensee. If erasure is not possible, the storage device must be destroyed.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—14.8(99E) Fantasy sports contest service provider requirements.

14.8(1) Internal controls. Licensees shall submit a description of internal controls to the administrator. The submission shall be made at least 30 days before fantasy sports contest operations are to commence unless otherwise approved by the administrator. All internal controls must be approved by the administrator prior to commencement of contest operations. The service provider shall submit to the administrator any changes to the internal controls previously approved at least 15 days before the changes are to become effective unless otherwise directed by the administrator. It shall be the affirmative responsibility and continuing duty of each licensee and its employees to follow and comply with all internal controls. The submission shall include controls and reasonable methods that comply with and provide for:

a. Prevention of employees of the internet fantasy sports contest service provider and relatives living in the same household of such employees from competing in any internet fantasy sports contest on the service provider’s digital platform in which the service provider offers a prize to the public.
b. Verification that any fantasy sports contest player is 21 years of age or older.
c. Restriction of entries from coaches, officials, athletes, contestants, or other individuals who participate in a game or contest that is the subject of an internet fantasy sports contest in which the outcome is determined, in whole or in part, by the accumulated statistical results of a team of individuals in the game or contest in which they participate.
d. An easy and obvious method for a player to make a complaint and to enable the player to notify the commission if such complaint has not been or cannot be resolved by the licensee.
e. Measures used to determine the true identity, date of birth, and address of each player seeking to open an account.
f. Standards and procedures used to monitor fantasy sports contests to detect the use of unauthorized scripts and restrict players found to have used such scripts from further fantasy sports contests.
g. Prevention of unauthorized withdrawals from a registered player’s account by the service provider or others.
h. How the service provider will accept wagers within the permitted boundary.
i. How the service provider will segregate fantasy sports contest player funds from operational funds.
j. Protection of a fantasy sports contestant’s personal and private information.
14.8(2) Records. Licensees shall provide all information requested by the commission. Access to this information shall be immediate, and copies of the information shall be delivered within seven days or less as ordered by the commission. The licensees shall ensure all books and records and their retention comply with 491—subrule 5.4(14). All records pertaining to contests shall be available to allow for player complaint resolution.

14.8(3) Reporting. The licensee shall provide prompt notification of any facts which the licensee has reasonable grounds to believe indicate a violation of law or commission rule committed by licensees, their key persons, or their employees, including without limitation the performance of licensed activities different from those permitted under their license. The licensee is also required to provide a detailed written report within seven business days, or a time frame otherwise approved by the administrator, from the discovery for any of the following:

a. Criminal or disciplinary proceedings commenced against the service provider or its employees in connection with its operations;
b. Abnormal contest activity or patterns that may indicate a concern about the integrity of an internet fantasy sports contest;
c. Any other conduct with the potential to corrupt an outcome of an internet fantasy sports contest for purposes of financial gain, including but not limited to match fixing;
d. Suspicious or illegal internet fantasy sports contest activities, including the use of funds derived from illegal activity, deposits of money to enter an internet fantasy sports contest to conceal or launder funds derived from illegal activity;
e. The use of agents to enter an internet fantasy sports contest or use of false identification.

14.8(4) Technical and testing requirements.

a. Initial testing. All equipment and systems integral to the conduct of fantasy sports contests shall be tested and certified for compliance with commission rules and the standards required by a commission-designated independent testing laboratory. Certification and commission approval must be received prior to the use of any equipment or system to conduct a fantasy sports contest. The commission may designate more than one independent testing laboratory.

b. Change control. The fantasy sports contest service providers shall submit change control processes that detail evaluation procedures for all updates and changes to equipment and systems to the administrator for approval. These processes shall include details for identifying criticality of updates and determining of submission of updates to an independent testing laboratory for review and certification.

c. Annual testing.

(1) A system integrity and security risk assessment shall be performed annually on the fantasy sports contest system.

1. The testing organization must be independent of the licensee and shall be qualified by the administrator.

2. The system integrity and security risk assessment shall be completed no later than March 31 of each year. Results shall include a remediation plan to address any risks identified during the risk assessment.

3. Results from the risk assessment shall be submitted to the administrator no later than 30 days after the assessment is completed.

4. The risk assessment shall be conducted in accordance with current and accepted industry standard review requirements for risk assessments.

5. The risk assessment shall include a review of licensee controls. Review of controls shall include but not be limited to a comparison of licensee controls to industry standard and best practice controls, and an audit of the licensee processes for compliance with those controls.

(2) At the discretion of the administrator, additional assessments or specific testing criteria may be required.
d. Limit on number of websites and platforms. A fantasy sports contest service provider is authorized to conduct no more than two websites or platforms maintained and operated by the service provider.

14.8(5) Operating requirements. A fantasy sports contest service provider shall ensure the following:

a. Players winning fantasy sports contests shall have winning funds deposited into their player account or be paid by other means approved by the administrator within 48 hours from the end of the contest. Players shall have a fee-free method to deposit or withdraw funds from their player account. If funds are unable to be placed in a player’s account, the fantasy sports contest service provider shall mail the funds to the player’s address on file within ten days.

b. Player withdrawal of funds maintained in the player account shall be completed within five business days of the request unless the licensed fantasy sports contest service provider believes, in good faith, that the player engaged in fraud or other illegal activity pursuant to Iowa Code chapter 99D, 99E or 99F.

c. Procedures allow for a player to close an account and to access the player’s history, including all fantasy sports contests in which the player participated.

d. Employees of the licensee are prohibited from participation in any fantasy sports contest offered by the licensee in which a cash prize is offered to the public. This includes prohibiting relatives living in the same household as such employees from competing in any fantasy sports contests offered by any licensee.

e. Prohibition of the sharing of confidential information that could affect fantasy sports contest play with third parties until the information is made publicly available.

f. Players are allowed to voluntarily self-exclude in compliance with Iowa Code section 99F.4(22), and a fantasy sports contest service provider shall follow all resolutions associated with the process.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 5423C, IAB 2/10/21, effective 3/17/21; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—14.9(99E) Contest rules.

14.9(1) Prior to conducting a new type of fantasy sports contest, a fantasy sports contest service provider shall submit proposed contest rules to the administrator. The contest submission shall be in writing and approved by the administrator prior to implementation. The administrator shall approve, deny, or request further information within three business days of submission. If the administrator takes no action within that period, the fantasy sports contest service provider may offer the requested contest unless the administrator issues a subsequent disapproval. Once a contest is approved, the contest is available for all fantasy sports contest service providers unless the contest format is subsequently disapproved by the administrator for any reason the commission deems appropriate. Fantasy sports contest service providers may offer minor variations of an approved contest type without seeking administrator approval. Minor variations include:

a. Offering the contest format for any sport, league, association or organization previously approved by the administrator for any fantasy sports contest type;

b. The size of the contest and number of entries permitted;

c. Nonmaterial changes to entry fee and prize structure;

d. The number of athletes that a contestant selects to fill a roster when completing an entry;

e. The positions that must be filled when completing an entry;

f. Adjustments to the scoring system; and

g. Adjustments to a salary cap.

14.9(2) Licensees are required to comply with and ensure the following:

a. Advertisements for contests and prizes offered by a licensee shall not target prohibited participants, underage persons, or self-excluded persons.

b. The values of all prizes and awards offered to winning players must be established and made known to the players in advance of the contest.
c. Introductory procedures for players are prominently displayed on the main page of the licensee’s platform to explain contest play and how to identify a highly experienced player.

d. Identification of all highly experienced players in every fantasy sports contest by a symbol attached to the players’ usernames, or by other easily visible means, on all platforms supported by the licensee.

e. Contests are not offered based on the performance of participants in high school or youth sports events. However, until May 1, 2020, “fantasy sports contest” does not include any fantasy or simulated game or contest in which any winning outcomes are based on statistical results from a collegiate sporting event as defined in Iowa Code section 99E.1.

f. Representations or implications about average winnings from contests shall not be unfair or misleading.

g. Prohibition of the use of unauthorized third-party scripts or unauthorized scripting programs for any contest and ensure that measures are in place to deter, detect, and prevent cheating to the extent reasonably possible. “Cheating” includes collusion and the use of cheating devices, including the use of software programs that submit entry fees or adjust the athletes selected by a player.

h. Prominent display of information about the maximum number of entries that may be submitted for that contest for all advertised fantasy sports contests.

i. Disclosure of the number of entries that a player may submit to each fantasy sports contest and provide reasonable steps to prevent players from submitting more than the allowable number.

j. Opportunity for players to file a patron dispute.

k. Conspicuously disclose the source of the data utilized in any results.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—14.10(99E) Segregation account requirements and financial reserves.

14.10(1) Segregation. Fantasy sports contest service providers shall segregate all fantasy sports contest player funds from operational funds.

14.10(2) Financial reserves. For the protection of the funds of contest participants held in paid fantasy sports accounts, the fantasy sports contest service provider shall maintain a reserve in the form of cash, cash equivalents, an irrevocable letter of credit, payment processor reserves and receivables, a bond, or a combination thereof in the amount of the deposits in internet fantasy sports contest player accounts.

a. The method of reserve shall be submitted and approved by the commission prior to implementation.

b. The amount of the reserve shall be equal to, at a minimum, the sum of all registered players’ funds held in player accounts originating in Iowa.

c. If, at any time, the licensee’s total reserve is less than the amount required by the reserve calculation, the licensee shall notify the commission of this deficiency within 72 hours.

d. Each licensee shall continuously monitor and maintain a record of all player deposits and the licensee’s cash reserves to ensure compliance with the cash reserves requirement.

e. The licensee shall provide the commission with documentation including the amount of deposits in players’ accounts and the amount in cash reserves as of the last day of each month. The information is due by the fifteenth day of the month for the preceding month.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 6169C, IAB 2/9/22, effective 3/16/22]

491—14.11(99E) Annual audit. An audit of the fantasy sports contest operations for the licensee or parent company of the licensee shall be conducted by certified public accountants authorized to practice in the state of Iowa and provided to the commission within 180 days of the licensee’s fiscal year and meet the following conditions:

14.11(1) Inclusion of an internal control letter, audited balance sheet, and audited profit-and-loss statement including a breakdown of expenditures and subsidiaries of fantasy sports contest activities.

14.11(2) Inclusion of a supplement schedule indicating financial activities on a calendar-year basis if the licensee’s fiscal year does not correspond to the calendar year.
14.11(3) Report of any material errors, irregularities that may be discovered during the audit, or notice of any audit adjustments.

14.11(4) Availability, upon request, of an engagement letter for the audit between the licensee or parent company of the licensee and the auditing firm.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]


14.12(1) Abandoned player accounts under this rule are subject to Iowa Code chapter 556. Player accounts are considered abandoned if no activity by the account holder has occurred for three years. Player activity includes entering a contest, making an account deposit, or withdrawing funds.

14.12(2) No internet fantasy sports contest service provider shall charge an administration fee or maintenance fee for any inactive player account derived from state of Iowa residents at any time for any reason.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

491—14.13(99E) Problem gambling.

14.13(1) The licensee shall adopt and implement the following:
   a. Policies and procedures designed to identify compulsive play.
   b. Policies and procedures designed to comply with the process established by the commission pursuant to Iowa Code section 99F.4(22).
   c. Policies and procedures designed to cooperate with the Iowa gambling treatment program in creating and establishing controls.
   d. Policies and procedures designed to make information available to customers concerning assistance for compulsive play in Iowa, including websites or toll-free numbers directing customers to reputable resources containing further information, which shall be free of charge.
   e. A process for players to easily impose limitations or notifications for deposits and monetary participation in a contest. Limitations must be applied automatically, take effect immediately, and be implemented as indicated by the player. No changes can be made reducing the severity of the self-imposed limitations for at least 24 hours.
   f. A process for players to easily self-exclude for a specified period of time and indefinitely. Self-exclusions must be applied automatically, take effect immediately, and be implemented as indicated by the player. No changes can be made to reduce the severity of the self-exclusion limitations for at least 24 hours. In the event of indefinite self-exclusion, the licensee must ensure that the player is paid in full for the player’s account balance within a reasonable time provided that the licensee acknowledges that the funds have cleared. Players must be easily and obviously directed via a link to exclude themselves pursuant to Iowa Code section 99F.4(22). This control does not supersede the requirements set forth in Iowa Code section 99F.4(22).
   g. A process to review and deactivate accounts of newly enrolled participants of the statewide self-exclusion program set forth in Iowa Code section 99F.4(22). The licensee must ensure that the player is paid in full for the player’s account balance provided that the licensee acknowledges that the funds have cleared.

14.13(2) The licensee shall also include on the internet site or mobile application the statewide telephone number of the Iowa department of public health to provide problem gambling information and extensive responsible gaming features in addition to those described in Iowa Code section 99F.4(22).

14.13(3) Money forfeited by a voluntarily excluded person pursuant to Iowa Code section 99F.4(22) shall be withheld by the licensee and remitted to the general fund of the state by the licensee.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20; ARC 6169C, IAB 2/9/22, effective 3/16/22]


14.14(1) Operation. The internet fantasy sports contest service provider shall submit the following for commission approval:

   a. Internal controls for the operation of the account.
b. A detailed description and certification of systems and procedures used by the internet fantasy sports contest service provider to validate the identity, age and location of licensee account holders and to validate the legality of wagers accepted.

c. Certification of secure retention of all records related to internet fantasy sports contests and accounts for a period of not less than three years or such longer period as specified by the commission.

d. Certification of prompt commission access to all records relating to account holder identity, age and location in hard-copy or standard electronic format acceptable to the commission.

e. Verification that the player is not on the statewide voluntary self-exclusion list set forth in Iowa Code section 99F.4(22) prior to establishing an account.

14.14(2) Record keeping.

a. Record storage required. Internet fantasy sports contest service providers shall maintain adequate records of business operations, which shall be made available to the administrator upon request. These records shall include:

(1) All correspondence with the administrator and other governmental agencies on the local, state, and federal level.

(2) All correspondence between the licensee and any of its customers who are applicants or licensees under Iowa Code chapter 99E.

(3) Financial records of all transactions with players and all other licensees under these regulations.

b. Record retention. The records listed in paragraph 14.14(2) "a" shall be retained as required by 491—subrule 5.4(14).

14.14(3) Violation of laws or regulations. Violation of any provision of any laws of the state or of the United States of America or of any rules of the commission may constitute an unsuitable method of operation, subjecting the licensee to limiting, conditioning, restricting, revoking or suspending the license, or fining the licensee, or any combination of the above. The commission has the discretion to suspend fantasy sports contest operations of its licensees by written order if necessary.

[ARC 4618C, IAB 8/28/19, effective 7/31/19; ARC 5016C, IAB 4/8/20, effective 5/13/20]

These rules are intended to implement Iowa Code chapters 99D, 99E and 99F.

[Filed Emergency ARC 4618C, IAB 8/28/19, effective 7/31/19]
[Filed ARC 5016C (Amended Notice ARC 4807C, IAB 12/18/19; Notice ARC 4617C, IAB 8/28/19), IAB 4/8/20, effective 5/13/20]
[Filed ARC 5422C (Notice ARC 5269C, IAB 11/18/20), IAB 2/10/21, effective 3/17/21]
[Filed ARC 5423C (Notice ARC 5315C, IAB 12/16/20), IAB 2/10/21, effective 3/17/21]
[Filed ARC 6169C (Notice ARC 6056C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
MANAGEMENT DEPARTMENT[541]

[Created by 1986 Iowa Acts, chapter 1245, section 103]
Divisions under this “umbrella” include: Appeal Board, State[543], City Finance Committee[545],
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CHAPTER 9
DELEGATION OF CONSTRUCTION PERMITTING AUTHORITY

[Prior subject matter DEQ Ch 24]
[Prior to 12/3/86, Water, Air and Waste Management[900]]

567—9.1(455B) Scope. Iowa Code section 455B.183 delegates construction permitting authority over certain sewer and water main extensions to qualified local public works departments and rural water systems organized under Iowa Code chapter 357A or 504. This chapter describes the manner and criteria under which the department oversees this delegated authority.
[ARC 5052C, IAB 6/17/20, effective 7/22/20]

567—9.2(455B,17A) Forms. The following forms are to be used by the local public works department or rural water system implementing this authority:
   542-1001: Application for delegating permitting authority to local public works departments
   542-1002: Statement of engineer’s qualifications
   542-1003: Review checklist for water main extensions at local public works departments
   542-1004: Review checklist for sewer extensions
   542-1005: Quarterly report for permitting authority
   542-1057: Application for delegating permitting authority to rural water systems
   542-1058: Review checklist for water main extensions at rural water systems
[ARC 5052C, IAB 6/17/20, effective 7/22/20]

567—9.3(455B) Procedures. A local public works department or rural water system incorporated under Iowa Code chapter 357A or 504 exercising permitting authority for sewer or water supply distribution system extensions under Iowa Code section 455B.183 shall notify the director in writing prior to the first permit issuance, using Form 542-1001 or 542-1057, as applicable, and 542-1002. Additional information may be requested by the director.
[ARC 5052C, IAB 6/17/20, effective 7/22/20]

567—9.4(455B) Criteria for permitting authority at local public works departments. The requirements for permitting authority at local public works departments are as follows:

9.4(1) Permitting authority under this rule applies only to extensions which:
   a. Primarily serve residential consumers and will not result in an increase greater than 5 percent of the capacity of the treatment works or system, or will serve fewer than 250 dwelling units.
   b. In the case of sewer extensions, will not exceed the capacity of any treatment works which received a federal or state monetary grant after 1972.
   c. In the case of water main extensions, will not exceed the production capacity of any system constructed after 1972.

9.4(2) The local public works department’s standard specifications must be in conformance with the Iowa Standards for Sewer Systems cited in 567—paragraph 64.2(9) “b,” or the water supply construction standards in rule 567—43.3(455B), and must be filed with and approved by the department.

9.4(3) The reviewing engineer shall be licensed as a professional engineer in Iowa and shall be employed or retained by the local public works department.

9.4(4) When reviewing applications for sewer and water supply distribution system extensions under its jurisdiction, the local public works department shall use the Iowa Standards for Sewer Systems, the water supply construction standards in rule 567—43.3(455B), and the local standard specifications approved by the department.

9.4(5) The local public works department shall use Form 542-1003 or Form 542-1004, as applicable, when reviewing plans. Upon issuance of each permit, the local public works department shall submit to the department a copy of the permit and a copy of the form used during the review.

9.4(6) The local public works department shall submit to the department a complete quarterly report using Form 542-1005 by the fifteenth day of the month following each quarter of the calendar year.
9.4(7) Plans for which a construction permit has been issued shall be retained on file by the local public works department for the life of the extension or until the extension has been platted.  
[ARC 5052C, IAB 6/17/20, effective 7/22/20; ARC 6190C, IAB 2/9/22, effective 3/16/22]

567—9.5(455B) Criteria for permitting authority at rural water systems. The requirements for permitting authority at rural water systems incorporated under Iowa Code chapter 357A or 504 are as follows:

9.5(1) Permitting authority under this rule applies only to extensions which:

a. Primarily serve residential consumers and will not result in an increase greater than 5 percent of the capacity of the treatment works or system, or will serve fewer than 250 dwelling units.

b. In the case of sewer extensions, will not exceed the capacity of any treatment works which received a federal or state monetary grant after 1972.

c. In the case of water main extensions, will not exceed the production capacity of any system constructed after 1972.

9.5(2) The rural water system’s standard specifications must be in conformance with the Iowa Standards for Sewer Systems cited in 567—paragraph 64.2(9) “b,” or the water supply construction standards in 567—43.3(455B), and must be filed with and approved by the department. The system’s hydraulic modeling must comply with the water supply distribution system standards pursuant to rule 567—43.3(455B).

9.5(3) The reviewing engineer shall be licensed as a professional engineer in Iowa and shall be employed or retained by the rural water system.

9.5(4) When reviewing applications for sewer and water supply distribution system extensions under its jurisdiction, the rural water system shall use the Iowa Standards for Sewer Systems, the water supply construction standards in rule 567—43.3(455B), and the local standard specifications approved by the department.

9.5(5) The rural water system shall use Form 542-1003 or Form 542-1058, as applicable, when reviewing plans. Upon issuance of each permit, the rural water system shall submit to the department a copy of the permit and a copy of the form used during the review.

9.5(6) The rural water system shall submit to the department a complete quarterly report using Form 542-1005 by the fifteenth day of the month following each quarter of the calendar year.

9.5(7) Plans for which a construction permit has been issued shall be retained on file by the rural water system for the life of the extension.  
[ARC 5052C, IAB 6/17/20, effective 7/22/20]

567—9.6(455B) No variance allowed. No variance to the design standards is allowed under delegated permitting authority. If a variance to the design standards is needed, the local public works department or rural water system must apply to the department for an individual construction permit following the wastewater permit procedures in rule 567—60.4(455B) and rule 567—64.2(455B) and the water supply permit procedures in 567—subrule 40.4(1).  
[ARC 5052C, IAB 6/17/20, effective 7/22/20]

567—9.7(455B) Criteria for rescission or revocation of delegated permitting authority.

9.7(1) The local public works department or rural water system may voluntarily request that its permitting authority be rescinded by submitting the request in writing to the director.

9.7(2) The director may suspend or revoke delegation of review and permit authority after notice and hearing as set forth in Iowa Code chapter 17A if the director determines that a public works department or rural water system with delegated permitting authority has approved extensions which do not comply with design criteria, which exceed the capacity of waste treatment plants or the production capacity of public water supply systems, or which otherwise violate state or federal requirements.  
[ARC 5052C, IAB 6/17/20, effective 7/22/20]

These rules are intended to implement Iowa Code sections 17A.3, 455B.105 and 455B.171 to 455B.187.  
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[Filed ARC 6190C (Notice ARC 6037C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
DIVISION B
DRINKING WATER

CHAPTER 40
SCOPE OF DIVISION—DEFINITIONS—FORMS—RULES OF PRACTICE

[Prior to 12/3/86, Water, Air and Waste Management [900]]

567—40.1(455B) Scope of division. The department conducts the public water supply program and establishes minimum standards for the construction of private water supply systems. The public water supply program includes the following: the establishment of drinking water standards, including maximum contaminant levels, treatment techniques, maximum residual disinfectant levels, action levels, monitoring, viability assessment, consumer confidence reporting, public notice requirements, public water supply system operator certification standards, environmental drinking water laboratory certification program, and a state revolving loan program consistent with the federal Safe Drinking Water Act, and the establishment of construction standards. The construction, modification and operation of any public water supply system requires a specific permit from the department. Certain construction permits are issued upon certification by a licensed professional engineer that a project meets standards, and, in certain instances, permits are issued by local authorities pursuant to 567—Chapter 9. Private water supplies are regulated by local boards of health.

Chapter 38 contains requirements for private water well construction permits, including test wells and monitoring wells.

Chapter 39 contains requirements for the proper closure or abandonment of wells.

Chapter 40 includes rules of practice, including designation of forms, applicable to the public in the department’s administration of the subject matter of this division.

Chapter 41 contains the drinking water standards and specific monitoring requirements for the public water supply program.

Chapter 42 contains the public notification, public education, consumer confidence reporting, and record-keeping requirements for the public water supply program.

Chapter 43 contains specific design, construction, fee, operating, and operation permit requirements for the public water supply program.

Chapter 44 contains the drinking water state revolving fund program for the public water supply program.

Chapter 49 contains the nonpublic water supply well requirements.

Chapters 50 to 52 contain the provisions for water withdrawal and allocation.

Chapter 55 contains the provisions for public water supply aquifer storage and recovery.

Chapter 81 contains the provisions for the certification of public water supply system operators.

Chapter 82 contains the provisions for the certification of water well contractors.

Chapter 83 contains the provisions for the certification of laboratories to provide environmental testing of drinking water supplies.

[ARC 9915B, IAB 12/14/11, effective 1/18/12]

567—40.2(455B) Definitions.

“Act” means the Safe Drinking Water Act as amended (42 U.S.C. 300f et seq.).

“Action level” is the concentration of lead or copper in water which determines, in some cases, the treatment requirements that a water system is required to complete.

“Acute health effect” means the health effect of a contaminant which is an immediate rather than a long-term risk to health.

“Animal confinement” means a lot, yard, corral, or similar structure in which the concentration of livestock or poultry is such that a vegetative cover is not maintained.

“Animal pasturage” means a fenced area where vegetative cover is maintained and in which animals are enclosed.

“Animal waste” means animal wastes consisting of excreta, leachings, feed losses, litter, washwaters or other associated wastes.

“Animal waste stockpiles” means the stacking, composting or containment of animal wastes.
“Animal waste storage basin or lagoon” means a fully or partially excavated or diked earthen structure used for containing animal waste, including earthen sideslopes or floor.

“Animal waste storage tank” means a completely fabricated structure, with or without a cover, either formed in place or transported to the site, used for containing animal wastes.

“Antisiphon device” means a device which will prevent back siphonage by means of a relief valve which automatically opens to the atmosphere, preventing the creation of subatmospheric pressure within a pipe, thereby preventing water from reversing its flow.

“Authority” means the Iowa finance authority (IFA) as established by Iowa Code chapter 16.

“Backflow” means the flow of water or other liquids, mixtures, or substances into the distribution system of a potable water supply from any source other than its permitted source.

“Backflow preventer” is a device or means to prevent backflow into a potable water system.

“Back siphon” means the flowing back of used, contaminated, or polluted water, from a plumbing fixture or vessel as a result of negative or subatmospheric pressure within the distribution system.

“Bag filters” means pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to the outside.

“Bank filtration” means a water treatment process that uses a well to recover surface water that has naturally infiltrated into groundwater through a river bed or bank(s). Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well(s).

“Best available technology” or “BAT” means the best technology, treatment techniques, or other means which the state finds, after examination, for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration).

“Cartridge filters” means pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.

“Cistern” means a tank in which rainwater from roof drains is stored.

“Clean compliance history” means, for the purposes of 567—paragraph 41.2(1)“e”(4)“2,” a record of no monitoring violations and no coliform treatment technique trigger exceedances or treatment technique violations under 567—subrule 41.2(1).

“Coagulation” means a process using coagulation chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

“Combined distribution system (CDS)” means the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

“Commission” means the environmental protection commission of the state of Iowa.

“Community water system (CWS)” means a public water supply system which has at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

“Compliance cycle” means the nine-year (calendar year) cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle begins January 1, 1993, and ends December 31, 2001; the second begins January 1, 2002, and ends December 31, 2010; the third begins January 1, 2011, and ends December 31, 2019, and continues every nine years thereafter.

“Compliance period” means a three-year (calendar year) period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993, to December 31, 1995; the second from January 1, 1996, to December 31, 1998; the third from January 1, 1999, to December 31, 2001, and continues every three years thereafter.

“Composite correction program (CCP)” is a systematic, comprehensive procedure that identifies and corrects the unique combination of factors, in the areas of design, operation, maintenance, and administration, that limit the performance of a filtration plant. The CCP is comprised of two elements:
comprehensive performance evaluation, which is the evaluation phase, and comprehensive technical assistance, which is the performance improvement phase.

“Comprehensive performance evaluation (CPE)” is a thorough review and analysis of a treatment plant’s performance-based capabilities and associated administrative, operation and maintenance practices. The CPE is conducted to identify factors that may be adversely impacting a plant’s capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. For purposes of compliance with surface water or influenced groundwater treatment plant requirements pursuant to 567—Chapters 41, 42, and 43, the comprehensive performance evaluation must consist of at least the following components: assessment of plant performance; evaluation of major unit processes; identification and prioritization of performance limiting factors; assessment of the applicability of comprehensive technical assistance; and preparation of a CPE report.

“Comprehensive technical assistance (CTA)” is the performance improvement phase of the composite correction plan that is implemented if the comprehensive performance evaluation results indicate improved performance potential by a filtration plant, in which the system must identify and systematically address plant-specific factors.

“Confluent growth” means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.

“Consecutive public water supply” means an active public water supply which purchases or obtains all or a portion of its water from another, separate public water supply, also called a wholesale system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

“Conservation easements” means an interest in land that entitles a person to use the land possessed by another (affirmative easement), or to restrict uses of the land subject to the easement (negative easement). A conservation easement restricts the landowner to uses that are compatible with resource conservation.

“Contaminant” means any physical, chemical, biological, or radiological substance or matter in water.

“Contiguous” means directly adjacent or touching along all or most of one side of a legally defined piece of property. Tracts of land involved in the same operation or water supply and separated only by roads, railroads, or bike trails are deemed contiguous tracts.

“Conventional filtration treatment” means a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.

“Corrosion inhibitor” means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

“Corrosive water” means a water which due to its physical and chemical characteristics may cause leaching or dissolving of the constituents of the transporting system in which it is contained.

“Cross connection” means any actual or potential connection between a potable water supply and any other source or system through which it is possible to introduce into the potable system any used water, industrial fluid, gas, or other substance other than the intended potable water with which the system is supplied.

“Customers” in consumer confidence reports are defined as billing units or service connections to which water is delivered by a community water system.

“Deep well” means a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

“Department” means the Iowa department of natural resources, which has jurisdiction over all nontribal public water systems in Iowa.

“Diatomaceous earth filtration” means a process resulting in substantial particulate removal in which (1) a precoat cake of diatomaceous earth filter media is deposited on a support membrane (septum), and (2) while the water is filtered by passing through the cake on the septum, additional filter
media known as body feed is continuously added to the feed water to maintain the permeability of the filter cake.

“Direct filtration” means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.

“Director” means the director of the Iowa department of natural resources or a designee.

“Disinfectant” means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment process or distribution process, that is intended to kill or inactivate pathogenic microorganisms.

“Disinfection” means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

“Disinfection profile” is a summary of Giardia lamblia inactivation through the treatment plant. The procedure for developing a disinfection profile is contained in 567—paragraph 43.9(2)“b” and 567—subrule 43.10(2).

“Dose equivalent” means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

“Drinking water state revolving fund” or “DWSRF” means the department-administered fund intended to develop drinking water revolving loans to help finance drinking water infrastructure improvements, source water protection, system technical assistance, and other activities intended to encourage and facilitate public water supply system rule compliance and public health protection established by Iowa Code sections 455B.291 to 455B.299.

“DWSRF funds” means the combination of a particular fiscal year’s federal capitalization grant appropriation plus the 20 percent state of Iowa match and any additional funds made available through the program.

“Effective corrosion inhibitor residual” means a concentration of corrosion inhibitor sufficient to form a passivating film on the interior walls of a pipe.

“Eligible cost” means the cost of all labor, material, machinery, equipment, loan initiation and loan service fees, project planning, design and construction engineering services, legal fees and expenses directly related to the project, capitalized interest during construction of the project, and all other expansion, construction, and rehabilitation of all or part of a project included in the funding request placed on the draft intended use plan as a fundable project, subject to approval by the commission.


“Enhanced softening” means the improved removal of disinfection byproduct precursors by precipitative softening.

“Federal cross-cutters” means the federal laws and authorities that apply to projects funded through the DWSRF.

“Filter profile” is a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.

“Filtration” means a process for removing particulate matter from water by passage through a porous media.

“Finished water” means water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion chemicals).

“First draw sample” means a one-liter sample of tap water, collected in accordance with 567—paragraph 41.4(1)“c” that has been standing in plumbing pipes at least six hours and is collected without flushing the tap.

“Fiscal year” means the federal fiscal year starting October 1 and ending September 30.
"Flocculation" means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.

"Flowing stream" means a course of running water flowing in a definite channel.

"GAC10" means granular activated carbon filter beds with an empty-bed contact time of ten minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency for GAC10 is 120 days when used as a best available technology for compliance with the maximum contaminant level locational running annual average for total trihalomethanes and haloacetic acids.

"GAC20" means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

"Gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

"Gross beta particle activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

"Haloacetic acids (HAA5)" means the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to two significant figures after addition.

"Halogen" means one of the chemical elements chlorine, bromine or iodine.

"Health advisory (HA)" means a group of levels set by EPA below which no harmful health effect is expected from a given contaminant in drinking water. The HAs used by the department are listed in the most current edition of the EPA "Drinking Water Regulations and Health Advisories" bulletin. The lifetime HA is the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects over a lifetime of exposure, with a margin of safety. The long-term HA is the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects up to approximately seven years (10 percent of an individual's lifetime of exposure), with a margin of safety.

"Human consumption" means water used as part of or in connection with drinking; washing; food processing or incidental to commercial food preparation, such as: water used in beverages or other food items; ice used in drinks or in salad bars; water for washing of vegetables or other food items; water used for washing dishes; pans or utensils used in food preparation or service; water used for cleanup and washing of food preparation or service areas; water for bathing, showering, hand washing, or oral hygiene purposes. Human consumption does not include: water for production of packaged or bulk food products regulated by other state or federal regulatory agencies, such as livestock slaughtering or bottled or canned food and beverages; cooling water; industrial or commercial wash waters used for nonfood products; irrigation water; water used in toilets or urinals.

"Impoundment" means a reservoir, pond, or lake in which surface water is retained for a period of time, ranging from several months upward, created by constructing a barrier across a watercourse and used for storage, regulation or control of water.

"Influenced groundwater (IGW)" means any groundwater which is under the direct or indirect influence of surface water, as determined by the presence of (1) significant occurrence of insects or other macroorganisms, algae or large-diameter pathogens such as Giardia lamblia or Cryptosporidium; or (2) significant and relatively rapid shifts in water characteristics such as turbidity (particulate content), temperature, conductivity, or pH which correlate to climatological or surface water conditions, or other parameters as specified in 567—43.5(455B).

"Initial compliance period" means the first full three-year compliance period of a compliance cycle.

"Intended use plan (IUP)" means a plan identifying the intended uses of funds available for loans in the DWSRF for each fiscal year as described in Section 1452 of the Safe Drinking Water Act.

"Lake or reservoir" means a natural or man-made basin or hollow on the Earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

"Large water system" means a water system that serves more than 50,000 persons.

"Lead free," when used with respect to solder and flux, refers to solders and flux containing not more than 0.2 percent lead; when used with respect to pipes and pipe fittings, refers to pipes and pipe fittings
or defects called defects of in operator examination reasons events that allow an appropriate operator a（including max. level of water distribution）.

“Lead service line” means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting which is connected to such lead line. A lead gooseneck is not considered a lead service line unless it exceeds 10 feet.

“Legionella” means a genus of bacteria, some species of which have caused a type of pneumonia called legionnaires’ disease.

“Level 1 assessment” means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform bacteria monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 1 assessment is conducted by the system operator or owner. Minimum elements of the assessment include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a groundwater system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system owner or operator must conduct the assessment consistent with any department directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

“Level 2 assessment” means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform bacteria monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system’s monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. A Level 2 assessment is conducted by a department water supply inspector and will typically include the system operator. Minimum elements of the assessment include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a groundwater system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The department may tailor specific assessment elements with respect to the size and type of the system and the size, type and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the department in the case of an E. coli MCL violation.

“Locational running annual average (LRAA)” means the average of the analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

“Maintenance” means the replacement of equipment or materials that are necessary to maintain the operation of the public water supply system but do not alter capacity, water quality or treatment method or effectiveness.

“Man-made beta particle and photon emitters” means all radionuclides emitting beta particles or photons or both listed in Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69, except the daughter products of thorium-232, uranium-235 and uranium-238.

“Maximum contaminant level” means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

“Maximum contaminant level goal (MCLG)” means the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. MCLGs are nonenforceable health goals.
“Maximum residual disinfectant level (MRDL)” means a level of a disinfectant added for water treatment that may not be exceeded at the consumer’s tap without an unacceptable possibility of adverse health effects.

“Maximum residual disinfectant level goal (MRDLG)” means the maximum level of a disinfectant added for water treatment at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. MRDLGs are nonenforceable health goals and do not reflect the benefit of the addition of the chemical for control of waterborne microbial contaminants.

“Medium-size water system” means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

“Membrane filtration” means a pressure- or vacuum-driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.

“Nonacute health effect” means the health effect of a contaminant which is a long-term rather than immediate risk to health.

“Noncommunity water system” means a public water system that is not a community water system. A noncommunity water system is either a “transient noncommunity water system (TNC)” or a “nontransient noncommunity water system (NTNC).”

“Nontransient noncommunity water system” or “NTNC” means a public water system other than a community water system which regularly serves at least 25 of the same persons four hours or more per day, for four or more days per week, for 26 or more weeks per year. Examples of NTNCs are schools, day-care centers, factories, offices and other public water systems which provide water to a fixed population of 25 or more people. In addition, other service areas, such as hotels, resorts, hospitals and restaurants, are considered as NTNCs if they regularly serve at least 25 or more of the same persons for four or more hours per day, for four or more days per week, for 26 or more weeks of the year.

“Optimal corrosion control treatment” means the corrosion control treatment that minimizes the lead and copper concentrations at users’ taps while ensuring that the treatment does not cause the water system to violate any drinking water standards (567—Chapters 40 to 43).

“Performance evaluation sample” means a reference sample provided to a laboratory for the purpose of demonstrating that a laboratory can successfully analyze the sample within limits of performance specified by the department. The true value of the concentration of the reference material is unknown to the laboratory at the time of analysis.

“Picocurie (pCi)” means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

“Plant intake” means the works or structures at the head of a conduit through which water is diverted from a surface water source (e.g., river, reservoir, or lake) into the treatment plant.

“Point of disinfectant application” is the point where the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water runoff.

“Point-of-entry treatment device (POE)” is a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

“Point-of-use treatment device (POU)” is a treatment device applied to a single tap or multiple taps used for the purpose of reducing contaminants in drinking water at those taps, but is not intended to treat all of the water in the facility.

“Population served” means the total number of persons served by a public water supply that provides water intended for human consumption. For municipalities which serve only the population within their incorporated boundaries, it is the last official U.S. census population (or officially amended census population). For all other community public water supply systems, it is either the actual population counted which is verifiable by the department, or population as calculated by multiplying the number of service connections by an occupancy factor of 2.5 persons per service connection. For municipalities which also serve outside their incorporated boundaries, the served population must be
added to the official census population determined either by verifiable count or by the 2.5 persons per service connection occupancy factor. For nontransient noncommunity (NTNC) and transient noncommunity (TNC) systems, it is the average number of daily employees plus the average number of other persons served such as customers or visitors during the peak month of the year regardless if each person actually uses the water for human consumption. Where a system provides water to another public water supply system (consecutive public water supply system) which is required to have an operation permit, the population of the recipient water supply shall not be counted as a part of the water system providing the water. Community and nontransient noncommunity public water supply systems will pay their operation permit fees based upon the population served.

“Presedimentation” means a preliminary treatment process used to remove gravel, sand, and other particulate material from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant.

“Privy” means a structure used for the deposition of human body wastes.

“Project” includes the planning, design, construction, alteration or extension of any public water supply system but does not include the maintenance of a system.

“Project priority list” means the list of projects in priority order that may qualify for DWSRF loan assistance contained in the IUP document prepared pursuant to rule 567—44.8(455B). The priority list shall identify all projects eligible for funding and the points assigned to each project pursuant to 567—subrule 44.7(7).

“Public water supply system control” is defined as one of the following forms of authority over a service line: authority to set standards for construction, repair, or maintenance of the service line; authority to replace, repair, or maintain the service line; or ownership of the line. Contaminants added to the water under circumstances controlled by the water consumer or user, with the exception of those contaminants resulting from the corrosion of piping and plumbing caused by water quality, are excluded from this definition of control.

“Public water supply system (PWS)” means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Such term does not include any “special irrigation district.” A public water system is either a “community water system” or a “noncommunity water system.”

“Regional water system” means a public water supply system in which the projected number of service connections in at least 50 percent of the length of the distribution system does not average more than eight service connections per linear mile of water main.

“Rem” means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A “millirem” (mrem) is 1/1000 of a rem.

“Repeat compliance period” means any subsequent compliance period after the initial compliance period.

“Residual disinfectant concentration” (“C” in CT calculations) means the concentration of disinfectant measured in mg/l in a representative sample of water.

“Sanitary defect” means a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

“Sanitary sewer pipe” means a sewer complying with the department’s standards for sewer construction.

“Sanitary survey” means a review and on-site inspection conducted by the department of the water source, facilities, equipment, operation and maintenance and records of a public water supply system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water and identifying improvements necessary to maintain or improve drinking water quality, pursuant to 567—subrule 43.1(7).
“SDWA” means the Safe Drinking Water Act.
“Seasonal system” means a noncommunity water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season.
“Sedimentation” means a water treatment process for removal of solid particles from a suspension before filtration by gravity or separation.
“Septic tank” means a watertight structure into which wastewater is discharged for solids separation and digestion.
“Service connections” means the total number of active and inactive service lines originating from a water distribution main for the purpose of delivering water intended for human consumption. For municipalities, rural water districts, mobile home parks, housing developments, and similar facilities, this includes, but is not limited to, occupied and unoccupied residences and buildings, provided that there is a service line connected to the water main (or another service line), and running onto the property. For rental properties which are separate public water supply systems, this includes, but is not limited to, the number of rental units such as apartments. Connections to a system that delivers water by a constructed conveyance other than a pipe are excluded from the definition, if:
1. The water is used exclusively for purposes other than human consumption;
2. The department determines that alternative water to achieve the equivalent level of public health protection provided by the applicable national primary drinking water regulation is provided for human consumption; or
3. The department determines that the water provided for human consumption is centrally treated or treated at the point of entry by the provider, a pass-through entity, or the user to achieve the equivalent level of protection provided by the applicable national primary drinking water regulations.
“Service line sample” means a one-liter sample of water, collected in accordance with 567—paragraph 41.4(1)“c” for the purpose of determining the concentration of lead and copper which has been standing for at least six hours in a service line.
“Shallow well” means a well located and constructed in such a manner that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.
“Significant deficiency” includes a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the department determines to be causing, or has the potential for causing the introduction of contamination into the water delivered to consumers.
“Significant noncompliance” means the failure to comply with any national primary drinking water standard as adopted by the state of Iowa according to criteria established by the administrator of the federal Environmental Protection Agency.
“Single-family structure” means a building constructed as a single-family residence that is currently used as either a residence or a place of business.
“Slow sand filtration” means a process involving passage of raw water through a bed of sand at low velocity (generally less than 0.4 m/h (0.02 ft/min)) resulting in substantial particulate removal by physical and biological mechanisms.
“Small water system” means a water system that serves 3,300 persons or fewer.
“Special irrigation district” means an irrigation district in existence prior to May 18, 1994, that provides primarily agricultural service through a piped water system with only incidental residential or similar use where the system or the residential or similar users of the system comply with numbered paragraphs “2” and “3” in the definition of “service connections.”
“Standard sample” means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.
“Standard specifications” means specifications submitted to the department for use as a reference in reviewing future plans for proposed water main construction.
“Supplier of water” means any person who owns or operates a public water supply system.
“Surface water” means all water which is open to the atmosphere and subject to surface runoff.
“SUVA” means Specific Ultraviolet Absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample’s ultraviolet absorption at a wavelength of 254 nm (in m⁻¹) by its concentration of dissolved organic carbon (in mg/L).
“Too numerous to count” means that the total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.
“Total organic carbon (TOC)” means total organic carbon in milligrams per liter, measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures.
“Total trihalomethanes (THM)” means the sum of the concentration in milligrams per liter of the trihalomethane compounds trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform), rounded to two significant figures.
“Transient noncommunity water system (TNC)” means a noncommunity water system that does not regularly serve at least 25 of the same persons over six months per calendar year.
“Treatment technique (TT)” means a treatment process required to minimize the level of a contaminant in drinking water. A treatment technique is specified in cases where it is not technically or economically feasible to establish an MCL, and it is an enforceable procedure or level of technological performance which public water systems must follow to ensure control of a contaminant.
“Trihalomethane (THM)” means one of the family of organic compounds, named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.
“Two-stage lime softening” means a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration.
“Uncovered finished water storage facility” means a tank, reservoir, or other facility used to store water that will undergo no further treatment to reduce microbial pathogens except residual disinfection and is directly open to the atmosphere. Such facilities are prohibited.
“Unregulated contaminant” means a contaminant for which no MCL has been set, but which does have federal monitoring requirements for certain public water systems set forth in CFR Title 40, Part 141.40, and additional reporting requirements in rule 567—42.3(455B).
“Viability” means the technical, financial, and managerial ability to comply with applicable national primary drinking water standards as adopted by the state of Iowa. Viability is the ability of a system to remain in compliance insofar as the requirements of the SDWA.
“Virus” means a virus of fecal origin which is infectious to humans by waterborne transmission.
“Waterborne disease outbreak” means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system which is deficient in treatment, as determined by the Iowa department of public health.
“Water distribution system” means that portion of the water supply system in which water is conveyed from the water treatment plant or other supply point to the premises of the consumer, including any storage facilities and pumping stations.
“Water main pipe” means a water main complying with the department’s standards for water main construction.
“Wholesale system” means a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

[ARC 9915B, IAB 12/14/11, effective 1/18/12; ARC 3735C, IAB 4/11/18, effective 5/16/18; ARC 6190C, IAB 2/9/22, effective 3/16/22]
Forms. The following forms are used by the public to apply for department approvals and to report on activities related to the public water supply program of the department. All forms may be obtained from the department’s website at www.iowadnr.gov (water supply pages) or from the Environmental Services Division, Administrative Support Station, Department of Natural Resources, Henry A. Wallace Building, 502 East Ninth Street, Des Moines, Iowa 50319-0034. Properly completed application forms shall be submitted to the Water Supply Section, Environmental Services Division. Water supply system monthly and other operation reporting forms shall be submitted to the appropriate field office (see 567—subrule 42.4(3)). Properly completed laboratory forms (reference 567—Chapter 83) shall be submitted to the State Hygienic Laboratory or as otherwise designated by the department.

40.3(1) Construction permit application forms. Schedules “1a” through “16d” are required.

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40.3(2) Operation permit application forms.
a. Form 13-2 — application for a new water supply  542-1300
b. Form 13-3 — renewal application for an existing water supply  542-1301

40.3(3) Water supply reporting forms. The monthly water supply operation report forms are available from the department’s water supply operations section website. The laboratory analyses for compliance samples are reported via electronic means directly to the department by each certified laboratory.

40.3(4) Laboratory certification application forms. Reserved.

[ARC 9915B, IAB 12/14/11, effective 1/18/12; ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—40.4(17A,455B) Public water supply construction permit application procedures.

40.4(1) General procedures. Applications for written approval from the department for any new construction or for reconstruction pursuant to 567—Chapter 43 shall consist of complete plans and specifications, application fee, and appropriate water supply construction permit application schedules. Upon review, the department will issue a construction permit for approval of a project if the review shows that the project meets all departmental design standards in accordance with 567—Chapter 43. Approval of a project which does not meet all departmental design standards will be denied unless a variance as provided by 567—paragraph 43.3(2) “b” is granted. A variance may be requested at the time plans and specifications are submitted or after the design discrepancy is pointed out to the applicant.

The department may review submitted project plans and specifications and provide comments and recommendations to the applicant. Departmental comments and recommendations are advisory, except when departmental review determines that a facility does not comply with the plans or specifications as approved by the department or comply with the design standards pursuant to the criteria for certification of project design. The owner of the system must correct the deficiency in a timely manner as set forth by the department.

40.4(2) Public water sources and below-ground level water storage facilities—site survey. For public water sources and for below-ground level finished water storage facilities, a site survey and approval must be made by the department. The manner and procedures for applying for and processing a site survey are the same as in 40.4(1) except that the following information must be submitted by the applicant’s engineer.

a. A preliminary engineering report or a cover letter which contains a brief description of the proposed source or storage facility and assurance that the project is in conformance with the long-range planning of the area.

b. Completed Schedule 1a — General Information
c. Completed Schedule 4 — Water Supply Facility Site Selection
d. A detailed map showing all potential sources of contamination (see 567—Chapter 43, Table A) within:
   (1) 1,000 feet of a proposed well location. The scale shall not be smaller than 1 inch = 200 feet.
   (2) 200 feet of a proposed below-ground level finished water storage facility.
   (3) 2,500 feet from a proposed surface water source and a plat showing all facilities more than 2,500 feet from an impoundment (within the drainage area) that may be potential sources of contamination. The scale shall not be smaller than 1 inch = 660 feet.
   (4) Six miles upstream of a proposed river intake.

40.4(3) Modifications of an approved water supply construction project. Persons seeking to make modifications to a water supply construction project after receiving a prior construction permit from the department shall submit an addendum to plans and specifications, a change order or revised plans and specifications at least 30 days prior to planned construction, and the appropriate fee. The department shall review the submitted material within 30 days of submission and shall issue a supplemental permit if the proposed modifications meet departmental standards.

40.4(4) Certification of project design. A permit shall be issued for the construction, installation or modification of a public water supply system or part of a system or for a water supply distribution system extension if a qualified, licensed professional engineer certifies that the plans and specifications
comply with federal and state laws and regulations or that a variance to standards has been granted by the department. Refer to Schedule 1a.

567—40.5(17A,455B) Public water supply operation permit application procedures. A person requesting a water supply operation permit pursuant to 567—43.2(455B) must complete the appropriate application form, which will be provided by the department. Upon receipt of a completed application, the department will review the application and, if approved, will prepare and issue a water supply operation permit or draft permit, as applicable, and transmit it to the applicant. An annual operation fee pursuant to 567—subrule 43.2(1) is due by September 1 of each year. A permit or renewal will be denied when the applicant does not meet one or more requirements for issuance or renewal of this permit. An operation permit may be denied for any of the following reasons: system failed to pay the operation fee; system is not viable; system is not in compliance with the applicable maximum contaminant levels, treatment techniques, or action levels; system is in significant noncompliance with the provisions of 567—Chapter 41, 42, or 43.

567—40.6(455B) Drinking water state revolving fund loan application procedures. A person requesting a drinking water state revolving fund loan pursuant to 567—44.7(455B) must complete the appropriate application form, which will be provided by the department. The department will review the application package pursuant to 567—44.9(455B). Eligible projects will be ranked according to priority, with the highest-ranked projects receiving funding priority.

567—40.7(455B) Viability assessment procedures. A person required to complete a viability assessment pursuant to 567—43.8(455B) must submit the appropriate information as outlined in 567—43.8(455B) to the department. Self-assessment worksheets which can be used to prepare the viability assessment are available from the Water Supply Section, Department of Natural Resources, Henry A. Wallace Building, 502 East Ninth Street, Des Moines, Iowa 50319-0034.

These rules are intended to implement Iowa Code sections 455B.171 through 455B.188 and 455B.190 through 455B.192.

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[Filed ARC 6190C (Notice ARC 6037C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]

0 Two or more ARCs

1 Effective date of definitions “Population served” and “Service connections” and rule 40.5(17A,455B) delayed until adjournment of the 1995 General Assembly by the Administrative Rules Review Committee at its meeting held March 13, 1995.
CHAPTER 43
WATER SUPPLIES—DESIGN AND OPERATION
[Prior to 12/12/90, portions of this chapter appeared in 567—Ch 41]

567—43.1(455B) General information.

   43.1(1) Emergency actions regarding water supplies. When, in the opinion of the director, an actual or imminent hazard exists, the supplier of water shall comply with the directives or orders of the director necessary to eliminate or minimize that hazard.

   43.1(2) Prohibition on the use of lead pipes, solder and flux. Any pipe, solder or flux which is used in the installation or repair of any public water supply system or any plumbing in a residential or nonresidential facility providing water for human consumption which is connected to a public water supply system shall be lead-free as defined in 567—40.2(455B). This action shall not apply to leaded joints necessary for the repair of cast iron pipe.

   43.1(3) Use of noncentralized treatment devices.

   a. Community PWS. Community public water systems shall not use bottled water, point-of-use (POU) or point-of-entry (POE) devices to achieve permanent compliance with a maximum contaminant level, action level, or treatment technique requirement in 567—Chapters 41 and 43.

   b. Noncommunity PWS. Noncommunity public water supply systems may be allowed by the department to use point-of-use devices to achieve MCL compliance provided the contaminant does not pose an imminent threat to health (such as bacteria) nor place a sensitive population at risk (such as infants for nitrate or nitrite).

   c. Reduced monitoring requirements. Bottled water, point-of-use, or point-of-entry devices cannot be used to avoid the monitoring requirements of 567—Chapters 41 and 43, but the department may allow reduced monitoring requirements in specific instances.

   d. Bottled water requirements. The department may require a public water system exceeding a maximum contaminant level, action level, or treatment technique requirement specified in 567—Chapters 41 and 43 to use bottled water as a condition of an interim compliance schedule or as a temporary measure to avoid an unreasonable risk to health. Any bottled water must, at a minimum, meet the federal Food and Drug Administration bottled water standards, listed in the Code of Federal Regulations, Title 21, Chapter 165.110. The system must meet the following requirements:

      (1) Monitoring program. Submit for approval to the department a monitoring program for bottled water. The monitoring program must provide reasonable assurances that the bottled water complies with all maximum contaminant levels, action levels, or treatment technique requirements in 567—Chapters 41 and 43. The public water system must monitor a representative sample of bottled water for all contaminants regulated under 567—Chapters 41 and 43 the first quarter that it supplies the bottled water to the public, and annually thereafter. Results of the monitoring program shall be provided to the department annually. If the bottled water is from a community public water system that currently meets all of the federal Safe Drinking Water Act requirements, the monitoring requirements of this subparagraph shall be waived by the department. The specific supplier of the bottled water must be identified in order for the department to waive the monitoring requirements.

      (2) Certification requirements. The public water system must receive a certification from the bottled water company that the bottled water supplied has been taken from an “approved source”; the bottled water company has conducted monitoring in accordance with 43.1(3)(b)(1); and the bottled water meets MCLs, action levels, or treatment technique requirements as set out in 567—Chapters 41 and 43. The public water system shall provide the certification to the department the first quarter after it supplies bottled water and annually thereafter.

      (3) Provision of bottled water to consumers. The public water supply system is fully responsible for the provision of sufficient quantities of bottled water to every person supplied by the public water system via door-to-door bottled water delivery.

   e. Point-of-use devices. Reserved.
f. **Point-of-entry devices.** Reserved.

43.1(4) **Cross-connection control.** To prevent backflow or backsiphonage of contaminants into a public water supply, connection shall not be permitted between a public water supply and any other system which does not meet the monitoring and drinking water standards required by this chapter except as provided below in "a" or "b."

a. **Piping and plumbing systems.** Piping systems or plumbing equipment carrying nonpotable water, contaminated water, stagnant water, liquids, mixtures or waste mixtures shall not be connected to a public water supply unless properly equipped with an antisiphon device or backflow preventer acceptable to the department.

b. **Bulk water loading stations.** Positive separation shall be provided through the use of an air gap separation or a backflow preventer, which is acceptable to the department, at all loading stations for bulk transport tanks.

1. Minimum air gap. The minimum required air gap shall be twice the diameter of the discharge pipe.

2. Backflow preventer criteria. An approved backflow preventer for this application shall be a reduced pressure backflow preventer or an antisiphon device which complies with the standards of the American Water Works Association and has been approved by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

When, in the opinion of the department, evidence clearly indicates the source of contamination within the system is the result of a cross-connection, the department may require a public water supply to conduct public notification, identify and eliminate the connection, and implement a systemwide cross-connection program.

43.1(5) **Requirement for certified operator.** The department maintains a list of operators who are certified in accordance with 567—Chapter 81. The list includes the operator’s name, certification classification (Water Treatment, Water Distribution, or Grade A Water System), and grade (A, I, II, III, or IV), and is periodically updated during the year.

a. **CWS and NTNC systems.** All community and nontransient noncommunity public water supply systems must have a certified operator in direct responsible charge of the treatment and distribution systems, in accordance with 567—Chapters 40 through 44 and 81.

b. **TNC systems.** Any transient noncommunity public water supply system which is owned by the state or federal government, such as a state park, state hospital, or interstate rest stop, or is using a groundwater under the direct influence of surface water or surface water source, must have a certified operator in direct responsible charge of the treatment and distribution systems, in accordance with 567—Chapters 40 through 44 and 81. Any TNC which uses chlorine dioxide as a disinfectant or oxidant must have a certified operator in direct responsible charge of the system, pursuant to 567—Chapter 81. The department may require any TNC to have a certified operator in direct responsible charge.

43.1(6) **Return water in public water supply systems.** Steam condensate, cooling water from engine jackets, water used in conjunction with heat exchange devices, or treated wastewater shall not be returned to the public water supply system.

43.1(7) **Sanitary surveys.** Each public water supply system must have a periodic sanitary survey, conducted by the department or its designee, which is a records review and on-site inspection of the system. Systems must provide the department, at its request, any existing information that will enable the department to conduct the sanitary survey. The inspection evaluates the system’s ability to produce and distribute safe drinking water and identifies improvements necessary to maintain or improve drinking water quality. The sanitary survey includes review and inspection of the following areas: water source; treatment facilities; distribution system; finished water storage; pumps, pump facilities, controls and other equipment; monitoring, reporting, and data verification, including self-monitoring requirements; system operation and management; maintenance; properly certified operators; and records. A report of the sanitary survey is issued by the department or its designee, and may include both enforceable required actions for remedying significant deficiencies and nonenforceable recommended actions. The frequency of the sanitary survey inspection must be at least once every five years for noncommunity systems and once every three years for community systems. The department or its designee must provide
the system with a written notice describing any significant deficiencies identified no later than 30 days after the department identifies the significant deficiency. The notice may be included in the sanitary survey report and may specify corrective actions and deadlines for completion of corrective actions. Systems must respond in writing to significant deficiencies outlined in the sanitary survey report or written notice within the time period specified in the report, indicating how and on what schedule the system will address significant deficiencies noted in the survey. At a maximum, the written response must be received within 30 days of receiving the survey report. All systems must take the steps necessary to address significant deficiencies identified in the sanitary survey report that are within the control of the system and its governing body.

[ARC 9915B, IAB 2/14/11, effective 1/18/12; ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—43.2(455B) Permit to operate.

43.2(1) Operation fees.

a. Annual fee. A fee for the operation of a public water supply system shall be paid annually. The fee will not be prorated and is nonrefundable. The fee shall be based on the population served. The fee shall be the greater of $25 per year or $0.14 multiplied by the total population served by the public water supply for all community and nontransient noncommunity public water supply systems. The fee shall be $25 per year for all transient noncommunity water systems. Where a system provides water to another public water supply system (consecutive public water supply system) which is required to have an operation permit, the population of the recipient water supply shall not be counted as a part of the water system providing the water.

b. Fee notices. The department will send annual notices to public water supply systems at least 60 days prior to the date that the operation fee is due.

c. Fee payments. The annual operation fee must be paid to the department by September 1 each year.

d. Fee schedule adjustment. The department may adjust the per capita fee payment by up to +/- $0.02 per person served so as to achieve the targeted revenue of $350,000 during each fiscal year. The environmental protection commission must approve any per capita fee rate above $0.14 per person. The extent of the fee adjustment must comply with Iowa Code section 455B.183A.

e. Exempted public water supply systems. Public water supply systems located on Indian lands are exempt from the fee requirements.

f. Late fees. When the owner of a public water supply fails to make timely application or to remit payment of fees by September 1, the department will notify the system by a single notice of violation. In addition, a late fee of $100 will be assessed for failure to remit the operation fee by September 1. The department may thereafter issue an administrative order pursuant to Iowa Code section 455B.175(1) or request a referral to the attorney general under Iowa Code section 455B.175(3) as necessary.

43.2(2) Operation permit requirement. Except as provided in 43.2(3) and 43.2(4), no person shall operate any public water supply system or part thereof without, or contrary to any condition of, an operation permit issued by the director.

43.2(3) Application for operation permit. The owner of any public water supply system or part thereof must make application for an operation permit. No such system shall be operated without an operation permit, unless proper application has been made. Upon submission of a completed application form, the time requirement for having a valid operation permit is automatically extended until the application has either been approved or disapproved by the director.

43.2(4) Operation permit application form issuance.

a. Operation permit application form. Application for operation permits shall be made on forms provided by the department. The application for an operation permit shall be filed at least 90 days prior to the date operation is scheduled to begin unless a shorter time is approved by the director. The director shall issue or deny operation permits for facilities within 60 days of receipt of a completed application, unless a longer period is required and the applicant is so notified. The director may require the submission of additional information deemed necessary to evaluate the application. If the application
is incomplete or otherwise deficient, processing of the application shall not be completed until such time as the applicant has supplied the missing information or otherwise corrected the deficiency.

b. **Identity of signatories of operation permit applications.** The person who signs the application for an operation permit shall be:

   (1) Corporation. In the case of a corporation, a principal executive officer of at least the level of vice president. The corporation has the option of appointing a designated signatory to satisfy this requirement.

   (2) Partnership. In the case of a partnership, a general partner.

   (3) Sole proprietorship. In the case of a sole proprietorship, the proprietor.

   (4) Public facility. In the case of a municipal, state or other public facility, by either the principal executive officer or the ranking elected official.

c. **Appeal.** The denial of a permit, or any permit condition, may be appealed by the applicant to the environmental protection commission pursuant to 567—Chapter 7.

**43.2(5) Operation permit conditions.**

a. **Operation permit conditions.** Operation permits may contain such conditions as are deemed necessary by the director to ensure compliance with all applicable rules of the department, to ensure that the public water supply system is properly operated and maintained, to ensure that potential hazards to the water consumer are eliminated promptly, and to ensure that the requirements of the Safe Drinking Water Act are met.

b. **Compliance schedule.** Where one or more maximum contaminant levels, treatment techniques, designated health advisories, or action levels cannot be met immediately, a compliance schedule for achieving compliance with standards may be made a condition of the permit. A compliance schedule requiring alterations in accordance with the standards for construction in 43.3(1) and 43.3(2) may also be included for any supply that, in the opinion of the director, contains a potential hazard.

c. **Treatment.** If the department determines that a treatment method identified in 43.3(10) is technically feasible, the department may require the system to install or use that treatment method in connection with a compliance schedule issued under the provisions of 43.2(5) “b.” The department’s determination shall be based upon studies by the system and other relevant information.

**43.2(6) Notification of change in operation permit application conditions.** The owner of a public water supply system shall notify the director within 30 days of any change in conditions identified in the permit application. This notice does not relieve the owner of the responsibility to obtain a construction permit as required by 567—43.3(455B).

**43.2(7) Renewal of operation permits.** The department may issue operation permits for durations of up to five years. Operation permits must be renewed prior to expiration in order to remain valid. The renewal date shall be specified in the permit or in any renewal. Application for renewal must be received by the director, or postmarked, 60 days prior to the renewal date, on forms provided by the department.

**43.2(8) Denial, modification, or suspension of operation permit.** The director may deny renewal of, modify, or suspend, in whole or in part, any operation permit for good cause. Denial of a new permit, renewal of an existing permit, or modification of a permit, may be appealed to the environmental protection commission pursuant to 567—Chapter 7. Suspension or revocation may occur after hearing, pursuant to 567—Chapter 7. Good cause includes the following:

a. Violation of any term or condition of the permit.

b. Obtaining a permit by misrepresentation of fact or failure to disclose fully all material facts.

c. A change in any condition that requires either a permanent or temporary modification of a permit condition.

d. Failure to submit such records and information as the director may require both generally and as a condition of the operation permit in order to ensure compliance with conditions specified in the permit.

e. Violation of any of the requirements contained in 567—Chapters 40 to 43.

f. Inability of a system to either achieve or maintain technical, managerial, or financial viability, as determined in rule 567—43.8(455B).

**567—43.3(455B) Public water supply system construction.**
43.3(1) Standards for public water supplies. Any public water supply that does not meet the drinking water standards contained in 567—Chapters 41 and 43 shall make the alterations in accordance with the standards for construction contained in 43.3(2) necessary to comply with the drinking water standards unless the public water supply has been granted a variance from a maximum contaminant level or treatment technique as a provision of its operation permit pursuant to 567—43.2(455B), provided that the public water supply meets the schedule established pursuant to 567—43.2(455B). Any public water supply that, in the opinion of the director, contains a potential hazard shall make the alterations in accordance with the standards for construction contained in this rule necessary to eliminate or minimize that hazard. A system that is not operating within the design standards may be required by the department via a compliance schedule to upgrade the deficient areas of the system before a construction permit will be issued for any work in the system that does not address the current deficiencies.

43.3(2) Standards for construction.

a. The standards for a project are the Ten States Standards as adopted through 2012 and the American Water Works Association (AWWA) Standards as adopted through 2016 and 43.3(7) to 43.3(9). To the extent of any conflict between the Ten States Standards and the American Water Works Association Standards and 43.3(7) to 43.3(9), the Ten States Standards, 43.3(2), and 43.3(7) to 43.3(9) shall prevail. Additional standards include the following:

(1) Polyvinyl chloride (PVC) pipe manufactured in accordance with ASTM D2241, AWWA C900, AWWA C905, ASTM F1483, or AWWA C909 may be used for water main construction. The maximum allowable pressure for PVC or polyethylene (PE) pipe shall be determined based on a safety factor of 2.0 and a surge allowance of no less than two feet per second (2 fps).

(2) For CWS groundwater systems, a minimum of two wells shall be provided, unless the system demonstrates to the department’s satisfaction that a single well will provide a reliable and adequate source. For NTNC and TNC groundwater systems, a single well is acceptable.

(3) Separation of water mains from sanitary and combined sewers.

1. Horizontal separation of water mains from gravity sanitary and combined sewers. Water mains shall be separated from gravity sanitary and combined sewer mains by a horizontal distance of at least ten feet measured edge to edge unless the bottom of the water main is at least 18 inches above the top of the sewer, and either:
   - The water main is placed in a separate trench, or
   - The water main is located on a bench of undisturbed earth at a minimum horizontal separation of three feet from the sewer.

   If it is not possible to obtain a horizontal separation of three feet and a vertical separation of 18 inches between the bottom of the water main and the top of the sewer, a linear separation of at least two feet shall be provided, and one of the following shall be utilized:
   - The water main shall be enclosed in watertight casing pipe with an evenly spaced annular gap and watertight end seals, or
   - The sewer shall be constructed of water main materials.

   The separation distance between the water main and the sewer shall be the maximum feasible in all cases.

2. Horizontal separation of water mains from sanitary sewer force mains. Water mains shall be separated from sanitary sewer force mains by a horizontal distance of at least ten feet measured edge to edge unless the sanitary sewer force main is constructed of water main materials and the water main is laid at least four feet horizontally from the sanitary sewer force main. The separation distance between the water main and the sanitary sewer force main shall be the maximum feasible in all cases.

3. Vertical separation of water mains from sanitary and combined sewer crossovers. Vertical separation of water mains crossing over any sanitary or combined sewers shall be at least 18 inches when measured from the bottom of the water main to the top of the sewer. If it is not possible to maintain the required vertical separation, one of the following shall be utilized:
   - The bottom of the water main shall not be placed closer than six inches above the top of a sewer, or
   - The top of the water main shall not be placed closer than 18 inches below the bottom of a sewer.
When a water main crosses below or less than 18 inches above a sanitary or combined sewer, one of the following shall be utilized within ten feet measured edge to edge horizontally, centered on the crossing:

- The water main shall be enclosed in watertight casing pipe with an evenly spaced annular gap and watertight ends, or
- Sewer pipe of water main material shall be installed.

The separation distance shall be the maximum feasible in all cases. Wherever a water main crosses a sanitary or combined sewer, the water main and sanitary or combined sewer pipes must be adequately supported. A low permeability soil shall be used for backfill material within ten feet of the point of crossing along the water main.

4. Horizontal separation of water mains from sanitary and combined sewer manholes. No water pipe shall pass through or come in contact with any part of a sanitary or combined sewer manhole. A minimum horizontal separation of three feet shall be maintained.

4(4) Separation of water mains from storm sewers.

1. Horizontal separation of water mains from gravity storm sewers. Water mains shall be separated horizontally from gravity storm sewers by at least ten feet measured edge to edge. If it is not possible to maintain the required horizontal separation of ten feet, a minimum of three feet of separation shall be maintained and one of the following shall be utilized within ten feet measured edge to edge:

- The water main shall be constructed of ductile iron pipe with gaskets impermeable to hydrocarbons, or
- The water main shall be enclosed in watertight casing pipe with an evenly spaced annular gap and watertight end seals, or
- Storm sewer pipe of water main material shall be installed, or
- Reinforced concrete pipe storm sewers shall be constructed with gaskets manufactured in accordance with ASTM C443.

2. Vertical separation of water mains from storm sewer crossovers. Water mains shall be vertically separated from storm sewers by at least 18 inches between the outside edges of the water main and the storm sewer. The separation distance shall be the maximum feasible in all cases. In all cases where a water main crosses a storm sewer, the water main and storm sewer pipes must be adequately supported. A low permeability soil shall be used for backfill material within ten feet of the point of crossing along the water main. If it is not possible to obtain 18 inches of vertical separation where the water main crosses above a storm sewer, a minimum of 6 inches vertical separation shall be maintained and one of the following shall be utilized within ten feet measured edge to edge horizontally, centered on the crossing:

- The water main shall be constructed of ductile iron pipe with gaskets impermeable to hydrocarbons, or
- The water main shall be enclosed in watertight casing pipe with an evenly spaced annular gap and watertight end seals, or
- Storm sewer pipe of water main material shall be installed, or
- Reinforced concrete pipe storm sewers shall be constructed with gaskets manufactured in accordance with ASTM C443.

b. Variance. When engineering justification satisfactory to the director is provided substantially demonstrating that variation from the design standards will result in equivalent or improved effectiveness, such a variation from design standards may be accepted by the director. A variance denial may be appealed to the environmental protection commission pursuant to 567—Chapter 7. Variance requests for projects qualifying for a waiver from the engineering requirement of 43.3(4) may be made without the retained services of a professional engineer.

43.3(3) Construction permits. No person shall construct, install or modify any project without first obtaining, or contrary to any condition of, a construction permit issued by the director or by a local public works department authorized to issue permits under 567—Chapter 9 except as provided in 43.3(3)"b,"43.3(4) and 43.3(6). Construction permits are not required for point-of-use treatment devices installed by a noncommunity water system except those devices required by the department to
meet a drinking water standard pursuant to Chapter 30 or Chapter 43. No construction permit will be issued for a new public water supply system without a completed viability assessment, which has been approved by the department, and demonstrates that the system is viable pursuant to Chapter 30 or Chapter 43.

a. Construction permit issuance conditions. A permit to construct shall be issued by the director if the director concludes from the application and specifications submitted pursuant to Chapter 30 or Chapter 43 that the project will comply with the rules of the department. The construction of the project must begin within one year from the date the permit was issued; if it is not, the permit is no longer valid. If construction is ongoing and continuous (aside from delays due to winter or exceptional weather) and the permitted project cannot be completed within one year, the permit shall remain valid until the project is completed. The department may grant an extension of the permit for a multiphase project, for a maximum of two additional years.

b. Construction permit application. Application for any project shall be submitted to the department at least 30 days prior to the proposed date for commencing construction or awarding of contracts. This requirement may be waived when it is determined by the department that an imminent health hazard exists to the consumers of a public water supply. Under this waiver, construction, installation, or modification may be allowed by the department prior to review and issuance of a permit if all the following conditions are met:

1. The construction, installation, or modification will alleviate the health hazard;
2. The construction is done in accordance with the standards for construction pursuant to Chapter 30;
3. Plans and specifications are submitted within 30 days after construction;
4. A professional engineer, licensed in the state of Iowa, supervises the construction; and
5. The supplier of water receives approval of this waiver prior to any construction, installation, or modification.

c. Construction permit fees. A nonrefundable fee for a construction permit issued in accordance with subrules Chapter 43(3) and Chapter 43(4) shall be submitted with the application for a construction permit prior to the authorization to commence construction. The construction permit fee shall be based upon the following rate structure:

1. Routine construction permits. The fee shall be determined based upon the total length of water main plus the non-water-main-related construction costs, calculated as follows:
   1. Water mains (minimum fee of $100; maximum fee of $5,000):

<table>
<thead>
<tr>
<th>Length of permitted water main</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 1,000 ft.</td>
<td>$100</td>
</tr>
<tr>
<td>Next 19,000 ft.</td>
<td>$0.10/ft.</td>
</tr>
<tr>
<td>Next 300,000 ft.</td>
<td>$0.01/ft.</td>
</tr>
<tr>
<td>Over 320,000 ft.</td>
<td>No additional charge</td>
</tr>
</tbody>
</table>

2. Non-water-main-related construction costs, including source, treatment, pumping, storage and waste handling (minimum fee of $100; maximum fee of $16,000):

<table>
<thead>
<tr>
<th>Estimated construction cost</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>First $50,000</td>
<td>$100</td>
</tr>
<tr>
<td>Next $950,000</td>
<td>0.2% of estimated construction cost</td>
</tr>
<tr>
<td>Next $14,000,000</td>
<td>0.1% of estimated construction cost</td>
</tr>
<tr>
<td>Over $15,000,000</td>
<td>No additional charge</td>
</tr>
</tbody>
</table>

(2) "As-built" construction. "As-built" construction is defined as construction that occurred before a construction permit is issued. The fee shall be calculated according to Chapter 43(3) "c"(1), plus an additional fee of $200, and is effective for construction that occurred after December 1, 2003. The fee for water main projects permitted in accordance with paragraph Chapter 43(3) "e" shall be calculated in accordance with
paragraph 43.3(3)‘c’(1); however, the additional “as-built” fee of $200 shall not be assessed for these projects.

3. Change orders, addenda, permit supplements, and request for time extensions. A fee for change orders, addenda, or permit supplements will only be charged if the aggregate of the changes approved for the project to date causes the total project construction cost to exceed the original project construction cost by at least 5 percent. For water main extensions, the fee will be charged if the total length of water main exceeds the original approved length by 5 percent. The request for a time extension is a flat fee.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change orders, addenda, and permit supplements for water mains</td>
<td>$0.10/ft. of additional water main,</td>
</tr>
<tr>
<td></td>
<td>minimum fee: $50</td>
</tr>
<tr>
<td>Change orders, addenda, and permit supplements for non-water-main-related</td>
<td>0.2% of additional non-water-main-related construction costs, minimum fee: $50</td>
</tr>
<tr>
<td>Request for time extension</td>
<td>$50</td>
</tr>
</tbody>
</table>

4. Calendar year construction permit fee cap. The total amount of construction permit fees for a public water supply system owner during any calendar year shall not exceed $5,000 for water mains and $16,000 for non-water-main-related construction projects.

d. Water well construction. All water well construction must be performed by a certified well contractor in accordance with 567—Chapter 82. It is the responsibility of the public water supply and certified well contractor to ensure that a public well construction permit has been issued by the department prior to initiation of well construction and to ensure that all well construction is performed in accordance with the provisions of this chapter.

e. Minor water main construction permit. A public water system may obtain a minor water main construction permit from the department for construction or replacement of minor water mains that serve additional users. By obtaining this permit, the system is able to construct new minor water mains or extend or replace existing minor water mains without obtaining an individual construction permit for each specific water main. The permit shall allow construction or replacement of minor water mains that do not exceed six inches in diameter and, in aggregation, do not increase the average daily demand (in gallons per day) of the public water supply system by more than 5 percent over the duration of the permit.

The additional users must have been included in the system’s hydraulic analysis that has been approved by the department. The water demands of the additional users must be consistent with the water demands in the approved hydraulic analysis.

1. A minor water main construction permit shall be issued subject to the following conditions:
   1. The system has standard specifications for water main construction approved and on file with the department;
   2. The system has adequate source capacity and, where treatment is provided, adequate treatment plant capacity to meet the peak day demand of all existing users and the proposed additional users covered under the permit;
   3. The system has adequate storage capacity to meet the average day demand of all existing users and the proposed additional users covered under the permit; and
   4. The system submits an application for a minor water main construction permit prior to the construction or replacement of any water main covered by the permit. The permit application must be submitted to the department 90 days before the anticipated first use of the permit, and construction shall not commence prior to the issuance of the permit. The minor water main construction permit expires on December 31 of the year in which it is issued. The application shall include the following:
      • An up-to-date hydraulic analysis of the system, prepared and submitted by a licensed professional engineer, must be either on file with the department or submitted with the permit application. The hydraulic basis of flow (gallons per minute per connection) used in the analysis must be acceptable to the department. The hydraulic analysis shall include:
         o All existing water mains within the system;
o All proposed water mains intended to be covered by the permit;
o A demonstration that the system has adequate hydraulic capacity to serve the existing and new users under peak flow conditions without causing the pressure to fall below 20 psi anywhere within the system;
o The location of all potential users of the system;
o The diameter of all existing and proposed pipes;
o The projected system flows; and
o The static and dynamic pressures anticipated throughout the system with the addition of the new users incorporated in the analysis.

• A completed Schedule 1b, Minor Water Main Construction Permit Application (Form 542-3151), listed in 567—subrule 40.3(1).

(2) The system must submit completed Schedule 2c, Notification of Minor Water Main Construction (Form 542-3152), prior to the construction or replacement of each minor water main covered by this permit. Each water main covered by the permit must have either been included in the previously submitted hydraulic analysis or must be included in an update to the hydraulic analysis, submitted with Schedule 2c. If an update to the hydraulic analysis is submitted with Schedule 2c, it must include all portions of the distribution system potentially affected by the new construction.

(3) By January 31 of the following year, the system shall submit the following to the department:
1. A complete set of plans for all water main extensions constructed under the permit. The plans must be prepared and submitted by a licensed professional engineer.
2. Completed Schedules 1a, 1c, and 2a, listed in 567—subrule 40.3(1).
3. The construction permit fee calculated in accordance with subparagraph 43.3(3) “c”(1). The fee calculation shall be based upon the total length of water main constructed under the permit. For the purpose of calculating the total amount of water main construction permit fees, paid by the system in accordance with subparagraph 43.3(3) “c” (4), the fee shall be credited to the calendar year in which the actual fee was received by the department.
4. A permit shall contain such conditions as are deemed necessary by the director to ensure compliance with all applicable rules of the department.

(5) The director may modify the permit, in whole or in part, at any time. The director may suspend or revoke the permit, in whole or in part, at any time by providing written notice to the permit holder and is not obligated to renew the permit. Cause for modification, suspension, or revocation of the permit includes, but is not limited to, the following:
1. Violation of any term or condition of the permit;
2. Misrepresentation of fact or failure to disclose fully all material facts in order to obtain a permit;
3. Failure to submit the records and information as required by the director, both generally and as condition of the permit;
4. Failure to submit timely reports from previous permits;
5. Failure to construct in accordance with approved design standards in accordance with subrule 43.3(2); or
6. Failure to construct in accordance with the system’s approved standard specifications.

(6) No variance to the design standards is allowed under this permit. If a variance to the design standards is needed, the system must apply for an individual construction permit following the procedures in 567—subrule 40.4(1).

43.3(4) Waiver from engineering requirements. The requirement for plans and specifications prepared by a licensed professional engineer may be waived for the following types of projects, provided the improvement complies with the standards for construction. This waiver does not relieve the supplier of water from meeting the application and permit requirements pursuant to 43.3(3), except that the applicant need not obtain a written permit prior to installing the equipment.

a. Simple chemical feed, if all the following conditions are met:
(1) The improvement consists only of a simple chemical solution application or installation, which in no way affects the performance of a larger treatment process, or is included as part of a larger treatment project;
(2) The chemical application is by a positive displacement pump (of the piston type with a solenoid operated diaphragm), the acceptability of said pump to be determined by the department;

(3) The supplier of water provides the department with a schematic of the installation and manufacturer’s specifications sufficient enough to determine if the simple chemical feed installation meets, where applicable, standards for construction pursuant to 43.3(2);

(4) The final installation is approved based on an on-site review and inspection by department staff; and

(5) The installation includes only the prepackaged delivery of chemicals (from sacks, containers, or carboys) and does not include the bulk storage or transfer of chemicals (from a delivery vehicle).

b. Self-contained treatment unit, if all the following conditions are met:
   (1) The equipment is of a type which can be purchased “off the shelf,” is self-contained requiring only a piping hookup for installation and operates throughout a range of 35 to 80 pounds per square inch;
   (2) The plant is designed to serve no more than an average of 250 individuals per day;
   (3) The department receives adequate information from the supplier of water on the type of treatment unit, such as manufacturer’s specifications, a schematic indicating the installation’s location within the system and any other information necessary for review by the department to determine if the installation will alleviate the maximum contaminant level violation; and

(4) The final installation is approved based on an on-site inspection by department staff.

43.3(5) Project planning and basis of design. An engineering report containing information and data necessary to determine the conformance of the project to the standards for construction and operation in 43.3(2) and the adequacy of the project to supply water in sufficient quantity and at sufficient pressure and of a quality that complies with drinking water standards pursuant to 567—Chapters 41 and 43 must be submitted to the department either with the project or in advance.

a. Such information and data must supply pertinent information as set forth in part one of the Ten States Standards.

b. The department may reject receipt or delay review of the plans and specifications until an adequate basis of design is received.

43.3(6) Standard specifications for water main construction. Standard specifications for water main construction by an entity may be submitted to the department or an authorized local public works department for approval. Such approval shall apply to all future water main construction by or for that entity for which plans are submitted with a statement requiring construction in accordance with all applicable approved standard specifications unless the standards for public water supply systems specified in 43.3(2) are modified subsequent to such approval and the standard specifications would not be approvable under the modified standards. In those cases where such approved specifications are on file, construction may commence 30 days following receipt of such plans by the department or an authorized local public works department if no response has been received indicating construction shall not commence until a permit is issued.

43.3(7) Site, separation distance, and monitoring requirements for new raw water source(s) and underground finished water storage facilities.

a. Approval required. The site for each proposed raw water supply source or finished water below-ground level storage facility must be approved by the department prior to the submission of plans and specifications.

b. Criteria for approval. A site may be approved by the director if the director concludes that the criteria in this paragraph are met.

(1) Groundwater source. Wells shall be planned and constructed to adapt to the geologic and groundwater conditions of the proposed well site to ensure production of water from the wells that is both microbially safe and free of substances that could cause harmful human health effects. Groundwater wells must meet the following requirements:

   1. Drainage must be directed away from the well in all directions for a minimum radius of 15 feet.
   2. A well site must be separated from contamination sources by the distances specified in Table A at a minimum.
3. After the well site has received preliminary approval from the department, the owner of the proposed well must submit proof of legal control of the land for a 200-foot radius around the well, through purchase, lease, easement, ordinance, or other similar means. Proof of legal control must be submitted as part of the construction permit application, prior to construction. The legal control must be maintained by the public water system for the life of the well, and the system must ensure that the siting criteria indicated in Table A are met.

However, if the proposed well is for an existing noncommunity water system and is replacing an existing well that either does not meet the current standards or is in poor condition, the requirement of 200-foot legal control may be waived by the department provided that:

- The proposed well is located on the best available site;
- The existing facility does not have adequate land to provide the 200-foot control zone;
- The owner has attempted to obtain legal control without success; and
- There is no other public water supply available to which the supply could connect.

4. When the proposed well is located in an existing well field and will withdraw water from the same aquifer as the existing well(s), individual separation distances may be waived if substantial historical data are available indicating that no contamination has resulted.

5. No well shall be constructed within the projected plume of any known anthropogenic groundwater contamination without the department’s written approval. The department may allow a well to be constructed within a contamination plume if the applicant can provide adequate treatment to ensure that all drinking water standards are met and that the pumpage of the proposed well will not cause migration of the plume such that it impacts the water quality of other nearby wells. The applicant must demonstrate, using a hydrogeologic model acceptable to the department, that the time of transport is greater than two years for a viral, bacterial, or other microorganism contaminant and greater than ten years for all chemical contaminants. At a minimum, modeling of the projected plume must take into account the proposed pumpage rate of the well. The department may require additional construction standards for these situations to ensure protection of the groundwater from contamination.

6. The department may require that an identification tag be applied to each well and may supply the numbered tag. The responsibility for ensuring that the tag is properly attached to the well is with the certified water well contractor for new wells and with the department for existing wells.

2. Surface water source. The applicant must submit proof that a proposed surface water source can, through readily available treatment methodology, comply with 567—Chapters 41 and 43, and that the raw water source is adequately protected against potential health hazards including, but not limited to, point source discharges, hazardous chemical spills, and the potential sources of contamination listed in Table A.

After a surface water impoundment has received preliminary approval from the department for use as a raw water source, the owner of the water supply system shall submit proof of legal control through ownership, lease, easement, or other similar means, of contiguous land for a distance of 400 feet from the shoreline at the maximum water level. Legal control shall be for the life of the impoundment and shall control location of sources of contamination within the 400-foot distance. Proof of legal control should be submitted as part of the construction permit application and shall be submitted prior to issuance of a permit to construct.

3. Below-ground storage facilities. The minimum separation between a below-ground level finished water storage facility and any source of contamination listed in Table A as being 50 feet or more shall be 50 feet. The specific separation distances listed in Table A that are less than 50 feet shall apply to a below-ground level finished water storage facility as indicated in the table.

4. Separation distances. Greater separation distances may be required where necessary to ensure that no adverse effects to water supplies or the existing environment will result. Lesser separation distances may be considered if detailed justification is provided by the applicant’s engineer showing that no adverse effects will result from a lesser separation distance, and the regional staff recommends approval of the lesser distance. Such exceptions must be based on special construction techniques or localized geologic or hydrologic conditions.
c. **New source water monitoring requirements.** Water quality monitoring shall be conducted on all new water sources and results submitted to the department prior to placing the new water source into service.

(1) All sources. Water samples shall be collected from each new water source and analyzed for all appropriate contaminants as specified in 567—Chapter 41 consistent with the particular water system classification. If multiple new sources are being added, compositing of the samples (within a single system) shall be allowed in accordance with the composite sampling requirements outlined in 567—Chapter 41. A single sample may be allowed to meet this requirement, if approved by the department.

Subsequent water testing shall be conducted consistent with the water system’s water supply operation permit monitoring schedule.

(2) Groundwater sources. Water samples collected from groundwater sources in accordance with 43.3(7)”c”(1) shall be conducted at the conclusion of the drawdown/yield test pumping procedure, with the exception of bacteriological monitoring. Bacteriological monitoring must be conducted after disinfection of each new well and subsequent pumping of the chlorinated water to waste. Water samples must be analyzed for ammonia. Water samples should also be analyzed for alkalinity, pH, calcium, chloride, copper, hardness, iron, magnesium, manganese, potassium, silica, specific conductance, sodium, sulfate, filterable and nonfilterable solids, and zinc.

(3) Surface water sources. Water samples collected from surface water sources in accordance with 43.3(7)”c”(1) should be collected prior to the design of the surface water treatment facility and shall be conducted and analyzed prior to utilization of the source. The samples shall be collected during June, July, and August. In addition, quarterly monitoring shall be conducted in March, June, September, and December at a location representative of the raw water at its point of withdrawal. Monitoring shall be for turbidity, alkalinity, pH, calcium, chloride, color, copper, hardness, iron, magnesium, manganese, potassium, silica, specific conductance, sodium, sulfate, filterable and nonfilterable solids, carbonate, bicarbonate, algae (qualitative and quantitative), total organic carbon, five-day biochemical oxygen demand, dissolved oxygen, surfactants, nitrogen series (organic, ammonia, nitrite, and nitrate), and phosphate.

**TABLE A: SEPARATION DISTANCES**

<table>
<thead>
<tr>
<th>SOURCE OF CONTAMINATION</th>
<th>REQUIRED MINIMUM LATERAL DISTANCE FROM WELL AS HORIZONTAL ON THE GROUND SURFACE, IN FEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deep Well¹</td>
</tr>
<tr>
<td></td>
<td>Shallow Well¹</td>
</tr>
<tr>
<td><strong>WASTEWATER STRUCTURES:</strong></td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Point of Discharge to Ground Surface</td>
<td>400</td>
</tr>
<tr>
<td>Sanitary &amp; industrial discharges</td>
<td>400</td>
</tr>
<tr>
<td>Water treatment plant wastes</td>
<td>50</td>
</tr>
<tr>
<td>Well house floor drains</td>
<td>5</td>
</tr>
<tr>
<td><strong>Sewers &amp; Drains²</strong></td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sanitary &amp; storm sewers, drains</td>
<td>0 – 25 feet: prohibited 25 – 75 feet if water main pipe 75 – 200 feet if sanitary sewer pipe</td>
</tr>
<tr>
<td>Sewer force mains</td>
<td>0 – 75 feet: prohibited 75 – 400 feet if water main pipe 400 – 1000 feet if sanitary sewer pipe</td>
</tr>
<tr>
<td>Water plant treatment process wastes that are treated onsite</td>
<td>0 – 5 feet: prohibited 5 – 50 feet if sanitary sewer pipe</td>
</tr>
</tbody>
</table>

¹ Minimum distance to be measured from the middle of the well screen to the top of the water table

² Sewers or drains originating from a sanitary or storm sewer system include all connections, fixtures, and drains connected to such a sanitary or storm sewer system that conveys domestic sewage or industrial waste.
<table>
<thead>
<tr>
<th>SOURCE OF CONTAMINATION</th>
<th>REQUIRED MINIMUM LATERAL DISTANCE FROM WELL AS HORIZONTAL ON THE GROUND SURFACE, IN FEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deep Well¹</td>
</tr>
<tr>
<td></td>
<td>Shallow Well¹</td>
</tr>
<tr>
<td>Water plant wastes to sanitary sewer</td>
<td>0 – 25 feet: prohibited</td>
</tr>
<tr>
<td></td>
<td>25 – 75 feet if water main pipe</td>
</tr>
<tr>
<td></td>
<td>75 – 200 feet if sanitary sewer main pipe</td>
</tr>
<tr>
<td>Well house floor drains to sewers</td>
<td>0 – 25 feet: prohibited</td>
</tr>
<tr>
<td></td>
<td>25 – 75 feet if water main pipe</td>
</tr>
<tr>
<td></td>
<td>75 – 200 feet if sanitary sewer main pipe</td>
</tr>
<tr>
<td>Well house floor drains to surface</td>
<td>0 – 5 feet: prohibited</td>
</tr>
<tr>
<td></td>
<td>5 – 50 feet if sanitary sewer pipe</td>
</tr>
<tr>
<td>Land Disposal of Treated Wastes</td>
<td></td>
</tr>
<tr>
<td>Irrigation of wastewater</td>
<td></td>
</tr>
<tr>
<td>Land application of solid wastes³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Private sewage disposal systems and onsite</td>
<td>200</td>
</tr>
<tr>
<td>treatment systems – open portion of treatment</td>
<td></td>
</tr>
<tr>
<td>system¹</td>
<td></td>
</tr>
<tr>
<td>Private sewage disposal systems and onsite</td>
<td>100</td>
</tr>
<tr>
<td>treatment systems – closed portion of</td>
<td></td>
</tr>
<tr>
<td>treatment system¹</td>
<td></td>
</tr>
<tr>
<td>Lagoons</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>Mechanical wastewater treatment plants</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
<tr>
<td>CHEMICALS:</td>
<td></td>
</tr>
<tr>
<td>Chemical application to ground surface</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Chemical &amp; mineral storage above ground¹,²</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Chemical &amp; mineral storage on or under ground</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Transmission pipelines (such as fertilizer,</td>
<td>200</td>
</tr>
<tr>
<td>liquid petroleum, or anhydrous ammonia)</td>
<td>400</td>
</tr>
<tr>
<td>ANIMALS:</td>
<td></td>
</tr>
<tr>
<td>Animal pasturage</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Animal enclosure</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Earthen silage storage trench or pit</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Animal Wastes</td>
<td></td>
</tr>
<tr>
<td>Land application of liquid or slurry</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Land application of solids</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Solids stockpile</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Storage basin or lagoon</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>Storage tank</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
<tr>
<td>MISCELLANEOUS:</td>
<td></td>
</tr>
<tr>
<td>Basements, pits, sumps</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Cemeteries</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>200</td>
</tr>
</tbody>
</table>
### Table: Minimum Lateral Distance from Well as Horizontal on the Ground Surface, in Feet

<table>
<thead>
<tr>
<th>Source of Contamination</th>
<th>Deep Well&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Shallow Well&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisterns</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Flowing streams or other surface water bodies</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>GHEX loop boreholes</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Railroads</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Private wells</td>
<td>200</td>
<td>400</td>
</tr>
<tr>
<td>Solid waste landfills and disposal sites&lt;sup&gt;7&lt;/sup&gt;</td>
<td>1000</td>
<td>1000</td>
</tr>
</tbody>
</table>

1. Deep and shallow wells, as defined in 567—40.2(455B): A deep well is a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn. A shallow well is a well located and constructed in such a manner that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

2. The separation distances are dependent upon two factors: the type of piping that is in the existing sewer or drain, as noted in the table, and that the piping was properly installed in accordance with the standards.

3. Solid wastes are those derived from the treatment of water or wastewater. Certain types of solid wastes from water treatment processes may be land-applied within the separation distance on an individual, case-by-case basis.

4. Private sewage disposal system is defined in 567—subrule 69.1(2). “Onsite treatment system” includes any wastewater treatment system not included in the definition of a private sewage disposal system that is utilizing onsite wastewater treatment technologies to treat domestic waste, such as those specified in 567—Chapter 69 (but excluding waste stabilization ponds). Open portions of treatment systems include subsurface absorption systems, mound systems, intermittent sand filters, constructed wetlands, open bottom media filters, and waste stabilization ponds. Closed portions of treatment systems include septic tanks, aerobic treatment units, fully contained media filters and impervious vault toilets. These separation distances also apply to septic systems that are not considered privately owned.

5. The minimum separation distance for liquid fuel storage associated with standby power generators shall be 50 feet if secondary containment is provided. Secondary containment shall provide for a minimum of 110 percent of the liquid fuel storage capacity. Double-walled storage tanks shall not be considered as secondary containment. The separation distance for liquefied petroleum gas (LPG) storage shall be 15 feet.

6. Electrical power transformers mounted on a single utility pole are exempt from the minimum separation distance requirements.

7. Solid waste means garbage, refuse, rubbish, and other similar discarded solid or semisolid materials, including but not limited to such materials resulting from industrial, commercial, agricultural, and domestic activities.

#### 43.3(8) Drinking Water System Components

Any drinking water system component which comes into contact with raw, partially treated, or finished water must be suitable for the intended use in a potable water system. The component must be certified by an American National Standards Institute (ANSI) accredited third party for conformance with American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61 specifications, if such specification exists for the particular product, unless approved components are not reasonably available for use, in accordance with guidance provided by the department. If the component does not meet the ANSI/NSF Standard 61 specifications or no specification is available, the person seeking to supply or use the component must prove to the satisfaction of the department that the component is not toxic or otherwise a potential hazard in a potable public water supply system.

#### 43.3(9) Water Treatment Filter Media Material

For single media filters, grain sizes up to 0.8 mm effective size may be approved for filters designed to remove constituents other than those contained in the primary drinking water standards. Pilot or full-scale studies demonstrating satisfactory treatment efficiency and operation with the proposed media will be required prior to issuing any construction permits which allow filter media sizes greater than 0.55 mm.

#### 43.3(10) Best Available Treatment Technology
a. **BATs for organic compounds.** The department identifies as indicated in the table below either granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OXID) as the best available technology, treatment technique, or other means available for achieving compliance with the maximum contaminant level for organic contaminants identified in 567—paragraph 41.5(1) “b.” For the purposes of setting MCLs for synthetic organic chemicals, any BAT must be at least as effective as granular activated carbon.

<table>
<thead>
<tr>
<th>ORGANIC CONTAMINANT</th>
<th>GAC</th>
<th>PTA</th>
<th>OXID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alachlor</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Aldicarb</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Aldicarb sulfone</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Aldicarb sulfoxide</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Atrazine</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Benzene</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Carbofuran</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Carbon tetrachloride</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Chlordane</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2,4-D</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Dalapon</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Dibromochloropropane (DBCP)</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>o-Dichlorobenzene</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>p-Dichlorobenzene</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>1,2-Dichloroethane</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>cis-1,2-Dichloroethylene</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>trans-1,2-Dichloroethylene</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>1,1-Dichloroethylene</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Dichloromethane</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Di(2-ethylhexyl)adipate</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Di(2-ethylhexyl)phthalate</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Dinoseb</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Diquat</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Endothall</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Endrin</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Ethylene dibromide (EDB)</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Glyphosate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heptachlor</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heptachlor epoxide</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hexachlorobenzene</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hexachlorocyclopentadiene</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lindane</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Methoxychlor</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monochlorobenzene</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Oxamyl (Vdate)</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b. BATs for inorganic compounds and radionuclides.

(1) Inorganic compounds. The department identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for the inorganic contaminants listed in 567—paragraph 41.3(1) “b,” except fluoride.

<table>
<thead>
<tr>
<th>INORGANIC CHEMICAL</th>
<th>BAT(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>2, 7</td>
</tr>
<tr>
<td>Arsenic\textsuperscript{d}</td>
<td>1, 2, 5, 6, 7, 9, 11\textsuperscript{e}</td>
</tr>
<tr>
<td>Asbestos</td>
<td>2, 3, 8</td>
</tr>
<tr>
<td>Barium</td>
<td>5, 6, 7, 9</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1, 2, 5, 6, 7</td>
</tr>
<tr>
<td>Cadmium</td>
<td>2, 5, 6, 7</td>
</tr>
<tr>
<td>Chromium</td>
<td>2, 5, 6\textsuperscript{b}, 7</td>
</tr>
<tr>
<td>Cyanide</td>
<td>5, 7, 12</td>
</tr>
<tr>
<td>Mercury</td>
<td>2\textsuperscript{a}, 4, 6\textsuperscript{a}, 7\textsuperscript{a}</td>
</tr>
<tr>
<td>Nickel</td>
<td>5, 6, 7</td>
</tr>
<tr>
<td>Nitrate</td>
<td>5, 7, 9</td>
</tr>
<tr>
<td>Nitrite</td>
<td>5, 7</td>
</tr>
<tr>
<td>Selenium</td>
<td>1, 2\textsuperscript{c}, 6, 7, 9</td>
</tr>
<tr>
<td>Thallium</td>
<td>1, 5</td>
</tr>
</tbody>
</table>

Key to BATs

1=Activated Alumina
2=Coagulation/Filtration\textsuperscript{*}
3=Direct and Diatomite Filtration
4=Granular Activated Carbon
5=Ion Exchange
6=Lime Softening\textsuperscript{*}
7=Reverse Osmosis
8=Corrosion Control
9=Electrodialysis
10=Chlorine
11=Oxidation/Filtration
12=Alkaline Chlorination (pH greater than or equal to 8.5)

\textsuperscript{*}not BAT for systems with less than 500 service connections
\textsuperscript{a}BAT only if influent Hg concentrations are less than or equal to 10 micrograms/liter.
\textsuperscript{b}BAT for Chromium III only.
(2) Small system compliance technologies for arsenic. The department identifies in the following table the affordable technology, treatment techniques, or other means available to systems serving 10,000 or fewer persons for achieving compliance with the arsenic maximum contaminant level.

### SMALL SYSTEM COMPLIANCE TECHNOLOGIES FOR ARSENIC

<table>
<thead>
<tr>
<th>Technology</th>
<th>Affordable for listed small system categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activated alumina</td>
<td>All size categories</td>
</tr>
<tr>
<td>Coagulation/filtration(^3)</td>
<td>501 – 3,300 and 3,301 – 10,000</td>
</tr>
<tr>
<td>Coagulation-assisted microfiltration</td>
<td>501 – 3,300 and 3,301 – 10,000</td>
</tr>
<tr>
<td>Electrodialysis reversal(^4)</td>
<td>501 – 3,300 and 3,301 – 10,000</td>
</tr>
<tr>
<td>Enhanced coagulation/filtration</td>
<td>All size categories</td>
</tr>
<tr>
<td>Enhanced lime softening (pH &gt; 10.5)</td>
<td>All size categories</td>
</tr>
<tr>
<td>Ion exchange</td>
<td>All size categories</td>
</tr>
<tr>
<td>Lime softening(^3)</td>
<td>501 – 3,300 and 3,301 – 10,000</td>
</tr>
<tr>
<td>Oxidation/filtration(^5)</td>
<td>All size categories</td>
</tr>
<tr>
<td>Reverse osmosis(^4)</td>
<td>501 – 3,300 and 3,301 – 10,000</td>
</tr>
</tbody>
</table>

\(^1\)Technologies are for Arsenic V. Preoxidation may be required to convert Arsenic III to Arsenic V.
\(^2\)There are three categories of small systems: those serving 25 to 500 people, those serving 501 to 3,300 people, and those serving 3,301 to 10,000 people.
\(^3\)Unlikely to be installed solely for arsenic removal. May require pH adjustment to optimal range if high removals are needed.
\(^4\)Technologies reject a large volume of water. May not be appropriate for areas where water quantity may be an issue.
\(^5\)To obtain high removals, iron to arsenic ratio must be at least 20:1.

(3) Radionuclides.
1. The department identifies in the following table the best available technology for achieving compliance with the radionuclide maximum contaminant levels as indicated.

### RADIONUCLIDE BAT

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Best Available Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross alpha particle activity (excluding radon and uranium)</td>
<td>Reverse osmosis</td>
</tr>
<tr>
<td>Beta particle and photon radioactivity</td>
<td>Ion exchange, reverse osmosis</td>
</tr>
<tr>
<td>Combined radium-226 and radium-228</td>
<td>Ion exchange, reverse osmosis, lime softening</td>
</tr>
<tr>
<td>Uranium</td>
<td>Ion exchange, reverse osmosis, lime softening, coagulation/filtration</td>
</tr>
</tbody>
</table>

2. Small system compliance technologies. The following technologies are identified as radionuclide BAT for systems serving 10,000 or fewer people.

### RADIONUCLIDES SMALL SYSTEM COMPLIANCE TECHNOLOGIES

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Compliance Technology(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross alpha particle activity</td>
<td>2</td>
</tr>
<tr>
<td>Beta particle and photon radioactivity</td>
<td>1, 2</td>
</tr>
<tr>
<td>Combined radium-226 and radium-228</td>
<td>1, 2, 3, 4, 5, 6, 7</td>
</tr>
<tr>
<td>Uranium</td>
<td>1, 2(^b), 3(^b), 8, 9</td>
</tr>
</tbody>
</table>

\(^a\)The numbers following each technology correspond to the following compliance categories:
1. Reverse osmosis
2. Coagulation/filtration
3. Ion exchange, reverse osmosis, lime softening
4. Electrodialysis reversal
5. Enhanced coagulation/filtration
6. Enhanced lime softening (pH > 10.5)
7. Preoxidation
8. Oxidation/filtration
9. Reverse osmosis
Compliance technologies are listed with their corresponding number and potential limitations for use, as follows:

1. Ion exchange. The regeneration solution contains high concentrations of the contaminant ions. Disposal options should be carefully considered before choosing this technology.
2. Reverse osmosis. Reject water disposal options should be carefully considered before choosing this technology.
3. Lime softening. The complexity of the water chemistry may make this technology too complex for small systems.
4. Green sand filtration. Removal efficiencies can vary depending on water quality.
5. Coprecipitation with barium sulfate. This technology has limited applications to small systems, and is most applicable to systems with sufficiently high sulfate levels that already have a suitable filtration treatment train in place.
7. Pre-formed hydrous manganese oxide filtration. This technology is most applicable to small systems that have existing filtration technology.
8. Activated alumina. The regeneration solution contains high concentrations of the contaminant ions. Disposal options should be carefully considered before choosing this technology. Handling of chemicals required during regeneration and pH adjustment requires an adequately trained operator.
9. Enhanced coagulation/filtration. This technology assumes that it is a modification to an existing coagulation/filtration process.

bNot recommended for systems serving 25 to 500 persons.

c. **BATs for disinfection byproducts and disinfectants.** The department identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for the disinfection byproducts listed in 567—paragraph 41.5(2)“b,” and the maximum residual disinfectant levels listed in 567—paragraph 41.5(2)“c.”

<table>
<thead>
<tr>
<th>DBP MCL or MRDL</th>
<th>Best Available Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromate MCL</td>
<td>Control of ozone treatment process to reduce production of bromate</td>
</tr>
<tr>
<td>Chlorite MCL</td>
<td>Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels</td>
</tr>
<tr>
<td>HAA5 and TTHM MCL running annual average</td>
<td>Enhanced coagulation or enhanced softening or GAC10, with chlorine as the primary and residual disinfectant</td>
</tr>
</tbody>
</table>
| HAA5 and TTHM MCL LRAA | • Non-consecutive system: Enhanced coagulation or enhanced softening, plus GAC10; or nanofiltration with a molecular weight cutoff that is less than or equal to 1000 Daltons; or GAC20  
• Consecutive system serving at least 10,000 persons*: Improved distribution system and storage tank management to reduce residence time, plus the use of chloramines for disinfectant residual maintenance  
• Consecutive system serving fewer than 10,000 persons*: Improved distribution system and storage tank management to reduce residence time |
| MRDL | Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels |

* Applies only to the disinfected water that consecutive systems buy or otherwise receive.

d. **Requirement to install BAT.** The department shall require community water systems and nontransient noncommunity water systems to install and use any treatment method identified in 43.3(10) as a condition for granting an interim contaminant level except as provided in paragraph “e.” If, after the system’s installation of the treatment method, the system cannot meet the maximum contaminant level, the system shall be eligible for a compliance schedule with an interim contaminant level granted under the provisions of 567—subrule 42.1(9) and rule 567—43.2(455B).

e. **Engineering assessment option.** If a system can demonstrate through comprehensive engineering assessments, which may at the direction of the department include pilot plant studies, that the treatment methods identified in 43.3(10) would only achieve a de minimis reduction in contaminants, the department may issue a schedule of compliance that requires the system being granted the variance to examine other treatment methods as a condition of obtaining the interim contaminant level.

f. **Compliance schedule.** If the department determines that a treatment method identified in 43.3(10)“a,” “b,” and “c” is technically feasible, the department may require the system to install or
use that treatment method in connection with a compliance schedule issued under the provisions of 567—subrule 42.1(9) and rule 567—43.2(455B). The determination shall be based upon studies by the system and other relevant information.

g. Avoidance of unacceptable risk to health (URTH). The department may require a public water system to use bottled water, point-of-use devices, point-of-entry devices or other means as a condition of granting a variance or an exemption, or issuance of a compliance schedule, from the requirements of 43.3(10) to avoid an unreasonable risk to health.

567—43.4(455B) Certification of completion. Within 30 days after completion of construction, installation or modification of any project, the permit holder shall submit a certification by a licensed professional engineer that the project was completed in accordance with the approved plans and specifications except if the project received a waiver pursuant to 43.3(4).

567—43.5(455B) Filtration and disinfection for surface water and influenced groundwater public water supply systems.

43.5(1) Applicability/general requirements.

a. These rules apply to all public water supply systems using surface water or groundwater under the direct influence of surface water, in whole or in part, and establish criteria under which filtration is required as a treatment technique. In addition, these rules establish treatment technique requirements in lieu of maximum contaminant levels for Giardia lamblia, heterotrophic plate count bacteria, Legionella, viruses and turbidity. Each public water system with a surface water source or a groundwater source under the direct influence of surface water must provide treatment of that source water which complies with these treatment technique requirements. Systems which serve at least 10,000 persons must also comply with the requirements of 567—43.9(455B). Systems which serve fewer than 10,000 persons must also comply with the requirements of 567—43.10(455B). The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

(1) At least 99.9 percent (3-log) removal or inactivation of Giardia lamblia cysts between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer; and

(2) At least 99.99 percent (4-log) removal or inactivation of viruses between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer.

b. Criteria for identification of groundwater under the direct influence of surface water. “Groundwater under the direct influence of surface water” means any water beneath the surface of the ground with: (1) significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as Giardia lamblia, or (2) significant and relatively rapid shifts in water characteristics such as turbidity (particulate content), temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the department. The department determination of direct influence may be based on site-specific measurements of water quality or documentation of well construction characteristics and geology with field evaluation. Only surface water and groundwater sources under the direct influence of surface water that are at risk to the contamination from Giardia cysts are subject to the requirements of this rule. Groundwater sources shall not be subject to this rule. The evaluation process shall be used to delineate between surface water, groundwater under the direct influence of surface water and groundwater. The identification of a source as surface water and groundwater under the direct influence of surface water shall be determined for an individual source, by the department, in accordance with the following criteria. The public water supply shall provide to the department that information necessary to make the determination. The evaluation process will involve one or more of the following steps:

(1) Preliminary evaluation. The department shall conduct a preliminary evaluation of information on the source provided by the public water supply to determine if the source is an obvious surface
water (e.g., pond, lake, stream) or groundwater under the direct influence of surface water. The source shall be evaluated during that period of highest susceptibility to influence from surface water. The preliminary evaluation may include a review of surveys, reports, geological information of the area, physical properties of the source, and a review of departmental and public water system records. If the source is identified as a surface water, no additional evaluation shall be conducted. If the source is a groundwater and identified as a deep well, it shall be classified as a groundwater not under the direct influence of surface water and no additional evaluation shall be conducted, unless through direct knowledge or documentation the source does not meet the requirements of 43.5(1)“b”(2). The deep well shall then be evaluated in accordance with 43.5(1) “b”(3). If the source is a shallow well, the source shall be evaluated in accordance with 43.5(1) “b”(2). If the source is a spring, infiltration gallery, radial collector well, or any other subsurface source, it shall be evaluated in accordance with 43.5(1) “b”(3).

(2) Well source evaluation. Shallow wells greater than 50 feet in lateral distance from a surface water source shall be evaluated for direct influence of surface water through a review of departmental or public water system files in accordance with 43.5(1) “b”(2)“1” and 43.5(1) “b”(2)“2.” Sources that meet the criteria shall be considered to be not under the direct influence of surface water. No additional evaluation will be required. Shallow wells 50 feet or less in lateral distance from a surface water shall be in accordance with 43.5(1) “b”(3) and (4).

1. Well construction criteria. The well shall be constructed so as to prevent surface water from entering the well or traversing the casing.
2. Water quality criteria. Water quality records shall indicate:
   - No record of total coliform or fecal coliform contamination in untreated samples collected over the past three years.
   - No history of turbidity problems associated with the well, other than turbidity as a result of inorganic chemical precipitates.
   - No history of known or suspected outbreak of Giardia or other pathogenic organisms associated with surface water (e.g., Cryptosporidium) which has been attributed to the well.
3. Other available data. If data on particulate matter analysis of the well are available, there shall be no evidence of particulate matter present that is associated with surface water. If information on turbidity or temperature monitoring of the well and nearby surface water is available, there shall be no data on the source which correlates with that of a nearby surface water.
4. Further evaluation. Wells that do not meet all the requirements listed shall require further evaluation in accordance with 43.5(1) “b”(3) and (4).

(3) Formal evaluation. The evaluation shall be conducted by the department or a licensed professional engineer at the direction of the public water supply. The evaluation shall include:

1. Complete file review. In addition to the information gathered in 43.5(1) “b”(1), the complete file review shall consider but not be limited to: design and construction details; evidence of direct surface water contamination; water quality analysis; indications of waterborne disease outbreaks; operational procedures; and customer complaints regarding water quality or water-related infectious illness. Sources other than a well source shall be evaluated in a like manner to include a field survey.
2. Field survey. A field survey shall substantiate findings of the complete file review and determine if the source is at risk to pathogens from direct surface water influence. The field survey shall examine the following criteria for evidence that surface water enters the source through defects in the source which include but are not limited to: a lack of a surface seal on wells, infiltration gallery laterals exposed to surface water, springs open to the atmosphere, surface runoff entering a spring or other collector, and distances to obvious surface water sources.

A report summarizing the findings of the complete file review and field survey shall be submitted to the department for final review and classification of the source. If the complete file review or field survey demonstrates conclusively that the source is subject to the direct surface water influence, the source shall be classified as under the direct influence of surface water. Either method or both may be used to demonstrate that the source is a surface water or groundwater under the direct influence of surface water. If the findings do not demonstrate conclusive evidence of direct influence of surface water, the analysis outlined in 43.5(1) “b”(4) should be conducted.
(4) Particulate analysis and physical properties evaluation.
   1. Surface water indicators. Particulate analysis shall be conducted to identify organisms which only occur in surface waters as opposed to groundwaters, and whose presence in a groundwater would indicate the direct influence of surface water.
      • Identification of a Giardia cyst, live diatoms, and blue-green, green, or other chloroplast containing algae in any source water shall be considered evidence of direct surface water influence.
      • Rotifers and insect parts are indicators of surface water. Without knowledge of which species is present, the finding of rotifers indicates that the source is either directly influenced by surface water, or the water contains organic matter sufficient to support the growth of rotifers. Insects or insect parts shall be considered strong evidence of surface water influence, if not direct evidence.
      • The presence of coccidia (e.g., Cryptosporidium) in the source water is considered a good indicator of direct influence of surface water. Other macroorganisms (greater than 7 um) which are parasitic to animals and fish such as, but not limited to, helminths (e.g., tapeworm cysts), ascaris, and Diphyllobothrium, shall be considered as indicators of direct influence of surface water.
   2. Physical properties. Turbidity, temperature, pH and conductivity provide supportive, but less direct, evidence of direct influence of surface water. Turbidity fluctuations of greater than 0.5-1.0 NTU over the course of a year may be indicative of direct influence of surface water. Temperature fluctuations may also indicate surface water influence. Changes in other chemical parameters such as pH, conductivity, or hardness may also give an indirect indication of influence by nearby surface water.
   
c. Compliance. A public water system using a surface water source or a groundwater source under the direct influence of surface water is considered to be in compliance with the requirements of this subrule if it meets the filtration requirements in 43.5(3) and the disinfection requirements in 43.5(2) in accordance with the effective dates specified within the respective subrules.

d. Certified operator requirement. Each public water system using a surface water source or a groundwater source under the direct influence of surface water must be operated by a certified operator who meets the requirements of 567—Chapter 81.

43.5(2) Disinfection. All community and noncommunity public water supply systems using surface water or groundwater under the direct influence of surface water in whole or in part shall be required to provide disinfection in compliance with this subrule and filtration in compliance with 43.5(3). If the department has determined that filtration is required, the system must comply with any interim disinfection requirements the department deems necessary before filtration is installed. A system providing filtration on or before December 30, 1991, must meet the disinfection requirements of this subrule beginning June 29, 1993. A system providing filtration after December 30, 1991, must meet the disinfection requirements of this subrule when filtration is installed. Failure to meet any requirement of this subrule after the applicable date specified in this subrule is a treatment technique violation. The disinfection requirements are as follows:
   
a. Disinfection treatment criteria. The disinfection treatment must be sufficient to ensure that the total treatment processes of that system achieve at least 99.9 percent (3-log) inactivation or removal of Giardia lamblia cysts and at least 99.99 percent (4-log) inactivation or removal of viruses, acceptable to the department. At least 0.5 log inactivation of Giardia lamblia cysts must be achieved through disinfection treatment using a chemical disinfectant even if the required inactivation or removal is met or exceeded through physical treatment processes. Each system is required to calculate the total inactivation ratio (CT_calculated/CT_required) each day the treatment plant is in operation. The system’s total inactivation ratio must be equal to or greater than 1.0 in order to ensure that the minimum inactivation and removal requirements have been achieved. If the system’s total inactivation ratio for the day is below 1.0, the system must notify the department within 24 hours.
   
b. Disinfection system. The disinfection system must include:
      (1) Redundant components, including an auxiliary power supply with automatic start-up and alarm to ensure that disinfectant application is maintained continuously while water is being delivered to the distribution system, or
      (2) Automatic shutoff of delivery of water to the distribution system whenever there is less than 0.3 mg/L of residual disinfectant concentration in the water. If the department determines that automatic
shutoff would cause unreasonable risk to health or interfere with fire protection, the system must comply with 43.5(2) “b”(1).

c. **Residual disinfectant entering system.** The residual disinfectant concentration in the water entering the distribution system, measured as specified in 43.5(4) “a”(5) and 43.5(4) “b”(2), cannot be less than 0.3 mg/L free residual or 1.5 mg/L total residual chlorine for more than four hours.

d. **Residual disinfectant in the system.** The residual disinfectant concentration in the distribution system, measured as total chlorine, combined chlorine, or chlorine dioxide, as specified in 43.5(4) “a”(5) and 43.5(4) “b”(2), cannot be undetectable in more than 5 percent of the samples each month for any two consecutive months that the system serves water to the public. Water within the distribution system with a heterotrophic plate count bacteria concentration less than or equal to 500/mL, measured as heterotrophic plate count (HPC) as specified in 567—paragraph 41.2(3) “e,” is deemed to have a detectable disinfectant residual for purposes of determining compliance with this requirement. Therefore, the value “V” in the following formula cannot exceed 5 percent in one month for any two consecutive months.

\[
V = \left[ \frac{c + d + e}{a + b} \right] \times 100
\]

where:

- \(a\) = number of instances in which the residual disinfectant concentration is measured;
- \(b\) = number of instances in which the residual disinfectant concentration is not measured but heterotrophic plate count bacteria (HPC) is measured;
- \(c\) = number of instances in which the residual disinfectant concentration is measured but not detected and no HPC is measured;
- \(d\) = number of instances in which no residual disinfectant concentration is detected and where the HPC is greater than 500/mL; and
- \(e\) = number of instances in which the residual disinfectant concentration is not measured and HPC is greater than 500/mL.

**43.5(3) Filtration.**

a. **Applicability.** A public water system that uses a surface water source or a groundwater source under the direct influence of surface water must provide treatment consisting of both disinfection, as specified in 43.5(2), and filtration treatment which complies with the turbidity requirements of subrules 43.5(3), 43.5(4), and 43.5(5). A system providing or required to provide filtration on or before December 30, 1991, must meet the requirements of this subrule by June 29, 1993. A system providing or required to provide filtration after December 30, 1991, must meet the requirements of this subrule when filtration is installed. Beginning January 1, 2002, systems serving at least 10,000 people must meet the turbidity requirements in 567—43.9(455B). Beginning January 1, 2005, systems serving fewer than 10,000 people must meet the turbidity requirements in 567—43.10(455B). A system shall install filtration within 18 months after the department determines, in writing, that filtration is required. The department may require and the system shall comply with any interim turbidity requirements the department deems necessary. Failure to meet any requirements of the referenced subrules after the dates specified is a treatment technique violation.

b. **Conventional filtration treatment or direct filtration.**

1. For systems using conventional filtration or direct filtration, the turbidity level of representative samples of a system’s filtered water must be less than or equal to 0.5 nephelometric turbidity units (NTU) in at least 95 percent of the measurements taken each month when measured as specified in 43.5(4) “a”(1) and 43.5(4) “b”(1).

2. The turbidity level of representative samples of a system’s filtered water must at no time exceed 5 NTU when measured as specified in 43.5(4) “a”(1) and 43.5(4) “b”(1).

c. **Slow sand filtration.**
(1) For systems using slow sand filtration, the turbidity level of representative samples of a system’s filtered water must be less than or equal to 1 NTU in at least 95 percent of the measurements taken each month when measured as specified in 43.5(4)“a”(1) and 43.5(4)“b”(1).

(2) The turbidity level of representative samples of a system’s filtered water must not exceed 5 NTU when measured as specified in 43.5(4)“a”(1) and 43.5(4)“b”(1).

d. Diatomaceous earth filtration.

(1) For systems using diatomaceous earth filtration, the turbidity level of representative samples of a system’s filtered water must be less than or equal to 1 NTU in at least 95 percent of the measurements taken each month when measured as specified in 43.5(4)“a”(1) and 43.5(4)“b”(1).

(2) The turbidity level of representative samples of a system’s filtered water must not exceed 5 NTU when measured as specified in 43.5(4)“a”(1) and 43.5(4)“b”(1).

e. Other filtration technologies. A public water system may use either a filtration technology not listed in 43.5(3)“b” to 43.5(3)“d” or a filtration technology listed in 43.5(3)“b” or 43.5(3)“c” at a higher turbidity level if it demonstrates to the department through a preliminary report submitted by a licensed professional engineer, using pilot plant studies or other means, that the alternative filtration technology in combination with disinfection treatment that meets the requirements of 43.5(2) consistently achieves 99.9 percent removal or inactivation of *Giardia lamblia* and 99.99 percent removal or inactivation of viruses. For a system that uses alternative filtration technology and makes this demonstration, the turbidity treatment technique requirements are as follows:

(1) The turbidity level of representative samples of a system’s filtered water must be less than or equal to 1 NTU in at least 95 percent of the measurements taken each month when measured as specified in 43.5(4)“a”(1) and 43.5(4)“b”(1).

(2) The turbidity level of representative samples of a system’s filtered water must not exceed 5 NTU when measured as specified in 43.5(4)“a”(1) and 43.5(4)“b”(1).

Beginning January 1, 2002, systems serving at least 10,000 people must meet the requirements for other filtration technologies in 43.9(3)“b.”

Beginning January 1, 2005, systems serving fewer than 10,000 people must meet the requirements for other filtration technologies in 567—43.10(455B).

43.5(4) Analytical and monitoring requirements.

a. Analytical requirements. Only the analytical method(s) specified in this paragraph, or otherwise approved by the department, may be used to demonstrate compliance with the requirements of 43.5(2) and 43.5(3). Measurements for pH, temperature, turbidity, and residual disinfectant concentrations must be conducted by a Grade II, III or IV operator meeting the requirements of 567—Chapter 81, any person under the supervision of a Grade II, III or IV operator meeting the requirements of 567—Chapter 81, or a laboratory certified by the department to perform analysis under 567—Chapter 83. For consecutive public water supplies from a surface water or groundwater under the direct influence of surface water system, the disinfectant concentration analyses must be conducted by a certified operator who meets the requirements of 567—Chapter 81. Measurements for heterotrophic plate count bacteria must be conducted by a laboratory certified by the department to do such analysis.

(1) Turbidity analytical methodology. Turbidity analysis shall be conducted using the methodology in the following table. Each turbidimeter must be calibrated at least once every 90 days with a primary standard. The calibration of each turbidimeter used for compliance must be verified at least once per week with a primary standard, secondary standards, or the manufacturer’s proprietary calibration confirmation device or by a method approved by the department. If the verification is not within plus or minus 0.05 NTU for measurements of less than or equal to 0.5 NTU, or within plus or minus 10 percent of measurements greater than 0.5 NTU, the turbidimeter must be recalibrated.
<table>
<thead>
<tr>
<th>Methodology</th>
<th>EPA</th>
<th>SM</th>
<th>GLI</th>
<th>HACH</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Nephelometry (online)</td>
<td>180.1(^1)</td>
<td>2130B(^2)</td>
<td>Method (^2)</td>
<td>FilterTrak 10133(^4)</td>
<td>Mitchell M5271(^6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mitchell M5331 Rev. 1.2(^10)</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Mitchell M5331 Rev. 1.2(^10)</td>
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<td></td>
<td></td>
<td></td>
<td>AMI Turbiwell(^9)</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Orion AQ4500(^8)</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Hach Method 10258(^11)</td>
</tr>
<tr>
<td>LED Nephelometry (online)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LED Nephelometry (portable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>360-degree Nephelometry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) "Methods for the Determination of Inorganic Substances in Environmental Samples," EPA-600/R-93-100, August 1993. Available at NTIS, PB94-121811.


\(^3\) GLI Method 2, “Turbidity,” November 2, 1992, Great Lakes Instruments, Inc., 8855 North 55th Street, Milwaukee, WI 53223.

\(^4\) Hach FilterTrak Method 10133, “Determination of Turbidity by Laser Nephelometry,” January 2000, Revision 2.0, Hach Co., P.O. Box 389, Loveland, CO 80539-0389, telephone (800)227-4224.

\(^5\) Styrene divinyl benzene beads (e.g., AMCO-AEPA-1 or equivalent) and stabilized formazin (e.g., Hach StablCal\(^\text{TM}\) or equivalent) are acceptable substitutes for formazin.


\(^9\) AMI Turbiwell, “Continuous Measurement of Turbidity Using a SWAN AMI Turbiwell Turbidimeter,” August 2009. Available at www.nemi.gov or from Markus Bernasconi, SWAN Analytische Instrumente AG, Studbachstrasse 13, CH-8340 Hinwil, Switzerland.


(2) Temperature analytical methodology. The temperature shall be determined in compliance with the methodology listed in 567—subparagraph 41.4(1)\(^\text{g}\)”(1).

(3) pH (hydrogen ion concentration) analytical methodology. The pH shall be determined in compliance with the methodology listed in 567—subparagraph 41.4(1)\(^\text{g}\)”(1).

(4) Heterotrophic plate count bacteria analytical methodology. The heterotrophic plate count bacteria sampling and analysis shall be conducted in compliance with 567—subrule 41.2(3) and 43.5(2)\(^\text{d}\)” The time from sample collection to initiation of analysis shall not exceed eight hours, and the samples must be held below 10 degrees C during transit.

(5) Residual disinfectant analytical methodology. The residual disinfectant concentrations shall be determined in compliance with one of the analytical methods in the following table. Residual disinfectant concentrations for free chlorine and combined chlorine may also be measured by using DPD colorimetric test kits. Free and total chlorine residuals may be measured continuously by adapting a specified chlorine residual method for use with a continuous monitoring instrument provided the chemistry, accuracy and precision remain the same. Instruments used for continuous monitoring must be verified with a grab
sample measurement at least every seven days. The analyzer concentration must be within plus or minus 0.1 mg/L or plus or minus 15 percent (whichever is larger) of the grab sample measurement. If the verification is not within this range, immediate actions must be taken to resolve the issue and another verification must be conducted.
## Disinfectant Analytical Methodology

<table>
<thead>
<tr>
<th>Residual</th>
<th>Methodology</th>
<th>Standard Methods&lt;sup&gt;1,2&lt;/sup&gt;</th>
<th>Standard Methods Online&lt;sup&gt;6&lt;/sup&gt;</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free chlorine</td>
<td>Amperometric Titration</td>
<td>4500-Cl D</td>
<td>4500-Cl D-00</td>
<td>D1253-034, 08, 14</td>
</tr>
<tr>
<td></td>
<td>DPD Ferrous Titrimetric</td>
<td>4500-Cl F</td>
<td>4500-Cl F-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DPD Colorimetric</td>
<td>4500-Cl G</td>
<td>4500-Cl G-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Syringaldazine (FACTS)</td>
<td>4500-Cl H</td>
<td>4500-Cl H-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Online Chlorine Analyzer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amperometric Sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indophenol Colorimetric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total chlorine</td>
<td>Amperometric Titration</td>
<td>4500-Cl D</td>
<td>4500-Cl D-00</td>
<td>D1253-034, 08, 14</td>
</tr>
<tr>
<td></td>
<td>Amperometric Titration (low-level measurement)</td>
<td>4500-Cl E</td>
<td>4500-Cl E-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DPD Ferrous Titrimetric</td>
<td>4500-Cl F</td>
<td>4500-Cl F-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DPD Colorimetric</td>
<td>4500-Cl G</td>
<td>4500-Cl G-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iodometric Electrode</td>
<td>4500-Cl I</td>
<td>4500-Cl I-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Online Chlorine Analyzer</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Amperometric Sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine dioxide</td>
<td>Amperometric Titration</td>
<td>4500-C1O₂ C</td>
<td>4500-C1O₂ C-00</td>
<td>ChlordioX Plus&lt;sup&gt;9&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>DPD Method</td>
<td>4500-C1O₂ D</td>
<td>4500-C1O₂ D-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amperometric Titration</td>
<td>4500-C1O₂ E</td>
<td>4500-C1O₂ E-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amperometric Sensor</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Spectrophotometric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ozone</td>
<td>Indigo method</td>
<td>4500-O₃ B&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4500-O₃ B-97</td>
<td>327.0, Revision 1&lt;sup&gt;15&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
b. Monitoring requirements. A public water system that uses a surface water source or groundwater source under the influence of surface water must monitor in accordance with this paragraph.

1. Turbidity.

   1. Routine turbidity monitoring requirements. Turbidity measurements as required by 43.5(3) must be performed on representative samples of the system’s filtered water every four hours (or more frequently as long as measurements are recorded at equal time intervals and detailed in the turbidity protocol) that the system serves water to the public. A public water system may substitute continuous turbidity monitoring for grab sample monitoring or may monitor more frequently than every four hours if it validates the continuous measurement for accuracy on a regular basis using a turbidity protocol approved by the department and audited for compliance during sanitary surveys. Major elements of the protocol shall include, but are not limited to: sample measurement location, method of calibration, calibration frequency, calibration standards, method of verification, verification frequency, documentation, data collection, data recording frequency, and data reporting. For any systems using slow sand filtration or filtration treatment other than conventional treatment, direct filtration, or diatomaceous earth filtration, the department may reduce the sampling frequency to once per day if it determines that less frequent monitoring is sufficient to indicate effective filtration performance. For systems serving 500 or fewer persons, the department may reduce the turbidity sampling frequency to once per day, regardless of the type of filtration treatment used, if the department determines that less frequent monitoring is sufficient to indicate effective filtration performance. Approval shall be based upon documentation provided by the system, acceptable to the department and pursuant to the conditions of an operation permit.

   2. Turbidity monitoring requirements for population greater than 100,000. A supplier of water serving a population or population equivalent of greater than 100,000 persons shall provide a continuous or rotating cycle turbidity monitoring and recording device or take hourly grab samples to determine...
compliance with 43.5(3). The system must meet the requirements in 43.5(4) “b”(1)”1,” including the turbidity protocol.

3. Failure of the continuous turbidity monitoring equipment. If there is a failure in the continuous turbidity monitoring equipment, the system must conduct grab sampling every four hours in lieu of continuous monitoring until the turbidimeter is repaired and back online. A system has a maximum of five working days after failure to repair the equipment or else the system is in violation. The system must notify the department within 24 hours of both when the turbidimeter was taken offline and when it was returned online.

(2) Residual disinfectant.
1. Residual disinfectant entering the system. The residual disinfectant concentration of the water entering the distribution system shall be monitored continuously, and the lowest value recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every four hours may be conducted in lieu of continuous monitoring, but not to exceed five working days following the failure of the equipment. If acceptable to the department, systems serving 3,300 or fewer persons may take grab samples in lieu of providing continuous monitoring on an ongoing basis at the frequencies prescribed below:

<table>
<thead>
<tr>
<th>System size (persons served)</th>
<th>Samples per day*</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 or fewer</td>
<td>1</td>
</tr>
<tr>
<td>501 to 1,000</td>
<td>2</td>
</tr>
<tr>
<td>1,001 to 2,500</td>
<td>3</td>
</tr>
<tr>
<td>2,501 to 3,300</td>
<td>4</td>
</tr>
</tbody>
</table>

*When more than one grab sample is required per day, the day’s samples cannot be taken at the same time. The sampling intervals must be at a minimum of four-hour intervals.

If at any time the disinfectant concentration falls below 0.3 mg/L free residual or 1.5 mg/L total residual chlorine in a system using grab sampling in lieu of continuous monitoring, the system shall take a grab sample every four hours until the residual disinfectant concentration is equal to or greater than 0.3 mg/L free residual or 1.5 mg/L total residual chlorine.

2. Residual disinfectant in the system. The residual disinfectant concentration must be measured at least daily in the distribution system. Residual disinfectant measurements that are required as part of the total coliform bacteria sample collection under 567—subparagraph 41.2(1) “c”(7) shall be used to satisfy this requirement on the day(s) when a bacteria sample(s) is collected. The department may allow a public water system that uses both a groundwater source and a surface water source or a groundwater source under direct influence of surface water to take residual disinfectant samples at points other than the total coliform sampling points, if these points are included as a part of the coliform sample site plan meeting the requirements of 567—paragraph 41.2(1) “c”(1)”1” and if the department determines that such points are representative of treated (disinfected) water quality within the distribution system. Heterotrophic plate count bacteria (HPC) may be measured in lieu of residual disinfectant concentration, using the analytical methods specified in 567—subparagraph 41.2(3)”e”(1). The time from sample collection to initiation of analysis shall not exceed eight hours. HPC samples must be kept below 10 degrees C during transit to the laboratory. All HPC samples must be analyzed by a department-certified laboratory meeting the requirements of 567—Chapter 83.

43.5(5) Reporting requirements. Public water supplies shall report the results of routine monitoring required to demonstrate compliance with 567—43.5(455B) and treatment technique violations as follows:

a. Waterborne disease outbreak. Each system, upon discovering that a waterborne disease outbreak potentially attributable to that water system has occurred, must report that occurrence to the department as soon as possible, but no later than by the end of the next business day.
b. **Turbidity exceeds 5 NTU.** If at any time the turbidity exceeds 5 NTU, the system must inform the department as soon as possible, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3) “b”(3).

c. **Residual disinfectant entering distribution system below 0.3 mg/L free residual chlorine or 1.5 mg/L total residual chlorine.** If at any time the residual falls below 0.3 mg/L free residual chlorine or 1.5 mg/L total residual chlorine in the water entering the distribution system, the system must notify the department as soon as possible, but no later than by the end of the next business day. The system also must notify the department by the end of the next business day whether or not the residual was restored to at least 0.3 mg/L free residual chlorine or 1.5 mg/L total residual chlorine within four hours.

d. **Routine monitoring reporting requirements.** Routine monitoring results shall be provided as part of the monthly operation reports in accordance with 567—40.3(455B) and 567—subrule 42.4(3).

e. **Total inactivation ratio below 1.0.** If the system’s total inactivation ratio for the day is below 1.0, the system must notify the department within 24 hours.

**43.5(6) Filter backwash recycle provisions.** All surface water or influenced groundwater systems that employ conventional filtration or direct filtration treatment and that recycle spent filter backwash water, thickener supernatant, or liquids from dewatering processes must meet the requirements of this subrule.

a. **Reporting.** A system must notify the department in writing by December 8, 2003, if the system recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes. This notification must include the following information at a minimum:

1. A plan schematic showing the origin of all flows which are recycled (including, but not limited to, spent filter backwash water, thickener supernatant, and liquids from dewatering processes), the hydraulic conveyance used to transport them, and the location where they are reintroduced back into the treatment plant.

2. Typical recycle flow in gallons per minute (gpm), the highest observed plant flow experience in the previous year (in gpm), design flow for the treatment plant (in gpm), the minimum plant rate (in gpm) during which the filter backwash will be recycled, and department-approved operating capacity for the plant where the department has made such determinations.

b. **Treatment technique requirement.** Any system that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes must return these flows through the processes of a system’s existing conventional or direct filtration system as defined in 567—40.2(455B) or at an alternate location approved by the department by June 8, 2004. However, if capital improvements are required to modify the recycle location to meet this requirement, all capital improvements must be completed no later than June 8, 2006.

c. **Record keeping.** The system must collect and retain on file the recycle flow information specified below for review and evaluation by the department beginning June 8, 2004.

1. A copy of the recycle notification and information submitted to the department under paragraph “a” of this subrule.

2. A list of all recycle flows and the frequency with which they are returned.

3. The average and maximum backwash flow rate through the filters and the average and maximum duration of the filter backwash process in minutes.

4. The typical filter run length and a written summary of how filter run length is determined.

5. The type of treatment provided for the recycle flow.

6. Data on the physical dimensions of the equalization and treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used including average dose and frequency of use, and frequency at which solids are removed, if applicable.

[ARC 9915B, IAB 12/14/11, effective 1/18/12; ARC 3735C, IAB 4/11/18, effective 5/16/18]

**567—43.6(455B) Residual disinfectant and disinfection byproduct precursors.**

**43.6(1) Residual disinfectant.**

a. **Applicability.**
(1) CWS and NTNC systems. This rule establishes criteria under which CWS and NTNC public water supply systems that add a chemical disinfectant to the water in any part of the drinking water treatment process or that provide water that contains a chemical disinfectant must modify their practices to meet the MCLs listed in 567—41.6(455B), the maximum residual disinfectant levels (MRDL) listed in this subrule, and treatment technique requirements for disinfection byproduct precursors listed in subrule 43.6(3).

(2) TNC systems with chlorine dioxide disinfection. This rule establishes criteria under which TNC public water supply systems that use chlorine dioxide as a disinfectant or oxidant must modify their practices to meet the chlorine dioxide MRDL listed in paragraph 43.6(1) ‘b.’

(3) Compliance dates. Compliance dates for this rule are based upon the source water type and the population served. Systems are required to comply with this rule as follows, unless otherwise noted:

1. Surface water and IGW CWS and NTNC. CWS and NTNC systems using surface water or groundwater under the direct influence of surface water (IGW) in whole or in part and which serve 10,000 or more persons must comply with this rule beginning January 1, 2002. CWS and NTNC surface water or IGW systems serving fewer than 10,000 persons must comply with this rule beginning January 1, 2004.

2. Groundwater CWS and NTNC. CWS and NTNC systems using only groundwater not under the direct influence of surface water must comply with this rule beginning January 1, 2004.

3. TNC using chlorine dioxide. TNC systems serving over 10,000 persons and using surface water or groundwater under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with any requirements for chlorine dioxide in this rule beginning January 1, 2002. TNC systems serving 10,000 persons or less, regardless of source water type, and using chlorine dioxide as a disinfectant or oxidant must comply with any requirements for chlorine dioxide in this rule beginning January 1, 2004.

4. Extension of compliance period for GAC or membrane technology installation. A system that is installing GAC or membrane technology to comply with this rule may apply to the department for an extension of up to 24 months past the dates in 43.6(1) ‘a’ (3), but not beyond December 31, 2003. In granting the extension, the department will set a schedule for compliance and may specify any interim measures the system must take. Failure to meet a compliance schedule or interim treatment requirements constitutes a violation of the public drinking water supply rules, requires public notification per 567—subrule 42.1(1), and may result in an administrative order.

(4) Control of residual disinfectants. Notwithstanding the MRDLs in this rule, systems may increase residual disinfectant levels of chlorine or chloramines (but not chlorine dioxide) in the distribution system to a level and for a time necessary to protect public health, to address specific microbiological contamination problems caused by circumstances such as, but not limited to, distribution line breaks, storm run-off events, source water contamination events, or cross-connection events.

(5) Consecutive systems. Consecutive systems that provide water containing a disinfectant or oxidant are required to comply with this rule.

(6) Systems with multiple water sources. Systems with water sources that are used independently from each other, are not from the same source as determined by the department, or do not go through identical treatment processes are required to conduct the monitoring for the applicable disinfectants or oxidants and disinfection byproducts during operation of each source. The system must comply with this rule during the use of each water source.

b. Maximum residual disinfectant levels. Maximum residual disinfectant levels (MRDLs) are as follows:

<table>
<thead>
<tr>
<th>Disinfection Residual</th>
<th>MRDL (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloramines</td>
<td>4.0 as Cl₂</td>
</tr>
<tr>
<td>Chlorine</td>
<td>4.0 as Cl₂</td>
</tr>
<tr>
<td>Chlorine dioxide</td>
<td>0.8 as ClO₂</td>
</tr>
</tbody>
</table>
c. **Monitoring requirements for residual disinfectants.**

(1) General requirements.
   1. Systems must take all samples during normal operating conditions. If the system does not use the disinfectant or oxidant on a daily basis, the system must conduct the required daily monitoring each day the disinfectant or oxidant is used, and any required monthly monitoring during those months in which the disinfectant or oxidant is used during any portion of the month.
   2. Failure to monitor in accordance with the monitoring plan required under 43.6(1)“c”(1)“5” is a monitoring violation.
   3. Failure to monitor is a violation for the entire period covered by the annual average where compliance is based on a running annual average of monthly or quarterly samples or averages and the system’s failure to monitor makes it impossible to determine compliance with MRDLs.
   4. Systems may use only data collected under the provisions of this rule or of 567—41.6(455B) to qualify for reduced monitoring.
   5. Systems required to monitor under the provisions of this rule or of 567—41.6(455B) must develop and implement a monitoring plan, in accordance with 567—paragraph 41.6(1)“c”(1)“6.”

(2) Chlorine and chloramines.
   1. Routine monitoring. Community and nontransient noncommunity water systems that use chlorine or chloramines must measure the residual disinfectant level at the same points in the distribution system and at the same time as total coliforms are sampled, as specified in 567—subrule 41.2(1). Surface water and groundwater under the direct influence of surface water systems may use the results of residual disinfectant concentration sampling conducted under 43.5(4)“b”(2)“2,” in lieu of taking separate samples.
   2. Reduced monitoring. Chlorine and chloramine monitoring may not be reduced.

(3) Chlorine dioxide.
   1. Routine monitoring. Any public water supply systems that use chlorine dioxide for disinfection or oxidation must take daily samples at the entrance to the distribution system. For any daily sample that exceeds the MRDL, the system must take samples in the distribution system the following day at the locations required by 43.6(1)“c”(3)“2,” in addition to the sample required at the entrance to the distribution system.
   2. Additional monitoring. On each day following a routine sample monitoring result that exceeds the MRDL, the system is required to take three chlorine dioxide distribution system samples.
      - If chlorine dioxide or chloramines are used to maintain a residual disinfectant in the distribution system, or if chlorine is used to maintain a residual disinfectant in the distribution system and there are no disinfection addition points after the entrance to the distribution system (i.e., no booster chlorination), the system must take three samples as close to the first customer as possible, at intervals of at least six hours.
      - If chlorine is used to maintain a residual disinfectant in the distribution system and there are one or more disinfection addition points after the entrance to the distribution system (i.e., booster chlorination), the system must take one sample at each of the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the distribution system as possible (reflecting maximum residence time in the distribution system).
   3. Reduced monitoring. Chlorine dioxide monitoring may not be reduced.

d. **Analytical requirements for residual disinfectants.**

(1) Analytical methods. Systems must measure residual disinfectant concentrations for free chlorine, combined chlorine (chloramines), and chlorine dioxide by the methods listed in the following table:
## Approved Methods for Residual Disinfectant Compliance Monitoring

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Standard Methods</th>
<th>Other Method</th>
<th>Residual measured(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Freely Dissolved Chlorine</td>
</tr>
<tr>
<td>Amperometric Titration</td>
<td>4500-Cl D</td>
<td>ASTM: D 1253-86 (96), 03, 08, 14</td>
<td>X (X) (X)</td>
</tr>
<tr>
<td>Low Level Amperometric Titration</td>
<td>4500-Cl E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPD Ferrous Titrimetric</td>
<td>4500-Cl F</td>
<td></td>
<td>X (X) (X)</td>
</tr>
<tr>
<td>DPD Colorimetric</td>
<td>4500-Cl G</td>
<td>Hach Method 10260(^4)</td>
<td>X (X) (X)</td>
</tr>
<tr>
<td>Syringaldazine (FACTS)</td>
<td>4500-Cl H</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Amperometric Sensor</td>
<td></td>
<td>ChloroSense(^3)</td>
<td>X (X) (X)</td>
</tr>
<tr>
<td>Online Chlorine Analyzer</td>
<td></td>
<td>EPA 334.0(^2)</td>
<td>X (X)</td>
</tr>
<tr>
<td>Indophenol Colorimetric</td>
<td></td>
<td>Hach Method 10241(^6)</td>
<td>X (X) (X)</td>
</tr>
<tr>
<td>Iodometric Electrode</td>
<td>4500-Cl I</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>DPD</td>
<td>4500-CIO(_2) D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amperometric Method II</td>
<td>4500-CIO(_2) E</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Lissamine Green Spectrophotometric</td>
<td></td>
<td>EPA: 327.0 Rev. 1.1</td>
<td>X</td>
</tr>
<tr>
<td>Amperometric Sensor</td>
<td></td>
<td>ChlorodioX Plus(^5)</td>
<td>X</td>
</tr>
</tbody>
</table>

The procedures shall be done in accordance with the documents listed below. The incorporation by reference of the following documents was approved by the Director of the Federal Register on February 16, 1999, in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the documents may be obtained from the sources listed below. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at (800) 426-4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW, Washington, DC 20460 (telephone: (202) 260-3027); or at the Office of Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC 20408.

The following method is available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428:


The following methods are available from the American Public Health Association, 800 I Street, NW, Washington, DC 20001-3710:

- American Public Health Association: Methods: 4500-Cl D, 4500-Cl E, 4500-Cl F, 4500-Cl G, 4500-Cl H, 4500-Cl I, 4500-CIO\(_2\) E. Only the 19th and 20th editions may be used for the chlorine dioxide Method 4500-CIO\(_2\) D.

The following methods are available from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161 (telephone: (800)553-6847):

- \(^1\)X indicates method is approved for measuring specified residual disinfectant. Free chlorine or total chlorine may be measured for demonstrating compliance with the chlorine MRDL, and combined chlorine or total chlorine may be measured for demonstrating compliance with the chloramine MRDL.


- \(^3\)ChloroSense, “Measurement of Free and Total Chlorine in Drinking Water by Palintest ChloroSense,” September 2009. Available at www.nemi.gov or from Palintest Ltd., 21 Kenton Lands Road, P.O. Box 18395, Erlanger, KY 41018.

(2) Test kit use. Systems may also measure residual disinfectant concentrations for chlorine, chloramines, and chlorine dioxide by using DPD colorimetric test kits acceptable to the department. Free and total chlorine residual disinfectant concentrations may be measured continuously by adapting a specified chlorine residual method for use with a continuous monitoring instrument provided the chemistry, accuracy, and precision remain the same. Instruments used for continuous monitoring must be calibrated with a grab sample measurement at least every five days.

(3) Operator requirement. Measurements for residual disinfectant concentration shall be conducted by a Grade A through IV operator meeting the requirements of 567—Chapter 81, any person under the direct supervision of a Grade A through IV operator meeting the requirements of 567—Chapter 81, or a laboratory certified by the department to perform analysis under 567—Chapter 83.

e. Compliance requirements for residual disinfectants.

(1) General requirements.

1. When compliance is based on a running annual average of monthly or quarterly samples or averages and the system’s failure to monitor makes it impossible to determine compliance with MRDLs for chlorine and chloramines, this failure to monitor will be treated as a monitoring violation for the entire period covered by the annual average.

2. All samples taken and analyzed under the provisions of this rule must be included in determining compliance, even if that number is greater than the minimum required.

(2) Chlorine and chloramines.

1. Compliance must be based on a running annual arithmetic average, computed quarterly, of monthly averages of all samples collected by the system under 43.6(1)“c”(2). If the average covering any consecutive four-quarter period exceeds the MRDL, the system is in violation of the MRDL and must notify the public pursuant to 567—paragraph 42.1(455B), in addition to reporting to the department pursuant to 567—paragraph 42.4(3)“d.”

2. In cases where systems switch between the use of chlorine and chloramines for residual disinfection during the year, compliance must be determined by including together all monitoring results of both chlorine and chloramines in calculating compliance. Reports submitted pursuant to 567—paragraph 42.4(3)“d” must clearly indicate which residual disinfectant was analyzed for each sample.

(3) Chlorine dioxide.

1. Acute violations. Compliance must be based on consecutive daily samples collected by the system under 43.6(1)“c”(3). If any daily sample taken at the entrance to the distribution system exceeds the MRDL, and on the following day one or more of the three samples taken in the distribution system exceed the MRDL, the system is in violation of the MRDL and shall take immediate corrective action to lower the level of chlorine dioxide below the MRDL and shall notify the public pursuant to the Tier 1 requirements in 567—subrule 42.1(2) in addition to reporting to the department pursuant to 567—paragraph 42.4(3)“d.” Failure to take samples in the distribution system the day following an exceedance of the chlorine dioxide MRDL at the entrance to the distribution system will also be considered an MRDL violation and the system must notify the public of the violation in accordance with the provisions for Tier 1 violations in 567—subrule 42.1(2), in addition to reporting to the department pursuant to 567—paragraph 42.4(3)“d.”

2. Nonacute violations. Compliance must be based on consecutive daily samples collected by the system under 43.6(1)“c”(3). If any two consecutive daily samples taken at the entrance to the distribution system exceed the MRDL and all distribution system samples taken are below the MRDL, the system is in violation of the MRDL and must take corrective action to lower the level of chlorine dioxide below the MRDL at the point of sampling and will notify the public pursuant to the Tier 2 requirements in 567—subrule 42.1(3), in addition to reporting to the department pursuant to 567—paragraph 42.4(3)“d.” Failure to monitor at the entrance to the distribution system the day following an exceedance of the
chlorine dioxide MRDL at the entrance to the distribution system is also an MRDL violation and the
system must notify the public of the violation in accordance with the provisions for Tier 2 violations in
567—subrule 42.1(3), in addition to reporting to the department pursuant to 567—paragraph 42.4(3)“d.”

f. Reporting requirements for disinfectants. Systems required to sample quarterly or more
frequently must report to the department within ten days after the end of each quarter in which samples
were collected, notwithstanding the public notification provisions of 567—42.1(455B). Systems
required to sample less frequently than quarterly must report to the department within ten days after
the end of each monitoring period in which samples were collected. The specific reporting requirements
for disinfectants are listed in 567—subparagraph 42.4(3)“d”(3).

43.6(2) Disinfection byproduct precursors.

a. Applicability.

(1) Surface water or IGW CWS and NTNC systems with conventional filtration. This rule
establishes criteria under which surface water or influenced groundwater CWS and NTNC public water
supply systems using conventional filtration treatment, as defined in 567—40.2(455B), that add a
chemical disinfectant to the water in any part of the drinking water treatment process or which provide
water that contains a chemical disinfectant must modify their practices to meet the MCLs listed in
567—41.6(455B) and the maximum residual disinfectant levels (MRDL) and treatment technique
requirements for disinfection byproduct precursors listed in this rule.

(2) CWS and NTNC systems using ozone treatment. CWS and NTNC systems that use ozone in
their treatment process must comply with the bromide requirements of this subrule.

(3) Compliance dates. Compliance dates for this rule are based upon the population served. CWS
and NTNC systems using surface water or groundwater under the direct influence of surface water in
whole or in part and which serve 10,000 or more persons must comply with this rule beginning January
1, 2002; while those systems serving fewer than 10,000 persons must comply with this rule beginning

(4) The department may require groundwater systems to conduct monitoring for disinfection
byproduct precursors as a part of an operation permit.

b. Monitoring requirements for disinfection byproduct precursors.

(1) Routine monitoring for total organic carbon (TOC).

1. Surface water and groundwater under the direct influence of surface water systems which use
conventional filtration treatment must monitor each treatment plant for total organic carbon (TOC) no
later than at the point of combined filter effluent turbidity monitoring and representative of the treated
water. The systems must also monitor for TOC in the source water prior to any treatment at the same
time as monitoring for TOC in the treated water. These samples (source water and treated water) are
referred to as paired samples. At the same time the source water sample is taken, all systems must
monitor for alkalinity in the source water prior to any treatment. Systems must take one paired set of
source water and treated water samples and one source water alkalinity sample per month per plant at a
time representative of normal operating conditions and influent water quality.

2. Surface water and groundwater under the direct influence of surface water systems which do not
use conventional filtration treatment must conduct the TOC monitoring under 43.6(2)“b”(1)“1” in order
to qualify for reduced disinfection byproduct monitoring for TTHM and HAA5 under 567—paragraph
41.6(1)“c”(4)“2.” The source water TOC running annual average must be less than or equal to 4.0 mg/L
based on the most recent four quarters of monitoring on a continuing basis at each treatment plant to
reduce or remain on reduced monitoring for TTHM and HAA5. Once qualified for reduced monitoring
for TTHM and HAA5, a system may reduce source water TOC monitoring to quarterly TOC samples
taken every 90 days at a location prior to any treatment.

(2) Reduced monitoring. The department may allow surface water and groundwater under the
direct influence of surface water systems with an average treated water TOC of less than 2.0 mg/L for two
consecutive years, or less than 1.0 mg/L for one year, to reduce monitoring for both TOC and alkalinity
to one set of paired samples and one source water alkalinity sample per plant per quarter. The system
must revert to routine monitoring in the month following the quarter when the annual average treated
water TOC is greater than or equal to 2.0 mg/L.
(3) Bromide. The department may allow systems required to analyze for bromate to reduce bromate monitoring from monthly to once per quarter, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/L based upon representative monthly measurements for one year. The system must continue bromide monitoring to remain on reduced bromate monitoring.

(4) The department may assign disinfection byproduct precursor monitoring prior to the compliance dates in 43.6(2) "a" (3) as part of an operation permit.

   c. Analytical requirements for disinfection byproduct precursors.

   (1) Analytical methods. Systems required to monitor disinfectant byproduct precursors must use the following methods, which must be conducted by a certified laboratory pursuant to 567—Chapter 83, unless otherwise specified.

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Methodology</th>
<th>EPA Standard Methods</th>
<th>ASTM</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity(^6)</td>
<td>Titrimetric</td>
<td>2320B</td>
<td>D 1067-92B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electrometric titration</td>
<td></td>
<td></td>
<td>1-1030-85</td>
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<tr>
<td>Bromide</td>
<td>Ion chromatography</td>
<td>300.0</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>300.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>317.0 Rev. 2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>326.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved Organic Carbon(^2)</td>
<td>High temperature combustion</td>
<td>415.3 Rev. 1.2</td>
<td>5310B or 5310B-00</td>
<td></td>
</tr>
<tr>
<td>(DOC)</td>
<td>Persulfate-UV or heated-persulfate oxidation</td>
<td>415.3 Rev. 1.2</td>
<td>5310C or 5310C-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wet oxidation</td>
<td>415.3 Rev. 1.1, 415.3 Rev. 1.2</td>
<td>5310D or 5310D-00</td>
<td></td>
</tr>
<tr>
<td>pH(^3)</td>
<td>Electrometric</td>
<td>150.1</td>
<td>4500-H(^{+})-B</td>
<td>D 1293-84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Ultraviolet Absorbance (SUVA)</td>
<td>Calculation using DOC and UV(_{254}) data</td>
<td>415.3 Rev. 1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Organic Carbon(^4)</td>
<td>High temperature combustion</td>
<td>415.3 Rev. 1.2</td>
<td>5310B or 5310B-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Persulfate-UV or heated-persulfate oxidation</td>
<td>415.3 Rev. 1.2</td>
<td>5310C or 5310C-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wet oxidation</td>
<td>415.3 Rev. 1.1, 415.3 Rev. 1.2</td>
<td>5310D or 5310D-00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ozone Oxidation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultraviolet Absorption at 254 nm(^5)</td>
<td>Spectrophotometry</td>
<td>415.3 Rev. 1.1, 415.3 Rev. 1.2</td>
<td>5910B or 5910B-00, 11</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)The procedures shall be done in accordance with the documents listed below. The incorporation by reference of the following documents was approved by the Director of the Federal Register on February 16, 1999, in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the documents may be obtained from the sources listed below. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at (800)426-4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW, Washington, DC 20460 (telephone: (202)260-3027); or at the Office of Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC 20408.

The following methods are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428:

The following methods are available from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161 (telephone: (800)553-6847):


Methods for the Determination of Inorganic Substances in Environmental Samples, EPA-600/R-93/100, August 1993, (NTIS PB94-121811): Method 300.0.


The following methods are available from the American Public Health Association, 800 I Street, NW, Washington, DC 20001-3710:


Standard Methods for the Examination of Water and Wastewater, Supplement to the 19th edition (1996), 21st (2005), and 22nd editions, American Public Health Association: Methods: 5310B, 5310C, and 5310D.

For method numbers ending “-00”, the year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only online versions that are IBR-approved.

2Dissolved Organic Carbon (DOC). DOC and UV254 samples used to determine a SUVA value must be taken at the same time and at the same location, prior to the addition of any disinfectant or oxidant by the system. Prior to analysis, DOC samples must be filtered through a 0.45 µ pore-diameter filter, as soon as practical after sampling, not to exceed 48 hours. After filtration, DOC samples must be acidified to achieve pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified DOC samples must be analyzed within 28 days. Inorganic carbon must be removed from the samples prior to analysis. Water passed through the filter prior to filtration of the sample must serve as the filtered blank. This filtered blank must be analyzed using procedures identical to those used for analysis of the samples and must meet a DOC concentration of <0.5 mg/L.

3pH must be measured by a laboratory certified by the department to perform analysis under 567—Chapter 83; a Grade II, III or IV operator meeting the requirements of 567—Chapter 81; or any person under the supervision of a Grade II, III or IV operator meeting the requirements of 567—Chapter 81.

4Total Organic Carbon (TOC). Inorganic carbon must be removed from the samples prior to analysis. TOC samples may not be filtered prior to analysis. TOC samples must be acidified at the time of sample collection to achieve a pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified TOC samples must be analyzed within 28 days.

5Ultraviolet Absorption at 254 nm (UV254). DOC and UV254 samples used to determine a SUVA value must be taken at the same time and at the same location, prior to the addition of any disinfectant or oxidant by the system. UV absorption must be measured at 253.7 nm (may be rounded off to 254 nm). Prior to analysis, UV254 samples must be filtered through a 0.45 µ pore-diameter filter. The pH of UV254 samples may not be adjusted. Samples must be analyzed as soon as practical after sampling, not to exceed 48 hours.

6Alkalinity must be measured by a laboratory certified by the department to perform analysis under 567—Chapter 83; a Grade II, III or IV operator meeting the requirements of 567—Chapter 81; or any person under the supervision of a Grade II, III or IV operator meeting the requirements of 567—Chapter 81. Only the listed titrimetric methods are acceptable.


SUVA. Specific Ultraviolet Absorbance (SUVA) is equal to the UV absorption at 254nm (UV254) (measured in m²/L) divided by the dissolved organic carbon (DOC) concentration (measured as mg/L). In order to determine SUVA, it is necessary to separately measure UV254 and DOC. When determining SUVA, systems must use the methods stipulated in subparagraph 43.6(1)“c”(1) to measure DOC and UV254. SUVA must be determined on water prior to the addition of disinfectants/oxidants by the system. DOC and UV254 samples used to determine an SUVA value must be taken at the same time and at the same location.

Magnesium. All methods approved for magnesium in 567—subparagraph 41.3(1)”e”(1) are approved for use in measuring magnesium under this rule.

d. Compliance requirements for disinfection byproduct precursors.

(1) General requirements. All samples taken and analyzed under the provisions of this rule must be included in determining compliance, even if that number is greater than the minimum required.

(2) Compliance determination. Compliance must be determined as specified by 43.6(3)“c.” The department may assign monitoring through an operation permit, or systems may begin monitoring to determine whether Step 1 TOC removals can be met 12 months prior to the compliance date for the system. This monitoring is not required and failure to monitor during this period is not a violation. However, the system may not monitor during this period and then determine in the first 12 months after the compliance date that it is not able to meet the Step 1 requirements in 43.6(3)“b”(2), and must therefore apply for alternate minimum TOC removal (Step 2) requirements, is not eligible for retroactive approval of alternate minimum TOC removal (Step 2) requirements as allowed pursuant to 43.6(3)“b”(3) and is in violation. Systems may apply for alternate minimum TOC removal (Step 2) requirements anytime after the compliance date. For systems required to meet Step 1 TOC removals, if the value calculated under 43.6(3)“c”(1)”4” is less than 1.00, the system is in violation of the treatment technique requirements and must notify the public pursuant to 567—42.1(455B), in addition to reporting to the department pursuant to 567—paragraph 42.4(3)”d.”

e. Reporting requirements for disinfection byproduct precursors. Systems required to sample quarterly or more frequently must report to the department within ten days after the end of each quarter in which samples were collected, notwithstanding the public notification provisions of 567—42.1(455B).

Systems required to sample less frequently than quarterly must report to the department within ten days after the end of each monitoring period in which samples were collected. The specific reporting requirements for disinfection byproduct precursors are listed in 567—subparagraph 42.4(3)”d”(4).

43.6(3) Treatment technique for control of disinfection byproduct precursors.

a. Applicability.

(1) Systems using surface water or groundwater under the direct influence of surface water and conventional filtration treatment (as defined in 567—40.2(455B)) must operate with enhanced coagulation or enhanced softening to achieve the TOC percent removal levels specified in paragraph “b” of this subrule unless the system meets at least one of the alternative compliance criteria listed in 43.6(3)“a”(2) or (3).

(2) Alternative compliance criteria for enhanced coagulation and enhanced softening systems. Systems using surface water or groundwater under the direct influence of surface water and conventional filtration treatment may use the alternative compliance criteria in 43.6(3)“a”(2)“1” through “6” to comply with this subrule in lieu of complying with 43.6(3)”b.” Systems must still comply with monitoring requirements in 43.6(2)“b.”

1. The system’s source water TOC level, measured according to 43.6(2)”c”(1), is less than 2.0 mg/L, calculated quarterly as a running annual average.

2. The system’s treated water TOC level, measured according to 43.6(2)”c”(1), is less than 2.0 mg/L, calculated quarterly as a running annual average.
3. The system’s source water TOC level, measured according to 43.6(2)“c”(1), is less than 4.0 mg/L, calculated quarterly as a running annual average; the source water alkalinity, measured according to 43.6(2)“c”(1), is greater than 60 mg/L as CaCO₃, calculated quarterly as a running annual average; and either the TTHM and HAA5 running annual averages are no greater than 0.040 mg/L and 0.030 mg/L, respectively; or prior to the effective date for compliance in 567—subparagraph 41.6(1)“a”(3) and in 43.6(1)“a”(3) and 43.6(2)“a”(3), the system has made a clear and irrevocable financial commitment not later than the effective date for compliance in 567—subparagraph 41.6(1)“a”(3) and in 43.6(1)“a”(3) and 43.6(2)“a”(3), to use of technologies that will limit the levels of TTHMs and HAA5 to no more than 0.040 mg/L and 0.030 mg/L, respectively. Systems must submit evidence of a clear and irrevocable financial commitment, in addition to a schedule containing milestones and periodic progress reports for installation and operation of appropriate technologies, to the department for approval not later than the effective date for compliance in 567—subparagraph 41.6(1)“a”(3) and in 43.6(1)“a”(3) and 43.6(2)“a”(3). These technologies must be installed and operating not later than June 30, 2005. Failure to install and operate these technologies by the date in the approved schedule will constitute a treatment technique violation.

4. The TTHM and HAA5 running annual averages are less than or equal to 0.040 mg/L and 0.030 mg/L, respectively, and the system uses only chlorine for primary disinfection and maintenance of a residual in the distribution system.

5. The system’s source water SUVA, prior to any treatment and measured monthly according to 43.6(2)“c.” is less than or equal to 2.0 L/mg-m, calculated quarterly as a running annual average.

6. The system’s finished water SUVA, measured monthly according to 43.6(2)“c.” is less than or equal to 2.0 L/mg-m, calculated quarterly as a running annual average.

3. Additional alternative compliance criteria for softening systems. Systems practicing enhanced softening that cannot achieve the TOC removals required by 43.6(3)“b”(2) may use the alternative compliance criteria in 43.6(3)“a”(3)”1” and “2” in lieu of complying with 43.6(3)“b.” Systems must still comply with monitoring requirements in 43.6(2)“b.”

1. Softening that lowers the treated water alkalinity to less than 60 mg/L as CaCO₃, measured monthly according to 43.6(2)“c.” and calculated quarterly as a running annual average.

2. Softening that removes at least 10 mg/L of magnesium hardness as CaCO₃, measured monthly and calculated quarterly as a running annual average.

b. Enhanced coagulation and enhanced softening performance requirements.

1. Systems must achieve the percent reduction of TOC specified in 43.6(3)“b”(2) between the source water and the combined filter effluent, unless the department approves a system’s request for alternate minimum TOC removal (Step 2 requirements under 43.6(3)“b”(3)).

2. Required Step 1 TOC reductions, indicated in the following table, are based upon specified source water parameters measured in accordance with 43.6(2)“c.” Systems using softening are required to meet the Step 1 TOC reductions in the right-hand column (Source water alkalinity > 120 mg/L) for the specified source water TOC:

<table>
<thead>
<tr>
<th>Source water TOC, mg/L</th>
<th>Source water Alkalinity, mg/L as CaCO₃</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-60</td>
</tr>
<tr>
<td>&gt;2.0 - 4.0</td>
<td></td>
</tr>
<tr>
<td>&gt;4.0 - 8.0</td>
<td></td>
</tr>
<tr>
<td>&gt;8.0</td>
<td></td>
</tr>
</tbody>
</table>

¹Systems meeting at least one of the conditions in 43.6(3)“a”(2)”1” to “6” are not required to operate with enhanced coagulation.

²Softening systems meeting one of the alternative compliance criteria in 43.6(3)“a”(3) are not required to operate with enhanced softening.
3 Systems practicing softening must meet the TOC removal requirements in this column.

(3) Surface water and groundwater under the influence of surface water systems using conventional treatment that cannot achieve the Step 1 TOC removals required by 43.6(3)"b"(2) due to water quality parameters or operational constraints must apply to the department for approval of alternative minimum Step 2 TOC removal requirements submitted by the system within three months of failure to achieve the TOC removals required by 43.6(3)"b"(2). If the department approves the alternative minimum Step 2 TOC removal requirements, the department may make those requirements retroactive for the purposes of determining compliance. The system must meet the Step 1 TOC removals contained in 43.6(3)"b"(2) until the department approves the alternate minimum Step 2 TOC removal requirements.

(4) Alternate minimum Step 2 TOC removal requirements. Applications made to the department by enhanced coagulation systems for approval of alternate minimum Step 2 TOC removal requirements under 43.6(3)"b"(3) must include, as a minimum, results of bench-scale or pilot-scale testing conducted under 43.6(3)"b"(4)"1" below and be used to determine the alternate enhanced coagulation level.

1. Alternate enhanced coagulation level. Alternate enhanced coagulation level is defined as coagulation at a coagulant dose and pH as determined by the method described in 43.6(3)"b"(4)"1" to "5" such that an incremental addition of 10 mg/L of alum (or equivalent amount of ferric salt) results in a TOC removal of less than or equal to 0.3 mg/L. The percent removal of TOC at this point on the “TOC removal versus coagulant dose” curve is then defined as the minimum TOC removal required for the system. Once approved by the department, this minimum requirement supersedes the minimum TOC removal required by the table in 43.6(3)"b"(2). This requirement will be effective until such time as the department approves a new value based on the results of a new bench-scale or pilot-scale test. Failure to achieve department-set alternative minimum TOC removal levels is a treatment technique violation.

2. Bench-scale or pilot-scale testing of enhanced coagulation must be conducted by using representative water samples and adding 10 mg/L increments of alum (or equivalent amounts of ferric salt) until the pH is reduced to a level less than or equal to the enhanced coagulation Step 2 target pH shown in the following table:

<table>
<thead>
<tr>
<th>Alkalinity (mg/L as CaCO₃)</th>
<th>Target pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-60</td>
<td>5.5</td>
</tr>
<tr>
<td>&gt;60-120</td>
<td>6.3</td>
</tr>
<tr>
<td>&gt;120-240</td>
<td>7.0</td>
</tr>
<tr>
<td>&gt;240</td>
<td>7.5</td>
</tr>
</tbody>
</table>

3. For waters with alkalinitities of less than 60 mg/L for which addition of small amounts of alum or equivalent addition of iron coagulant drives the pH below 5.5 before significant TOC removal occurs, the system must add necessary chemicals to maintain the pH between 5.3 and 5.7 in samples until the TOC removal of 0.3 mg/L per 10 mg/L alum added (or equivalent addition of iron coagulant) is reached.

4. The system may operate at any coagulant dose or pH necessary (consistent with other public drinking water rules in 567—Chapters 41 through 43) to achieve the minimum TOC percent removal approved under 43.6(3)"b"(3).

5. If the TOC removal is consistently less than 0.3 mg/L of TOC per 10 mg/L of incremental alum dose at all dosages of alum (or equivalent addition of iron coagulant), the water is deemed to contain TOC not amenable to enhanced coagulation. The system may then apply to the department for a waiver of enhanced coagulation requirements.

c. Compliance calculations.

1. Surface water or groundwater under the influence of surface water systems other than those identified in 43.6(3)"a"(2) or (3) must comply with requirements contained in 43.6(3)"b"(2) or (3). Systems must calculate compliance quarterly, beginning after the system has collected 12 months of data, by determining an annual average using the following method:
1. Step 1: Determine actual monthly TOC percent removal using the following equation, to two decimal places:

$$\text{Actual monthly TOC percent removal} = 1 - \left( \frac{\text{treated water TOC}}{\text{source water TOC}} \right) \times 100$$

2. Step 2: Determine the required monthly TOC percent removal from either 43.6(3)“b”(2) or (3).

3. Step 3: Divide the “actual monthly TOC percent removal” value (from Step 1) by the “required monthly TOC percent removal” value (from Step 2). Determine this value for each of the last 12 months.

$$\text{Monthly percent removal ratio} = \frac{\text{actual monthly TOC percent removal}}{\text{required monthly TOC percent removal}}$$

4. Step 4: Add together the “monthly percent removal ratio” values from Step 3 for each of the last 12 months and divide by 12, to determine the annual average value.

$$\text{Annual average} = \frac{\Sigma \text{monthly percent removal ratio}}{12}$$

5. Step 5: If the “annual average” value calculated in Step 4 is less than 1.00, the system is not in compliance with the TOC percent removal requirements.

   (2) Systems may use the provisions in 43.6(3)“c”(2)“1” through “5” in lieu of the calculations in 43.6(3)“c”(1)“1” through “5” to determine compliance with TOC percent removal requirements.

   1. In any month that the system’s treated or source water TOC level, measured according to 43.6(2)“c”(1), is less than 2.0 mg/L, the system may assign a monthly value of 1.0 (in lieu of the value calculated in 43.6(3)“c”(1)) when calculating compliance under the provisions of 43.6(3)“c”(1).

   2. In any month that a system practicing softening removes at least 10 mg/L of magnesium hardness as CaCO₃, the system may assign a monthly value of 1.0 (in lieu of the value calculated in 43.6(3)“c”(1)“3”) when calculating compliance under the provisions of 43.6(3)“c”(1).

   3. In any month that the system’s source water SUVA, prior to any treatment and measured according to 43.6(2)“c”(2), is less than or equal to 2.0 L/mg-m, the system may assign a monthly value of 1.0 (in lieu of the value calculated in 43.6(3)“c”(1)“3”) when calculating compliance under the provisions of 43.6(3)“c”(1).

   4. In any month that the system’s finished water SUVA, measured according to 43.6(2)“c”(2), is less than or equal to 2.0 L/mg-m, the system may assign a monthly value of 1.0 (in lieu of the value calculated in 43.6(3)“c”(1)“3”) when calculating compliance under the provisions of 43.6(3)“c”(1).

   5. In any month that a system using enhanced softening lowers alkalinity below 60 mg/L as CaCO₃, the system may assign a monthly value of 1.0 (in lieu of the value calculated in 43.6(3)“c”(1)“3”) when calculating compliance under the provisions of 43.6(3)“c”(1).

   (3) Surface water or groundwater under the direct influence of surface water systems using conventional treatment may also comply with the requirements of this subrule by meeting the criteria in 43.6(3)“a”(2) or (3).

   d. Treatment technique requirements for disinfection byproduct precursors. The treatment techniques to control the level of disinfection byproduct precursors in drinking water treatment and distribution systems, for surface water or groundwater under the direct influence of surface water systems using conventional filtration treatment, are enhanced coagulation or enhanced softening.

[ARC 9915B, IAB 12/14/11, effective 1/18/12; AR 3735C, IAB 4/11/18, effective 5/16/18]

567—43.7(455B) Lead and copper treatment techniques.

43.7(1) Corrosion control treatment for lead and copper control.

a. Applicability. Systems shall complete the applicable corrosion control treatment requirements by the deadlines specified in the following rules:
(1) Large systems serving more than 50,000 persons. A large system (serving greater than 50,000 persons) shall complete the corrosion control treatment steps specified in 43.7(1)“d,” unless the system is deemed to have optimized corrosion control under 43.7(1)“b ”(2) or (3).

(2) Small and medium-size systems serving 50,000 or fewer persons. A small system (serving less than or equal to 3,300 persons) or a medium-size system (serving greater than 3,300 and less than or equal to 50,000 persons) shall complete the corrosion control treatment steps specified in 43.7(1)“e,” unless the system has optimized corrosion control under 43.7(1)“b ”(1), (2), or (3).

b. Determination that a system has optimized corrosion control. A public water supply system has optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in this subrule if the system satisfies one of the criteria specified in subparagraphs 43.7(1)“b ”(1) through (3). Any such system deemed to have optimized corrosion control under this paragraph and which has treatment in place shall continue to operate and maintain optimal corrosion control treatment and meet any requirements that the department determines appropriate to ensure optimal corrosion control treatment is maintained.

(1) A small or medium-size water supply system has optimized corrosion control if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods, conducted in accordance with 567—paragraph 41.4(1)“c.”

(2) Any public water supply system may be deemed to have optimized corrosion control treatment if the system demonstrates to the satisfaction of the department that it has conducted activities equivalent to the corrosion control steps applicable to such system under this subrule. If the department makes this determination, it shall provide the water supply system with written notice explaining the basis for its decision and shall specify the water quality control parameters representing optimal corrosion control in accordance with 43.7(2)“f.” Systems deemed to have optimized corrosion control under this paragraph shall operate in compliance with the department-designated optimal water quality control parameters in accordance with paragraph 43.7(1)“g” and continue to conduct lead and copper tap and water quality parameter sampling in accordance with 567—paragraph 41.4(1)“c ”(4)“3” and 567—subparagraph 41.4(1)“d”(4), respectively. A system shall provide the department with the following information in order to support a determination under this paragraph:

1. The results of all test samples collected for each of the water quality parameters in 43.7(2)“c”(3);
2. A report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in 43.7(2)“c ”(1), the results of all tests conducted, and the basis for the system’s selection of optimal corrosion control treatment;
3. A report explaining how corrosion control was installed and how it is being maintained to ensure minimal lead and copper concentrations at consumers’ taps; and
4. The results of tap water samples collected in accordance with 567—paragraph 41.4(1)“c” at least once every six months for one year after corrosion control has been installed.

(3) Any water system has optimized corrosion control if it submits results of tap water monitoring conducted in accordance with 567—paragraph 41.4(1)“c” and source water monitoring conducted in accordance with 567—paragraph 41.4(1)“e” that demonstrate for two consecutive six-month monitoring periods that the difference between the 90th percentile tap water lead level computed under 567—subparagraph 41.4(1)“b ”(3) and the highest source water lead concentration is less than the practical quantitation level for lead specified in 567—paragraph 41.4(1)“g.”

1. Those systems whose highest source water lead level is below the method detection limit may also be deemed to have optimized corrosion control under this paragraph if the 90th percentile tap water lead level is less than or equal to the practical quantitation level for lead for two consecutive six-month monitoring periods.

2. Any water system deemed to have optimized corrosion control in accordance with this paragraph shall continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites specified in 567—subparagraph 41.4(1)“c ”(3) and collecting the samples at times and locations specified in 567—paragraph 41.4(1)“c ”(4)“4,” fourth bulleted paragraph.
3. Any water system deemed to have optimized corrosion control pursuant to this paragraph shall notify the department in writing pursuant to 567—subparagraph 42.4(2)“a”(3) of any upcoming long-term change in treatment or the addition of a new source as described in 567—subparagraph 42.4(2)“a”(3). The department must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system.

4. Unless a system meets the copper action level, it is not deemed to have optimized corrosion control under this paragraph and shall implement corrosion control treatment pursuant to 43.7(1)“b”(3)“5.”

5. Any system triggered into corrosion control because it is no longer deemed to have optimized corrosion control under this paragraph shall implement corrosion control treatment in accordance with the deadlines in paragraph 43.7(1)“e.” Any such large system shall adhere to the schedule specified in that paragraph for medium-size systems, with the time periods for completing each step being triggered by the date the system is no longer deemed to have optimized corrosion control under this paragraph.

c. **Requirements to recommence corrosion control steps.** Any small or medium-size water system that is required to complete the corrosion control steps due to its exceedance of the lead or copper action level may cease completing the treatment steps whenever the system meets both action levels during each of two consecutive monitoring periods conducted pursuant to 567—paragraph 41.4(1)“c” and submits the results to the department. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety. The department may require a system to repeat treatment steps previously completed by the system when it is determined by the department that this is necessary to implement properly the treatment requirements of this rule. The department will notify the system in writing of such a determination and explain the basis for its decision. The requirement for any small or medium-size system to implement corrosion control treatment steps in accordance with 43.7(1)“e” (including systems deemed to have optimized corrosion control under 43.7(1)“b”(1)) is triggered whenever any small or medium-size system exceeds the lead or copper action level.

d. **Treatment steps and deadlines for large systems.** Except as provided in 43.7(1)“b”(2) or (3), large systems shall complete the following corrosion control treatment steps (described in the referenced portions of 43.7(1)“b,” subrule 43.7(2), and 567—paragraphs 41.4(1)“c” and “d”) by the dates indicated below.

(1) Step 1. The system shall conduct initial monitoring pursuant to 567—paragraph 41.4(1)“c”(4)“1” and 567—subparagraph 41.4(1)“d”(2) during two consecutive six-month monitoring periods by January 1, 1993.

(2) Step 2. The system shall complete corrosion control studies pursuant to 43.7(2)“c” by July 1, 1994.

(3) Step 3. The department will designate optimal corrosion control treatment within six months of receiving the corrosion control study results (by January 1, 1995).


(5) Step 5. The system shall complete follow-up sampling pursuant to 567—paragraph 41.4(1)“c”(4)“2” and 567—subparagraph 41.4(1)“d”(3) by January 1, 1998.

(6) Step 6. The department will review installation of treatment and designate optimal water quality control parameters pursuant to 43.7(2)“f” by July 1, 1998.

(7) Step 7. The system shall operate in compliance with optimal water quality control parameters delineated by the department and continue to conduct tap sampling.

e. **Treatment steps and deadlines for small and medium-size systems.** Except as provided in 43.7(2), small and medium-size systems shall complete the following corrosion control treatment steps (described in subrule 43.7(2) and 567—paragraphs 41.4(1)“c” and “d”) by the indicated time periods listed below.

(1) Step 1. The system shall conduct initial tap sampling pursuant to 567—paragraph 41.4(1)“c”(4)“1” and 567—subparagraph 41.4(1)“d”(2) until the system either exceeds the lead or copper action level or becomes eligible for reduced monitoring under 567—paragraph 41.4(1)“c”(4)“4.”
A system exceeding the lead or copper action level shall recommend optimal corrosion control treatment under 43.7(2)“a” within six months after the end of the monitoring period during which it exceeds one of the action levels.

(2) Step 2. Within 12 months after the end of the monitoring period during which a system exceeds the lead or copper action level, the department may require the system to perform corrosion control studies under 43.7(2)“b.” If the system is not required to perform such studies, the department will specify optimal corrosion control treatment under 43.7(2)“d” as follows: for medium-size systems, within 18 months after the end of the monitoring period during which such system exceeds the lead or copper action level, and, for small systems, within 24 months after the end of the monitoring period during which such system exceeds the lead or copper action level.

(3) Step 3. If a system is required to perform corrosion control studies under Step 2, the system shall complete the studies (under 43.7(2)“c”) within 18 months after such studies are required to commence.

(4) Step 4. If the system has performed corrosion control studies under Step 2, the department will designate optimal corrosion control treatment under 43.7(2)“d” within six months after completion of Step 3.

(5) Step 5. The system shall install optimal corrosion control treatment under 43.7(2)“e” within 24 months after such treatment is designated.

(6) Step 6. The system shall complete follow-up sampling pursuant to 567—paragraph 41.4(1)“c”(4)“2” and 567—subparagraph 41.4(1)“d”(3) within 36 months after optimal corrosion control treatment is designated.

(7) Step 7. The department will review the system’s installation of treatment and designate optimal water quality control parameters pursuant to 43.7(2)“f” within six months after completion of Step 6.

(8) Step 8. The system shall operate in compliance with the department-designated optimal water quality control parameters under 43.7(2)“f” (and continue to conduct tap sampling as per 567—paragraph 41.4(1)“c”(4)“3” and 567—subparagraph 41.4(1)“d”(4)).

43.7(2) **Description of corrosion control treatment requirements.** Each public water supply system shall complete the corrosion control treatment requirements described below which are applicable to such systems under 43.7(1).

a. Public water supply system recommendation regarding corrosion control treatment. Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium-size water systems exceeding the lead or copper action level shall recommend installation of one or more of the corrosion control treatments listed in 43.7(2)“c” which the system believes constitute optimal corrosion control for that system. The department may require the system to conduct additional water quality parameter monitoring in accordance with 567—subparagraph 41.4(1)“d”(2) to assist in reviewing the system’s recommendation.

b. Department decision to require studies of corrosion control treatment (applicable to small and medium-size systems). The department may require any small or medium-size system that exceeds the lead or copper action level to perform corrosion control studies under 43.7(2)“c” to identify optimal corrosion control treatment for the system.

c. Performance of corrosion control studies.

(1) Any public water supply system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment: alkalinity and pH adjustment; calcium hardness adjustment; and the addition of a phosphate or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

(2) The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.

(3) The public water supply system shall measure the following water quality parameters in any tests conducted under this paragraph before and after evaluating the corrosion control treatments listed above:

1. Lead;
2. Copper;
3. pH;
4. Alkalinity;
5. Calcium;
6. Conductivity;
7. Orthophosphate (when an inhibitor containing a phosphate compound is used);
8. Silicate (when an inhibitor containing a silicate compound is used);

(4) The public water supply system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and outline such constraints with the following: data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; or data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

(5) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes.

(6) On the basis of an analysis of the data generated during each evaluation, the water system shall recommend in writing to the department the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation required by 43.7(2)“c”(1) through (5).

d. Department designation of optimal corrosion control treatment.

(1) Based upon consideration of available information including, where applicable, studies performed under 43.7(2)“c” and a system’s recommended treatment alternative, the department will either approve the corrosion control treatment option recommended by the public water supply system, or designate alternative corrosion control treatment(s) from among those listed in 43.7(2)“c.” The department will consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes (when designating optimal corrosion control treatment).

(2) The department will notify the public water supply system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the department requests additional information to aid its review, the public water supply system shall provide the information.

e. Installation of optimal corrosion control. Each public water supply system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated under 43.7(2)“d.”

f. Department review of treatment and specification of optimal water quality control parameters.

(1) The department will evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the public water supply system and determine whether the system has properly installed and operated the optimal corrosion control treatment designated in 43.7(2)“d.” Upon reviewing the results of tap water and water quality parameter monitoring by the public water supply system, both before and after the system installs optimal corrosion control treatment, the department will designate the following:

1. A minimum value or a range of values for pH measured at each entry point to the distribution system;
2. A minimum pH value, measured in all tap samples. Such value shall be equal to or greater than 7.0 unless meeting a pH level of 7.0 is not technologically feasible or is not necessary for the public water supply system to optimize corrosion control;
3. If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, necessary to form a passivating film on the interior walls of the pipes of the distribution system;
4. If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples; or
5. If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples.

(2) The values for the applicable water quality control parameters listed above shall be those which reflect optimal corrosion control treatment for the public water supply system. The department may designate values for additional water quality control parameters determined by the department to reflect optimal corrosion control for the system. The department will notify the system in writing of these determinations and explain the basis for its decisions.

g. Continued operation with optimized corrosion control and water quality parameter monitoring compliance determination. All systems optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the department under paragraph 43.7(2)“f,” in accordance with this paragraph for all samples collected under 567—subparagraphs 41.4(1)“d”(4) through (6). Compliance with the requirements of this paragraph shall be determined every six months, as specified under 567—subparagraph 41.4(1)“d”(4). A water system is out of compliance with the requirements of this paragraph for a six-month period if it has excursions for any department-specified parameter on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the department. Daily values are calculated as follows. The department has the discretion to invalidate results of obvious sampling errors from this calculation.

(1) On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both.

(2) On days when only one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement.

(3) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.

h. Modification of department treatment decisions. A determination of the optimal corrosion control treatment under 43.7(2)“d” or optimal water quality control parameters under 43.7(2)“f” may be modified. A request for modification by a public water supply system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The department may modify its determination when it concludes that such change is necessary to ensure that the public water supply system continues to optimize corrosion control treatment. A revised determination will be made in writing, which will set forth the new treatment requirements, explain the basis for the decision, and provide an implementation schedule for completing the treatment modifications.

43.7(3) Source water treatment requirements. Public water supply systems shall complete the applicable source water monitoring and treatment requirements, as described in the referenced portions of 43.7(3)“b,” and in 567—paragraphs 41.4(1)“e” and “e,” by the following deadlines.

a. Deadlines for completing source water treatment steps.

(1) Step 1. A public water supply system exceeding the lead or copper action level shall complete lead and copper source water monitoring under 567—subparagraph 41.4(1)“e”(2) and make a written treatment recommendation to the department no later than 180 days after the end of the monitoring period during which the lead or copper action level was exceeded.

(2) Step 2. The department will make a determination regarding source water treatment pursuant to 43.7(3)“b”(2) within six months after submission of monitoring results under Step 1.

(3) Step 3. If installation of source water treatment is required, the system shall install the treatment pursuant to 43.7(3)“b”(3) within 24 months after completion of Step 2.
(4) Step 4. The public water supply system shall complete follow-up tap water monitoring under 567—paragraph 41.4(1)“c”(4)“2” and source water monitoring under 567—subparagraph 41.4(1)“e”(3) within 36 months after completion of Step 2.

(5) Step 5. The department will review the system’s installation and operation of source water treatment and specify maximum permissible source water levels under 43.7(3)“b”(4) within six months after completion of Step 4.

(6) Step 6. The public water supply system shall operate in compliance with the specified maximum permissible lead and copper source water levels under 43.7(3)“b”(4) and continue source water monitoring pursuant to 567—subparagraph 41.4(1)“e”(4).

b. Description of source water treatment requirements.

(1) System treatment recommendation. Any system which exceeds the lead or copper action level shall recommend in writing to the department the installation and operation of one of the source water treatments listed in 43.7(3)“b”(2). A system may recommend that no treatment be installed based upon a demonstration that source water treatment is not necessary to minimize lead and copper levels at users’ taps.

(2) Source water treatment determinations. The department will complete an evaluation of the results of all source water samples submitted by the public water supply system to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users’ taps. If the department determines that treatment is needed, the department will require installation and operation of the source water treatment recommended by the public water supply system or require the installation and operation of another source water treatment from among the following: ion exchange, reverse osmosis, lime softening or coagulation/filtration. If the department requests additional information to aid in its review, the water system shall provide the information by the date specified in its request. The department will notify the system in writing of its determination and set forth the basis for its decision.

(3) Installation of source water treatment. Public water supply systems shall properly install and operate the source water treatment designated by the department under 43.7(3)“b”(2).

(4) Department review of source water treatment and specification of maximum permissible source water levels. The department will review the source water samples taken by the water supply system both before and after the system installs source water treatment and determine whether the public water supply system has properly installed and operated the designated source water treatment. Based upon its review, the department will designate maximum permissible lead and copper concentrations for finished water entering the distribution system. Such levels shall reflect the contaminant removal capability of the treatment (properly operated and maintained). The department will notify the public water supply system in writing and explain the basis for its decision.

(5) Continued operation and maintenance. Each public water supply system shall maintain lead and copper levels below the maximum permissible concentrations designated by the department at each sampling point monitored in accordance with 567—paragraph 41.4(1)“e.” The system is out of compliance with this paragraph if the level of lead or copper at any sampling point is greater than the maximum permissible designated concentration.

(6) Modification of source water treatment decisions. The department may modify its determination of the source water treatment under 43.7(3)“b”(6), or maximum permissible lead and copper concentrations for finished water entering the distribution system under 43.7(3)“b”(4). A request for modification by a public water supply system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The department may modify its determination where it concludes that such change is necessary to ensure that the system continues to minimize lead and copper concentrations in source water. A revised determination will be made in writing, set forth the new treatment requirements, explain the basis for the decision, and provide an implementation schedule for completing the treatment modifications.

43.7(4) Lead service line replacement requirements.

a. Applicability. Public water supply systems that fail to meet the lead action level in tap samples taken pursuant to 567—paragraph 41.4(1)“c”(4)“2” after installing corrosion control or source water
treatment (whichever sampling occurs later) shall replace lead service lines in accordance with the requirements of this subrule. If a system is in violation of 43.7(1) and 43.7(3) for failure to install source water or corrosion control treatment, the department may require the system to commence lead service line replacement under this subrule after the date by which the system was required to conduct monitoring under 567—paragraph 41.4(1)“c”(4)“2” has passed.

b. Lead service line replacement schedule. A public water supply system shall replace annually at least 7 percent of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based upon a materials evaluation, including the evaluation required under 567—subparagraph 41.4(1)“c”(1), and relevant legal authorities regarding the portion owned by the system such as contracts and local ordinances.

(1) The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded in tap sampling referenced in 43.7(4)“a.” If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the department has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.

(2) Any water system resuming a lead service line replacement program after the cessation of its lead service line replacement program as allowed by 43.7(4)“g” shall update its inventory of lead service lines to include those sites that were previously determined not to require replacement through the sampling provision under 43.7(4)“c.” The system will then divide the updated number of remaining lead service lines by the number of remaining years in the program to determine the number of lines that must be replaced per year. Seven percent lead service line replacement is based on a 15-year replacement program. For example, systems resuming lead service line replacement after previously conducting two years of replacement would divide the updated inventory by 13.

(3) For those systems that have completed a 15-year lead service line replacement program, the department will determine a schedule for replacing or retesting lines that were previously exempted through testing under 43.7(4)“c” from the replacement program when the system re-exceeds the action level.

c. Exemption to lead service line replacement requirement. A public water supply system is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken pursuant to 567—paragraph 41.4(1)“c”(2)“3,” is less than or equal to 0.015 mg/L.

d. Lead service line replacement requirements. A water system shall replace that portion of the lead service line that it owns. In cases where the system does not own the entire lead service line, the system shall notify the owner of the line, or the owner’s authorized agent, that the system will replace the portion of the service line that it owns and shall offer to replace the owner’s portion of the line. A system is not required to bear the cost of replacing the privately owned portion of the line, nor is it required to replace the privately owned portion of the line where the owner chooses not to pay the cost of replacing the privately owned portion of the line, or where replacing the privately owned portion would be precluded by state, local, or common law. A water system that does not replace the entire length of the service line shall complete the following tasks.

(1) Notification of residents. At least 45 days prior to commencing with the partial replacement of a lead service line, the water system shall provide to the resident(s) of all buildings served by the line notice explaining that the resident(s) may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers may take to minimize their exposure to lead. The department may allow the water system to provide this notice less than 45 days prior to commencing partial lead service line replacement where such replacement is in conjunction with emergency repairs. In addition, the water system shall inform the resident(s) served by the line that the system will, at the system’s expense, collect from each partially replaced lead service line a sample that is representative of the water in the service line for analysis of lead content, as prescribed under 567—paragraph 41.4(1)“c”(2)“3,” within 72 hours after the completion of the partial replacement of the service line. The system shall collect the sample and report the results of the analysis to the owner
and the resident(s) served by the line within three business days of receiving the results. Mailed notices postmarked within three business days of receiving the results shall be considered “on time.”

(2) Notification methods. The water system shall provide the information required by subparagraph 43.7(4)“d”(1) to the residents of individual dwellings by mail or by other methods approved by the department. In instances where multifamily dwellings are served by the line, the water system shall have the option to post the information at a conspicuous location.

e. Lead service line control—department review. Rescinded IAB 1/7/04, effective 2/11/04.

f. Lead service line replacement schedule. The department may require a public water supply system to replace lead service lines on a shorter schedule than that required by this subrule, taking into account the number of lead service lines in the system, where such a shorter replacement schedule is feasible. The department will make this determination in writing and notify the system of its finding within six months after the system is triggered into lead service line replacement based on monitoring referenced in 43.7(4)“a.”

g. Cessation of lead service line replacement. Any public water supply system may cease replacing lead service lines whenever first draw samples collected pursuant to 567—paragraph 41.4(1)“c”(2)“2” meet the lead action level during each of two consecutive monitoring periods and the system submits the results. If the first draw tap samples collected in any such water system thereafter exceed the lead action level, the system shall recommence replacing lead service lines, as detailed in 43.7(4)“b.”

h. Lead service line replacement reporting requirements. To demonstrate compliance with 43.7(4)“a” through “d,” a system shall report the information specified in 567—paragraph 42.4(2)“e.”

[ARC 9915B, IAB 12/14/11, effective 1/18/12; ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—43.8(455B) Viability assessment.

43.8(1) Definitions specific to viability assessment.

“New system” for viability assessment purposes includes public water supply systems which are newly constructed after the effective date of this rule, as well as systems which do not currently meet the definition of a PWS, but which expand their infrastructure and thereby grow to become a PWS. Systems not currently meeting the definition of a PWS and which add additional users and thereby become a PWS without constructing any additional infrastructure are not “new systems” for the purposes of this subrule.

“Nonviable system” for viability assessment purposes means a system lacking the technical, financial, and managerial ability to comply with 567—Chapters 40 through 43 and 81.

“Significant noncompliance (SNC)” for viability assessment purposes means the failure to comply with any drinking water standard as adopted by the state of Iowa as designated by the department.

“Viability” for viability assessment purposes is the ability to remain in compliance insofar as the requirements of the federal Safe Drinking Water Act and 567—Chapters 40 through 43 and 81.

“Viable system” for viability assessment purposes means a system with the technical, financial, and managerial ability to comply with applicable drinking water standards adopted by the state of Iowa.

43.8(2) Applicability and purpose. These rules apply to all new and existing public water supplies, including the following: new systems commencing operation after October 1, 1999; systems deemed to be in significant noncompliance with the primary drinking water standards; DWSRF applicants; and existing systems. The purpose of the viability assessment program is to ensure the safety of the public drinking water supplies and ensure the viability of new public water supply systems upon commencement of operation. The department may assess public notification requirements and administrative penalties to any public water supply system which fails to fulfill the requirements of this rule.

43.8(3) Contents of a viability assessment. The viability assessment must address the areas of technical, financial, and managerial viability for a public water supply system. The assessment must include evaluation of the following areas at a minimum, and the public water supply system may be required to include additional information as directed by the department. The viability of a system should be forecast for a 20-year period.

a. Technical viability.

(1) Supply sources and facilities
(2) Treatment
(3) Infrastructure (examples: pumping, storage, distribution)
   b. Financial viability.
      (1) Capital and operating costs
      (2) Revenue sources
      (3) Contingency plans
   c. Managerial viability.
      (1) Operation
      (2) Maintenance
      (3) Management
      (4) Administration

43.8(4) New systems.
   a. Submission of system viability assessment. New public water supply systems (including community, nontransient noncommunity systems, and transient noncommunity systems) commencing operation after the effective date of this rule are required to submit a completed system viability assessment for review by the department, prior to obtaining a construction permit. The viability assessment may be submitted with the application for a construction permit. The department may reject receipt or delay review of the construction plans and specifications until an adequate viability assessment is provided. If the department finds, upon review and approval of the viability assessment, that the PWS will be viable, a construction permit will be issued in accordance with 567—Chapters 40 and 43. Prior to beginning operation, a public water supply operation permit must be obtained in accordance with 567—43.2(455B) and 567—40.5(455B).
   b. Review of the viability assessment. If the department declines to approve the viability assessment as submitted by the applicant, or if the department finds that the PWS is not viable, approval of construction and operation permit applications will be denied. If the viability assessment is conditionally approved, construction and operation permits will be issued, with conditions and a schedule to achieve compliance specified in the operation permit.

43.8(5) Existing systems.
   a. Submission of system viability assessment. Any community, nontransient noncommunity, or transient noncommunity water system which operated prior to October 1, 1999, and was regulated as a public water system by the department shall be considered an existing system. Any system which does not currently meet the definition of a PWS, but which expands their infrastructure and thereby grows to become a PWS is considered a new system. Systems not currently meeting the definition of a PWS and which add additional users and thereby become a PWS without constructing any additional infrastructure are considered existing systems for the purposes of this subrule. All PWSs should complete a viability assessment. However, only those existing PWSs which meet one or more of the following criteria are required to complete a viability assessment for the department’s review and approval.
      (1) Systems applying for DWSRF loan funds.
      (2) Systems categorized as being in significant noncompliance by the department, due to their history of failure to comply with drinking water standards.
      (3) Systems identified by the department via a sanitary survey as having technical, managerial, or financial problems as evidenced by such conditions as poor operational control, a poor state of repair or maintenance, vulnerability to contamination, or inability to maintain adequate distribution system operating pressures.
      (4) Systems which have been unable to retain a certified operator in accordance with 567—Chapter 81.
   b. Review of viability assessments for systems required to submit an assessment. If the assessment is incomplete and does not include all of the required elements, the supply will be notified in writing and will be given an opportunity to modify and resubmit the assessment within the time period specified by the department. If the system fails to resubmit a completed viability assessment as specified by the department, the department may find that the system is not viable. If the submitted assessment is
complete, the department will either indicate that the system is viable or not viable after the assessment review process. The system will be notified of the results of the evaluation by the department.

c. Review of voluntarily submitted viability assessments. It is recommended that all existing systems complete the viability assessment and submit it to the department. Voluntarily submitted assessments may be reviewed upon request and will be exempt from any requirements to modify the assessment if it is not approved, or from a determination that the system is not viable, providing the system does not meet any of the criteria for mandatory completion of a viability assessment as set forth in 43.8(4) “a” above.

43.8(6) Systems which are determined to be not viable.

a. Applicability. The following applies to community, nontransient noncommunity, and transient noncommunity systems:

(1) Systems applying for DWSRF loan funds must be viable, or the loan funds must be used to assist the system in attaining viable status. If a system making a loan application is found to be not viable, and loan funds will not be sufficient or available to ensure viability, then the situation must be corrected to the department’s satisfaction prior to qualification to apply for loan funds.

(2) Systems which meet the department’s criteria of significant noncompliance are not considered viable. The viability assessment completed by the public water supply and the most recent sanitary survey results will be evaluated by the department to assist the system in returning to and remaining in compliance, which would achieve viability. Required corrective actions will be specified in the system’s operation permit and will include a compliance schedule. Field office inspections will be conducted on an as-needed basis to assist the system in implementing the required system improvements.

(3) Systems experiencing technical, managerial, or financial problems as noted by department in the sanitary survey will be considered not viable. The viability assessment completed by the public water supply will be evaluated by the department to assist the system in attaining viability, and any required corrective actions will be specified in the system’s operation permit.

(4) Systems unable to retain a certified operator will be considered not viable. All community and nontransient noncommunity water systems, and transient noncommunity water systems as denoted by the department, are required to have a certified operator who meets the requirements of 567—Chapter 81. The viability assessment completed by the public water supply will be used to determine the source of the problem, and required corrective actions will be specified in the system’s operation permit.

b. Reserved.

43.8(7) Revocation or denial of operation or construction permit.

a. Revocation or denial of an operation permit. Failure to correct the deficiencies regarding viability, as identified in accordance with a compliance schedule set by the department, may result in revocation or denial of the system’s operation permit. If the department revokes or denies the operation permit, the owner of the system must negotiate an alternative arrangement with the department for providing treatment or water supply services within 30 days of receipt of the notification by the department unless the owner of the supply appeals the decision to the department. The public water supply is required to provide water that continually meets all health-based standards during the appeal process.

b. Denial of new construction permits for an existing system. In addition to the criteria provided in 567—Chapters 40 through 44, new construction permits for water system improvements may be denied until the system makes the required corrections and attains viable status unless the proposed project is necessary to attain viability.

c. Failure to conform to approved construction plans and specifications, or to comply with the requirements of 567—Chapters 40 to 44. Failure of a project to conform to approved construction plans and specifications, or to fail to comply with the requirements of 567—Chapters 40 to 44, constitutes grounds for the director to withhold the applicable construction and operation permits. The system is then responsible for ensuring that the identified problem with the project is rectified so that permits may be issued. Once an agreement for correcting the problem is reached between the department and the system, the department will issue the appropriate permits according to the provisions of the agreement. If an agreement cannot be reached within a reasonable time period, the permit shall be denied.
d. **Contents of the notification denying the permit.** The notification of denial or withholding approval of the operation or construction permit will state the department’s reasons for withholding or denying permit approval.

43.8(8) Appeals.

a. **Request for formal review of determination of viability.** A person or entity who disagrees with the decision regarding the viability of a public water supply system may request a formal review of the action. A request for review must be submitted in writing to the director by the owner or their designee within 30 days of the date of notification by the department of the viability decision.

b. **Appeal of denial of operation or construction permit.** A decision to deny an operation or construction permit may be appealed by the applicant to the environmental protection commission pursuant to 567—Chapter 7. The appeal must be made in writing to the director within 30 days of receiving the notice of denial by the owner of the public water supply.

567—43.9(455B) **Enhanced filtration and disinfection requirements for surface water and IGW systems serving at least 10,000 people.**

43.9(1) General requirements.

a. **Applicability.** The requirements of this rule constitute national primary drinking water regulations. This rule establishes the filtration and disinfection requirements that are in addition to criteria under which filtration and disinfection are required in 567—43.5(455B). The requirements of this rule are applicable, beginning January 1, 2002, to all public water systems using surface water or groundwater under the direct influence of surface water, in whole or in part, and which serve at least 10,000 people. This rule establishes or extends treatment technique requirements in lieu of maximum contaminant levels for the following contaminants: *Giardia lamblia*, viruses, heterotrophic plate count bacteria, *Legionella*, Cryptosporidium, and turbidity. Each surface water or groundwater under the direct influence of surface water system serving at least 10,000 people must provide treatment of its source water that complies with these treatment technique requirements and they are in addition to those identified in subrule 43.5(1). The treatment technique requirements consist of installing and properly operating water treatment processes that reliably achieve:

1. At least 99 percent (2-log) removal of Cryptosporidium between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer for filtered systems.

2. Compliance with the profiling and benchmark requirements under 43.9(2).

3. The department may require other surface water or groundwater under the direct influence of surface water systems to comply with this rule, through an operation permit.

b. **Compliance determination.** A public water system subject to the requirements of this rule is considered to be in compliance with the requirements of 43.9(1)”a” if it meets the applicable filtration requirements in either 43.5(3) or 43.9(3) and the disinfection requirements in 43.5(2) and 43.6(2).

c. **Prohibition of new construction of uncovered intermediate or finished water storage facilities.** Systems that are required to comply with this rule may construct only covered intermediate or finished water storage facilities. For the purposes of this rule, an intermediate storage facility is defined as a storage facility or reservoir after the clarification treatment process.

d. **Systems with populations that increased after January 1, 2002, to more than 10,000 people served.** Systems using surface water or influenced groundwater sources that did not conduct optional monitoring under 43.9(2) because they served fewer than 10,000 persons when such monitoring was required, but serve more than 10,000 persons prior to January 1, 2005, must comply with 43.9(1), 43.9(3), 43.9(4), and 43.9(5). These systems must also consult with the department to establish a disinfection benchmark. A system that decides to make a significant change to its disinfection practice as described in 43.9(2)”c”(1)”1” through “4” must consult with the department prior to making such a change.

43.9(2) **Disinfection profiling and benchmarking.**

a. **Determination of systems required to profile.** A public water system subject to the requirements of this rule must determine its total trihalomethane (TTHM) and haloacetic acid (HAA5) annual averages using the procedures listed below. The annual average is the arithmetic average of the quarterly averages
of four consecutive quarters of monitoring. Both the TTHM and HAA5 samples must be collected as paired samples during the same time period in order for each parameter to have the same annual average period for result comparison. A paired sample is one that is collected at the same location and time and is analyzed for both TTHM and HAA5 parameters.

1. Allowance of information collection rule data. Those systems that collected data under the provisions of the federal Information Collection Rule listed in Code of Federal Regulations Title 40, Part 141, Subpart M, must use the results of the TTHM and HAA5 samples collected during the last four quarters of monitoring required under 40 CFR 141.142. The system must have submitted the results of the samples collected during the last 12 months of required monitoring.

2. Systems that have not collected TTHM and HAA5 data under 43.9(2)“a”(1). Those systems that have not collected four consecutive quarters of paired TTHM and HAA5 samples as described under 43.9(2)“a”(1) must comply with all other provisions of this subrule as if the HAA5 monitoring had been conducted and the results of that monitoring required compliance with 43.9(2)“b.” The system that elects this option must notify the department in writing of its decision.

3. The department may require that a system use a more representative annual data set than the data set determined under 567—subparagraph 42.9(2)“a”(1) for the purpose of determining applicability of the requirements of this subrule.

4. Profiling determination criteria. Any system having either a TTHM annual average greater than 0.064 mg/L or an HAA5 annual average greater than 0.048 mg/L during the period identified in 43.9(2)“a”(1) through (3) must comply with 43.9(2)“b.”

   a. Disinfection profiling.

   (1) Applicability. Any system that meets the criteria in 43.9(2)“a”(4) must develop a disinfection profile of its disinfection practice for a period of up to three years.

   (2) Monitoring requirements. The system must monitor daily for a period of 12 consecutive calendar months to determine the total logs of inactivation for each day of operation, based on the CT_{99,9} values in Tables 1 through 8 in Appendix A, as appropriate, through the entire treatment plant. This system must begin this monitoring as directed by the department. As a minimum, the system with a single point of disinfectant application prior to entrance to the distribution system must conduct the monitoring in 43.9(2)“b”(2)“1” through “4.” A system with more than one point of disinfectant application must conduct the monitoring in 43.9(2)“b”(2)“1” through “4” for each disinfection segment. The system must monitor the parameters necessary to determine the total inactivation ratio, using analytical methods in 43.5(4)”a” as follows:

   1. The temperature of the disinfected water must be measured once per day at each residual disinfectant concentration sampling point during peak hourly flow.

   2. If the system uses chlorine, the pH of the disinfected water must be measured once per day at each chlorine residual disinfectant concentration sampling point during peak hourly flow.

   3. The disinfectant contact time(s) (“T”) must be determined for each day during peak hourly flow.

   4. The residual disinfectant concentration(s) (“C”) of the water before or at the first customer and prior to each additional point of disinfection must be measured each day during peak hourly flow.

   (3) Use of existing data. A system that has existing operational data may use those data to develop a disinfection profile for additional years, in addition to the disinfection profile generated under 43.9(2)“b”(2). Such systems may use these additional yearly disinfection profiles to develop a benchmark under the provisions of 43.9(2)“c.” The department must determine whether these operational data are substantially equivalent to data collected under the provisions of 43.9(2)“b”(2). These data must also be representative of inactivation through the entire treatment plant and not just of certain treatment segments.

   (4) Calculation of the total inactivation ratio. The system must calculate the total inactivation ratio as follows, using the CT_{99,9} values from Tables 1 through 8 listed in Appendix A:

   1. If the system uses only one point of disinfectant application, the system may determine the total inactivation ratio for the disinfection segment based on either of the following two methods:

      * Determine one inactivation ratio (CT_{calc}/CT_{99,9}) before or at the first customer during peak hourly flow.
• Determine successive CTcalc/CT$_{99.9}$ values, representing sequential inactivation ratios, between the point of disinfectant application and a point before or at the first customer during peak hourly flow. Under this alternative, the system must calculate the total inactivation ratio by determining (CTcalc/CT$_{99.9}$) for each sequence and then adding the (CTcalc/CT$_{99.9}$) values together to determine $\Sigma$(CTcalc/CT$_{99.9}$).

2. If the system uses more than one point of disinfectant application before the first customer, the system must determine the CT value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow. The CTcalc/CT$_{99.9}$ value of each segment and $\Sigma$(CTcalc/CT$_{99.9}$) must be calculated using the method in 43.9(2)“b”(4)“1.”

3. The system must determine the total logs of inactivation by multiplying the value calculated in 43.9(2)“b”(4)“1” or “2” by 3.0.

4. Systems using chloramines or ozone. A system that uses either chloramines or ozone for primary disinfection must also calculate the logs of inactivation for viruses using a method approved by the department.

5. Profile retention requirements. The system must retain disinfection profile data in graphic form, as a spreadsheet, or in some other format acceptable to the department for review as part of sanitary surveys conducted by the department. The department may require the system to submit the data to the department directly or as part of a monthly operation report.

6. Disinfection benchmarking.

(a) Significant change to disinfection practice. Any system required to develop a disinfection profile under the provisions of 43.9(2)“a” or “b” that decides to make a significant change to its disinfection practice must obtain department approval prior to making such change. Significant changes to disinfection practice are:

1. Changes to the point of disinfection;
2. Changes to the disinfectant(s) used in the treatment plant;
3. Changes to the disinfection process; and
4. Any other modification identified by the department.

(b) Calculation of the disinfection benchmark. Any system that is modifying its disinfection practice must calculate its disinfection benchmark using the procedure specified below:

1. For each year of profiling data collected and calculated under 43.9(2)“b,” the system must determine the lowest average monthly Giardia lamblia inactivation in each year of profiling data. The system must determine the average Giardia lamblia inactivation for each calendar month for each year of profiling data by dividing the sum of daily Giardia lamblia inactivation by the number of values calculated for that month.

2. The disinfection benchmark is the lowest monthly average value (for systems with one year of profiling data) or average of lowest monthly average values (for systems with more than one year of profiling data) of the monthly logs of Giardia lamblia inactivation in each year of profiling data.

3. A system that uses either chloramines or ozone for primary disinfection must also calculate the disinfection benchmark for viruses using a method approved by the department.

4. The system must submit the following information to the department as part of its consultation process:

   1. A description of the proposed change;
   2. The disinfection profile for Giardia lamblia (and, if necessary, viruses) under 43.9(2)“b” and the disinfection benchmark as required by 43.9(2)“c”(2); and
   3. An analysis of how the proposed change will affect the current levels of disinfection.

43.9(3) Filtration.

(a) Conventional filtration treatment or direct filtration.

1. Turbidity requirement in 95 percent of samples. For systems using conventional filtration or direct filtration, the turbidity level of representative samples of a system’s filtered water (combined filter effluent or CFE) must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month, measured as specified in 43.5(4)“a”(1) and 43.5(4)“b”(1).
(2) Maximum turbidity level. The turbidity level of representative samples of a system’s filtered water (combined filter effluent or CFE) must at no time exceed 1 NTU, measured as specified in 43.5(4)"a"(1) and 43.5(4)"b"(1). If at any time the combined filter effluent turbidity exceeds 1 NTU, either in a grab sample used for compliance or in a continuously monitored flow, the system must inform the department as soon as possible, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3)"b"(3).

(3) Systems with lime-softening treatment. A system that uses lime softening may acidify representative samples prior to analysis using a protocol approved by the department.

b. Filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration. The department may allow a public water system to use a filtration technology not listed in 43.9(3)"a" or 43.5(4)"c" or "d" if it demonstrates to the department, using pilot plant studies or other means, that the alternative filtration technology, in combination with disinfection treatment that meets the requirements of 43.5(2), consistently achieves 99.9 percent removal or inactivation of Giardia lamblia cysts, 99.99 percent removal or inactivation of viruses, and 99 percent removal of Cryptosporidium oocysts and the department approves the use of the filtration technology. For each approval, the department will set turbidity performance requirements that the system must meet at least 95 percent of the time and the requirement that the system shall not exceed at any time at a level that consistently achieves 99.9 percent removal or inactivation of Giardia lamblia cysts, 99.99 percent removal or inactivation of viruses, and 99 percent removal of Cryptosporidium oocysts.

43.9(4) Filtration sampling requirements.

a. Monitoring requirements for systems using filtration treatment. In addition to monitoring required by 43.5(4), a public water system subject to the requirements of this rule that provides conventional filtration treatment or direct filtration must conduct continuous monitoring of turbidity for each individual filter using an approved method in 43.5(4)"a"(1) and must calibrate turbidimeters at least every 90 days with a primary standard. The calibration of each turbidimeter used for compliance must be verified at least once per week with a primary standard, secondary standards, or the manufacturer’s proprietary calibration confirmation device or by a method approved by the department. If the verification is not within plus or minus 0.05 NTU for measurements of less than or equal to 0.5 NTU, or within plus or minus 10 percent of measurements greater than 0.5 NTU, then the turbidimeter must be recalibrated. Systems must record the results of individual filter monitoring every 15 minutes.

b. Failure of the continuous turbidity monitoring equipment. If there is a failure in the continuous turbidity monitoring equipment, the system must conduct grab sampling every four hours in lieu of continuous monitoring until the turbidimeter is repaired and back online. A system has a maximum of five working days after failure to repair the equipment, or else it is in violation.

43.9(5) Reporting and record-keeping requirements. In addition to the reporting and record-keeping requirements in 567—paragraph 42.4(3)"c," a system subject to the requirements of this rule that provides conventional filtration treatment or direct filtration must report monthly to the department the information specified in 43.9(5)"a" and "b" beginning January 1, 2002. In addition to the reporting and record-keeping requirements in 567—paragraph 42.4(3)"c," a system subject to the requirements of this rule that provides filtration approved under 43.9(3)"b" must report monthly to the department the information specified in 43.9(5)"a" beginning January 1, 2002. The reporting in 43.9(5)"a" is in lieu of the reporting specified in 567—subparagraph 42.4(3)"c"(1).

a. Turbidity. Turbidity measurements as required by 43.9(3) must be reported in a format acceptable to the department and within ten days after the end of each month that the system serves water to the public. Information that must be reported includes:

(1) The total number of filtered water (combined filter effluent or CFE) turbidity measurements taken during the month;

(2) The number and percentage of filtered water (combined filter effluent or CFE) turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in 43.9(3)"a" or "b"; and
(3) The date and value of any combined filter effluent or CFE turbidity measurements taken during the month which exceed 1 NTU for systems using conventional filtration treatment or direct filtration or which exceed the maximum level set by the department under 43.9(3)"b."

(4) The dates and summary of calibration and verification of all compliance turbidimeters.

b. Individual filter turbidity monitoring. Systems must maintain the results of individual filter turbidity per monitoring taken under 43.9(4) for at least three years. Systems must report to the department that they have conducted individual filter turbidity monitoring under 43.9(4) within ten days after the end of each month that the system serves water to the public. Systems must report to the department individual filter turbidity measurement results taken under 43.9(4) within ten days after the end of each month that the system serves water to the public only if measurements demonstrate one or more of the conditions specified in 43.9(5)"b"(1) through (4). Systems that use lime softening may apply to the department for alternative exceedance levels for the levels specified in 43.9(5)"b"(1) through (4) if they can demonstrate that higher turbidity levels in individual filters are due to lime carryover only and not due to degraded filter performance.

(1) For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart, the system must report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system must either produce a filter profile for the filter within seven days of the exceedance (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

(2) For any individual filter that has a measured turbidity level of greater than 0.5 NTU in two consecutive measurements taken 15 minutes apart anytime following the first four hours of continuous filter operation after the filter has been backwashed or otherwise taken offline, the system must report the filter number, the turbidity, and the date(s) on which the exceedance occurred. In addition, the system must either produce a filter profile for the filter within seven days of the exceedance (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

(3) For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each month of three consecutive months, the system must report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system must conduct a self-assessment of the filter within 14 days of the exceedance and report that the self-assessment was conducted. The self-assessment must consist of at least the following components: assessment of filter performance; development of a filter profile; identification and prioritization of factors limiting filter performance; assessment of the applicability of corrections; and preparation of a filter self-assessment report.

(4) For any individual filter that has a measured turbidity level of greater than 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each month of two consecutive months, the system must report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system must arrange for a comprehensive performance evaluation to be conducted by the department or a third party approved by the department no later than 30 days following the exceedance and have the evaluation completed and submitted to the department no later than 90 days following the exceedance.

c. Additional reporting requirement for turbidity combined filter effluent.

(1) If at any time the turbidity exceeds 1 NTU in representative samples of filtered water (combined filter effluent or CFE) in a system using conventional filtration treatment or direct filtration, the system must consult with the department as soon as practical, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3)"b"(3).

(2) If at any time the turbidity in representative samples of filtered water (combined filter effluent or CFE) exceeds the maximum level set by the department under 43.9(3)"b" for filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration, the system must consult with the department as soon as practical, but no later than 24
hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3) "b"(3).

[ARC 9915B, IAB 12/14/11, effective 1/18/12; ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—43.10(455B) Enhanced filtration and disinfection requirements for surface water and IGW systems serving fewer than 10,000 people.

43.10(1) General requirements.
   a. Applicability. The requirements of this rule constitute national primary drinking water regulations. This rule establishes requirements for filtration and disinfection that are in addition to criteria under which filtration and disinfection are required in 567—43.5(455B). The requirements of this rule are applicable beginning January 1, 2005, unless otherwise noted, to all public water systems using surface water or groundwater under the direct influence of surface water, in whole or in part, and which serve less than 10,000 people. This rule establishes or extends treatment technique requirements in lieu of maximum contaminant levels for the following contaminants: Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, Cryptosporidium, and turbidity. The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:
      (1) At least 99 percent (2 log) removal of Cryptosporidium between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer for filtered systems; and
      (2) Compliance with the profiling and benchmark requirements in subrules 43.10(2) and 43.10(3).
   b. Prohibition of new construction of uncovered intermediate or finished water storage facilities. Systems that are required to comply with this rule may construct only covered intermediate or finished water storage facilities. For the purposes of this rule, an intermediate storage facility is defined as a storage facility or reservoir after the clarification treatment process.

43.10(2) Disinfection profile.
   a. Applicability. A disinfection profile is a graphical representation of a system’s level of Giardia lamblia or virus inactivation measured during the course of a year. All systems required to comply with this rule must develop a disinfection profile unless the department determines that such a profile is unnecessary. Records must be maintained according to subrule 43.10(7).
      (1) The department may approve the use of a more representative data set for disinfection profiling than the data set required in paragraph 43.10(2) "b."
      (2) The department may determine that a system’s profile is unnecessary only if a system’s TTHM and HAA5 levels are below 0.064 mg/L and 0.048 mg/L, respectively. To determine these levels, TTHM and HAA5 samples must be collected after January 1, 1998, during the month with the warmest water temperature, and at the point of maximum residence time in the distribution system. The department may approve the use of a more representative annual data set for purpose of determining applicability of the requirements of this subrule. The annual data set must be calculated on an annual average, of the arithmetic average of the quarterly averages of four consecutive quarters of monitoring. At least 25 percent of the samples collected in each quarter must be collected at the maximum residence time location in the distribution system.
      1. For systems that provide water to other public water supplies, if the producing system meets the byproduct level requirements of less than 0.064 mg/L for TTHM and less than 0.048 mg/L for HAA5, it will not be required to develop a disinfection profile and benchmark unless:
         ● The consecutive system cannot meet in its distribution system the byproduct level requirements of less than 0.064 mg/L for TTHM and less than 0.048 mg/L for HAA5, and
         ● The producing system wants to make a significant change to its disinfection practices.
      2. The department will then assign the requirement to the producing system to conduct the disinfection profiling study and determine a disinfection benchmark.
   b. Required elements of a disinfection profile.
      (1) Collection of the following data for 12 consecutive months, beginning by July 1, 2003, for systems serving 500 to 9,999 people, and by January 1, 2004, for systems serving fewer than 500
people. A system must monitor the following parameters to determine the total log inactivation by using the analytical methods in paragraph 43.5(4) “a,” once per week on the same calendar day, over 12 consecutive months.

1. Temperature of the disinfected water at each residual disinfectant concentration sampling point during peak hourly flow, measured in degrees Celsius;
2. For systems using chlorine, the pH of the disinfected water at each residual disinfectant concentration sampling point during peak hourly flow, measured in standard pH units;
3. The disinfectant contact time (“T”) during peak hourly flow, measured in minutes; and
4. The residual disinfectant concentration(s) (“C”) of the water following each point of disinfection at a point(s) prior to each subsequent point of disinfection and at the entry point to the distribution system or at a location just prior to the first customer during peak hourly flows, measured in mg/L.

(2) The data collected in 43.10(2) “b”(1) must be used to calculate the weekly log inactivation, along with the CT₉₉.₉ tables listed in Appendix A. The system must calculate the total inactivation ratio as follows and multiply the value by 3.0 to determine log inactivation of *Giardia lamblia*:

1. If the system uses only one point of disinfectant application, it must determine:
   - One inactivation ratio (CT calc/CT₉₉.₉) before or at the first customer during peak hourly flow, or
   - Successive (CT calc/CT₉₉.₉) values, representing sequential inactivation ratios, between the point of disinfection application and a point before or at the first customer during peak hourly flow. Under this alternative, the system must calculate the total inactivation ratio by determining (CT calc/CT₉₉.₉) for each sequence and then adding the (CT calc/CT₉₉.₉) values together to determine (ΣCT calc/CT₉₉.₉).
2. If a system uses more than one point of disinfectant application before the first customer, the system must determine the (CT calc/CT₉₉.₉) value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow using the procedure specified in 43.10(2) “b”(2) “1,” second bulleted paragraph.
3. If a system uses chloramines, ozone, or chlorine dioxide for primary disinfection, the system must also calculate the inactivation logs for viruses and develop an additional disinfection profile for viruses using methods approved by the department.

(3) The weekly log inactivations are used to develop a disinfection profile, as follows:

1. The disinfection profile is developed by graphing each log inactivation data point versus time. Each log inactivation serves as a data point in the disinfection profile. The system will have obtained 52 measurements at a minimum, one for each week of the year.
2. The disinfection profile depicts the variation of microbial inactivation over the course of the year.
3. The system must retain the disinfection profile data both in a graphic form and in a spreadsheet, which must be available for review by the department.
4. This profile is used to calculate a disinfection benchmark if the system is considering changes to its disinfection practices.

43.10(3) Disinfection benchmark.

a. Applicability. Any system required to develop a disinfection profile under 43.10(2) must develop a disinfection benchmark prior to making any significant change in disinfection practice. The system must receive department approval before any significant change in disinfection practice is implemented. Records must be maintained according to subrule 43.10(7).

b. Significant changes to disinfection practice. Significant changes to disinfection practice include:

1. Changes to the point of disinfection;
2. Changes to the disinfectant(s) used in the treatment plant;
3. Changes to the disinfection process; or
4. Any other modification identified by the department.

c. Calculation of the disinfection benchmark. The system must calculate the disinfection benchmark in the following manner:
(1) Step 1. Using the data collected to develop the disinfection profile, the system must determine the average *Giardia lamblia* inactivation for each calendar month by dividing the sum of all *Giardia lamblia* inactivations for that month by the number of values calculated for that month.

(2) Step 2. The system must determine the lowest monthly average value out of the 12 values. This value becomes the disinfection benchmark.

   d. Information required for department approval of a change in disinfection practice. Any significant change in disinfection practice must have been approved by the department before the system institutes the change. The following information must be submitted by the system to the department as part of the consultation and approval process.

   (1) A description of the proposed change;
   (2) The disinfection profile for *Giardia lamblia* and, if necessary, viruses;
   (3) The disinfection benchmark;
   (4) An analysis of how the proposed change will affect the current levels of disinfection; and
   (5) Any additional information requested by the department.

   e. Additional benchmark requirements if chloramines, ozone, or chlorine dioxide is used for primary disinfection. If a system uses chloramines, ozone, or chlorine dioxide for primary disinfection, the system must calculate the disinfection benchmark from the data collected for viruses to develop the disinfection profile in addition to the *Giardia lamblia* disinfection benchmark calculated in paragraph 43.10(3)“c.” This viral benchmark must be calculated in the same manner used to calculate the *Giardia lamblia* disinfection benchmark in paragraph 43.10(3)“c.”

**43.10(4) Combined filter effluent turbidity requirements.** All systems using surface water or groundwater under the direct influence of surface water which serve less than 10,000 people must use filtration, and the turbidity limits that must be met depend upon the type of filtration used. Systems using lime softening may acidify representative combined filter effluent turbidity samples prior to analysis, using a protocol approved by the department.

   a. Conventional filtration treatment or direct filtration.

   (1) Turbidity must be measured in the combined filter effluent as described in paragraphs 43.5(4)“a” and “b.”

   (2) The turbidity in the combined filter effluent must be less than or equal to 0.3 NTU in 95 percent of the turbidity measurements taken each month.

   (3) The turbidity in the combined filter effluent must never exceed 1 NTU at any time during the month. If at any time the combined filter effluent turbidity exceeds 1 NTU, either in a grab sample used for compliance or in a continuously monitored flow, the system must inform the department as soon as possible, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraphs 42.1(3)“b”(3) and 42.1(2)”a”(8).

   (4) The monthly reporting requirements are listed in subrule 43.10(6).

   b. Slow sand filtration or diatomaceous earth filtration.

   (1) Turbidity must be measured in the combined filter effluent as described in paragraphs 43.5(4)“a” and “b.”

   (2) The combined filter effluent turbidity limits of subrule 43.5(3) must be met.

   (3) The monthly reporting requirements are listed in subrule 43.10(6).

   c. Other alternative filtration technologies. By using pilot studies or other means, a system using alternative filtration must demonstrate to the satisfaction of the department that the system’s filtration, in combination with disinfection treatment, consistently achieves 99 percent removal of *Cryptosporidium* oocysts; 99.9 percent removal, inactivation, or a combination of both, of *Giardia lamblia* cysts; and 99.99 percent removal, inactivation, or a combination of both, of viruses. The department will then use the pilot study data to determine system-specific turbidity limits.

   (1) Turbidity must be measured in the combined filter effluent as described in paragraphs 43.5(4)“a” and “b.”

   (2) The turbidity must be less than or equal to a value set by the department in 95 percent of the combined filter effluent turbidity measurements taken each month, based on the pilot study. The value may not exceed 1 NTU.
(3) The combined filter effluent turbidity must never exceed a value set by the department, based on the pilot study. The value may not exceed 5 NTU.

(4) The monthly reporting requirements are listed in subrule 43.10(6).

**43.10(5) Individual filter turbidity requirements.** All systems utilizing conventional filtration or direct filtration must conduct continuous monitoring of turbidity for each individual filter. Records must be maintained according to subrule 43.10(7).

a. **Continuous turbidity monitoring requirements.** Following are the continuous turbidity monitoring requirements.

1. Monitoring must be conducted using an approved method listed in paragraph 43.5(4) “a”;
2. Calibration of turbidimeters must be conducted at least every 90 days with a primary standard. The calibration of each turbidimeter used for compliance must be verified at least once per week with a primary standard, secondary standards, or the manufacturer’s proprietary calibration confirmation device or by a method approved by the department. If the verification is not within plus or minus 0.05 NTU for measurements of less than or equal to 0.5 NTU, or within plus or minus 10 percent of measurements greater than 0.5 NTU, the turbidimeter must be recalibrated;
3. Results of turbidity monitoring must be recorded at least every 15 minutes;
4. Monthly reporting must be completed according to subrule 43.10(6); and
5. Records must be maintained according to 43.10(7).

b. **Failure of continuous turbidity monitoring equipment.** If there is a failure in the continuous turbidity monitoring equipment, the system must conduct grab sampling every four hours in lieu of continuous monitoring until the turbidimeter is back on-line. A system has a maximum of 14 days after failure to repair the equipment, or else the system is in violation. The system must notify the department within 24 hours of both when the turbidimeter was taken off-line and when it was returned on-line.

c. **Special provision for one-filter or two-filter systems.** If a system has only one or two filters, it may conduct continuous monitoring of the combined filter effluent turbidity instead of individual effluent turbidity monitoring. The continuous monitoring of the combined filter effluent turbidity must meet the requirements listed in 43.10(5) “a” and “b.”

d. **Alternative turbidity levels for systems using lime softening.** Systems using lime softening may apply to the department for alternative turbidity exceedance levels for the levels specified in 43.10(5) “e.” The system must be able to demonstrate to the satisfaction of the department that higher turbidity levels are due to lime carryover only, and not due to degraded filter performance.

e. **Requirements triggered by the individual filter turbidity monitoring data.** Systems are required to conduct additional activities based upon their individual filter turbidity monitoring data, as listed in this paragraph.

1. If the turbidity of an individual filter (or the turbidity of the combined filter effluent for a system with one or two filters, pursuant to 43.10(5) “c”) exceeds 1.0 NTU in two consecutive recordings taken 15 minutes apart, the system must report the following information in the monthly operation report to the department by the tenth day of the following month:
   1. The filter number(s);
   2. Corresponding date(s);
   3. Turbidity value(s) which exceeded 1.0 NTU; and
   4. The cause of the exceedance(s), if known.
2. If the turbidity of an individual filter (or the turbidity of the combined filter effluent for a system with one or two filters, pursuant to 43.10(5) “c”) exceeds 1.0 NTU in two consecutive recordings 15 minutes apart in three consecutive months, the system must meet the following requirements:
   1. The system must conduct a self-assessment of the filter(s) within 14 days of the day the filter exceeded 1.0 NTU in two consecutive measurements for the third straight month, unless a comprehensive performance evaluation as specified in the following paragraph is required. Two-filter systems that monitor the combined filter effluent turbidity instead of the individual filters must conduct a self-assessment of both filters.
   2. The self-assessment must consist of at least the following components:
      ● Assessment of filter performance;
- Development of a filter profile;
- Identification and prioritization of factors limiting filter performance;
- Assessment of the applicability of corrections;
- Preparation of a filter self-assessment report;
- Date the self-assessment requirement was triggered; and
- Date the self-assessment was completed.

(3) If the turbidity of an individual filter (or the turbidity of the combined filter effluent for a system with one or two filters, pursuant to 43.10(5)“c”) exceeds 2.0 NTU in two consecutive recordings 15 minutes apart in two consecutive months, the system must meet the following requirements:

1. The system must arrange to have a comprehensive performance evaluation (CPE) conducted by the department or a third party approved by the department no later than 60 days following the day the filter exceeded 2.0 NTU in two consecutive measurements for the second straight month. The CPE report must be completed and submitted to the department within 120 days following the day the filter exceeded 2.0 NTU in two consecutive measurements for the second straight month.

2. A new CPE is not required if a CPE has been completed by the department or a third party approved by the department within the prior 12 months or if the system and department are jointly participating in an ongoing comprehensive technical assistance project at the system.

(4) The department may conduct a CPE at a system regardless of individual filter turbidity levels.

43.10(6) Reporting requirements. The system must meet the following reporting requirements:

a. Combined filter effluent turbidity monitoring.

(1) The following information must be reported in the monthly operation report to the department by the tenth day of the following month.

1. Total number of filtered water turbidity measurements taken during the month.
2. The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the system’s required 95th percentile limit.
3. The date and analytical result of any turbidity measurements taken during the month which exceeded the maximum turbidity limit for the system, in addition to the requirements of (2).
4. The dates and summary of calibration and verification of all compliance turbidimeters.

(2) For an exceedance of the combined filter effluent maximum turbidity limit, the following requirements must be met.

1. If at any time the turbidity exceeds 1 NTU in representative samples of filtered water in a system using conventional filtration treatment or direct filtration, the system must consult with the department as soon as practical, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3)“b”(3).

2. If at any time the turbidity in representative samples of filtered water exceeds the maximum level under subrule 43.5(3) for slow sand filtration or diatomaceous earth filtration, the system must consult with the department as soon as practical, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3)“b”(3).

3. If at any time the turbidity in representative samples of filtered water exceeds the maximum level set by the department under paragraph 43.10(4)“c” for filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration, the system must consult with the department as soon as practical, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3)“b”(3).

b. Individual filter effluent turbidity monitoring. The following information must be reported in the monthly operation report to the department by the tenth day of the following month, unless otherwise noted.

(1) That the system conducted individual filter turbidity monitoring during the month.

(2) For any filter that had two consecutive measurements taken 15 minutes apart that exceeded 1.0 NTU, the following information must be reported:

1. The filter number(s);
2. The corresponding dates;
3. The turbidity values that exceeded 1.0 NTU; and
4. The cause, if known, of the exceedance.
(3) If a self-assessment was required, the date it was triggered and the date the assessment was completed must be reported. If the self-assessment requirement was triggered in the last four days of the month, the information must be reported to the department by the 14th day of the following month.
(4) If a comprehensive performance evaluation was required, the date it was triggered must be reported. A copy of the CPE report must be submitted to the department within 120 days of when the CPE requirement was triggered.
(5) The dates and summary of calibration and verification of all compliance turbidimeters.
   c. Disinfection profiling. The following information must be reported to the department by January 1, 2004, for systems serving fewer than 500 people.
   (1) Results of disinfection byproduct monitoring that indicate TTHM levels less than 0.064 mg/L and HAA5 levels less than 0.048 mg/L; or
   (2) That the system has begun to collect the profiling data.
   d. Disinfection benchmarking. Before a system that was required to develop a disinfection profile makes a significant change to its disinfection practice, it must report the following information to the department, and the system must receive department approval before any significant change in disinfection practice is implemented.
   (1) Description of the proposed change in disinfection practice;
   (2) The system’s disinfection profile for Giardia lamblia and, if applicable, for viruses;
   (3) The system’s disinfection benchmark; and
   (4) An analysis of how the proposed change will affect the current levels of disinfection.

43.10(7) Record-keeping requirements. The system must meet the following record-keeping requirements, in addition to the record-keeping requirements in 567—paragraph 42.4(3)“c” and 567—42.5(455B).
   a. Individual filter effluent turbidity requirements. The results of the individual filter effluent turbidity monitoring must be kept for at least three years.
   b. Disinfection profiling requirements. The results of the disinfection profile, including raw data and analysis, must be kept indefinitely.
   c. Disinfection benchmarking requirements. The results of the disinfection benchmark, including raw data and analysis, must be kept indefinitely.

567—43.11(455B) Enhanced treatment for Cryptosporidium.

43.11(1) Applicability. The requirements of this rule are national primary drinking water regulations and establish or extend treatment technique requirements in lieu of maximum contaminant levels for Cryptosporidium. These requirements are in addition to the filtration and disinfection requirements of 567—43.5(455B), 567—43.9(455B) and 567—43.10(455B) and apply to all Iowa public water systems supplied by surface water or influenced groundwater sources.
   a. Wholesale systems. Wholesale systems must comply with the requirements based on the population of the largest system in the combined distribution system.
   b. Filtered systems. The requirements of this rule for filtered systems apply to systems that are required to provide filtration treatment pursuant to 567—43.5(455B), whether or not the system is currently operating a filtration system.

43.11(2) General requirements. Systems subject to this rule must comply with the following requirements:
   a. Source water monitoring. Systems must conduct two rounds of source water monitoring for each plant that treats a surface water or influenced groundwater source. This monitoring may include sampling for Cryptosporidium, E. coli, and turbidity, as described in 43.11(3), to determine what level, if any, of additional Cryptosporidium treatment the systems must provide.
b. Disinfection profiles and benchmarks. Systems that plan to make a significant change to their disinfection practice must develop disinfection profiles and calculate disinfection benchmarks, as described in 43.11(4).

c. Cryptosporidium treatment bin determination. Systems must determine their Cryptosporidium treatment bin classification and provide additional treatment for Cryptosporidium, if required, according to the prescribed schedule.

d. Additional treatment for Cryptosporidium. Systems required to provide additional treatment for Cryptosporidium must implement microbial toolbox options that are designed and operated as described in 43.11(8) through 43.11(13).

e. Record keeping and reporting. Systems must comply with the applicable record-keeping and reporting requirements described in 43.11(14) and 43.11(15).

f. Significant deficiencies. Systems must address significant deficiencies identified during sanitary surveys as described in 43.1(7).

43.11(3) Source water monitoring.

a. Schedule. Systems must conduct the source water monitoring no later than the month and year listed in Table 1. A system may avoid the source water monitoring if the system provides a total of at least 5.5-log treatment for Cryptosporidium, equivalent to meeting the treatment requirements of Bin 4 in 43.11(6). The system must install and operate technologies to provide this level of treatment by the applicable treatment compliance date specified in 43.11(7).

Table 1: Source Water Monitoring Schedule

<table>
<thead>
<tr>
<th>System</th>
<th>First round of monitoring</th>
<th>Second round of monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves at least 100,000 people</td>
<td>October 2006</td>
<td>April 2015</td>
</tr>
<tr>
<td>Serves 50,000-99,999 people</td>
<td>April 2007</td>
<td>October 2015</td>
</tr>
<tr>
<td>Serves 10,000-49,999 people</td>
<td>April 2008</td>
<td>October 2016</td>
</tr>
<tr>
<td>Serves fewer than 10,000 people and only conducts E. coli monitoring</td>
<td>October 2008</td>
<td>October 2017</td>
</tr>
<tr>
<td>Serves fewer than 10,000 people and conducts Cryptosporidium monitoring</td>
<td>April 2010</td>
<td>April 2019</td>
</tr>
</tbody>
</table>

b. Monitoring requirements. The minimum monitoring requirements are listed below. Systems may sample more frequently, provided the sampling frequency is evenly spaced throughout the monitoring period.

(1) Systems serving at least 10,000 people. Systems serving at least 10,000 people must sample their source water for Cryptosporidium, E. coli, and turbidity at least monthly for 24 months.

(2) Systems serving fewer than 10,000 people. Systems serving fewer than 10,000 people are allowed to first conduct E. coli monitoring to determine if further monitoring for Cryptosporidium is required.

1. Systems must sample their source water for E. coli at least once every two weeks for 12 months. If the annual mean E. coli concentration is at or below 100 E. coli per 100 mL, the system can avoid further Cryptosporidium monitoring in that sampling round.

2. A system may avoid E. coli monitoring if the system notifies the department no later than three months prior to the E. coli monitoring start date that the system will conduct Cryptosporidium monitoring.

3. Systems that fail to conduct the required E. coli monitoring or that cannot meet the E. coli annual mean limit are required to conduct Cryptosporidium monitoring. The system must sample its source water for Cryptosporidium either at least twice per month for 12 months or at least monthly for 24 months.

4. A system that begins monitoring for E. coli and determines during the sampling period that the system mathematically cannot meet the applicable E. coli annual mean limit may discontinue the E. coli
sampling. The system is then required to start *Cryptosporidium* monitoring according to the schedule in Table 1.

(3) Plants operating only part of the year. Systems with surface water or influenced groundwater treatment plants that operate for only part of the year must conduct source water monitoring in accordance with this rule, but with the following modifications.

1. Systems must sample their source water only during the months that the plant operates unless the department specifies another monitoring period based on plant operating practices.
2. Systems with plants that operate less than six months per year and that monitor for must collect at least six samples per year for two years. The samples must be evenly spaced throughout the period the plant operates.

(4) New sources. A system that begins using a new surface water or influenced groundwater source after the dates in Table 1 must monitor according to a schedule approved by the department and meet the requirements of this subrule. The system must also meet the requirements of the bin classification and *Cryptosporidium* treatment for the new source on a schedule approved by the department. The system must conduct the second round of source water monitoring no later than six years following the initial bin classification or determination of the mean *Cryptosporidium* level, as applicable.

(5) Monitoring violation determination. Failure to collect any source water sample required under this subrule in accordance with the sampling plan, location, analytical method, approved laboratory, or reporting requirements of 43.11(3)“c” through 43.11(3)“e” is a monitoring violation.

(6) Grandfathered monitoring data. Systems were allowed to use source water monitoring *Cryptosporidium* data collected prior to the applicable start date in Table 1 to meet the requirements of the first round of monitoring, a process referred to as grandfathering data. This grandfathered data substituted for an equivalent number of months at the end of the monitoring period and had to meet the requirements of 40 CFR 141.707 as adopted on January 5, 2006, which the department hereby adopts by reference. Department approval of the grandfathered data application is required.

c. Sampling plan. Systems must submit a sampling plan that specifies the sampling locations in relation to the sources and treatment processes and the calendar dates when the system will collect each required sample. The specific treatment process locations that must be included in the plan are pretreatment, points of chemical treatment, and filter backwash recycle.

1. The sampling plan must be submitted no later than three months prior to the applicable monitoring date in Table 1. If the department does not respond to a system regarding the submitted sampling plan prior to the start of the monitoring period, the system must sample according to the submitted sampling plan.
2. The plan must be submitted in a form acceptable to the department.
3. The system must monitor within two days of the date specified in the plan, unless one of the following conditions occurs.

1. If an extreme condition or situation exists that may pose danger to the sample collector, or that cannot be avoided, and causes the system to be unable to sample in the scheduled five-day period, the system must sample as close to the scheduled date as is feasible unless the department approves an alternative sampling date. The system must submit an explanation for the delayed sampling date to the department within one week of the missed sampling period. A replacement sample must be collected.
2. If a system is unable to report a valid analytical result for a scheduled sampling date due to equipment failure, loss of or damage to the sample, failure to comply with the analytical method or quality control requirements, or failure of the laboratory to analyze the sample, the system must notify the department of the cause of the delay and collect a replacement sample.
3. A replacement sample must be collected within 21 days of the scheduled sampling period or on the resampling date approved by the department.

(4) Missed sampling dates. Systems that fail to meet the dates in their sampling plan for any source water sample must revise their sampling plan to add dates for collecting all missed samples. The revised schedule must be submitted to the department for approval prior to the collection of the missed samples.

d. Sampling locations. Systems must collect samples for each treatment plant that treats a surface water or influenced groundwater source. If multiple plants draw water from the same influent (same pipe
or intake), the department may approve one set of monitoring results to be used to satisfy the requirements for those plants.

(1) Chemical treatment location. Systems must collect source water samples prior to chemical treatment. If the system cannot feasibly collect a sample prior to chemical treatment, the department may grant approval for the system to collect the sample after chemical treatment. This approval would only be granted if the department determines in writing that collecting the samples prior to chemical treatment is not feasible for the system and that the chemical treatment is unlikely to have a significant adverse effect on the analysis of the sample.

(2) Filter backwash recycle return location. Systems that recycle filter backwash water must collect the source water samples prior to the point of filter backwash water addition.

(3) Bank filtration credit sampling location.
   1. Systems that receive Cryptosporidium treatment credit for bank filtration under 43.9(3)“b” or 43.10(4)“c” must collect source water samples in the surface water source prior to bank filtration.
   2. Systems that use bank filtration as pretreatment to a filtration plant must collect source water samples from the well, which is after bank filtration has occurred. Use of bank filtration during monitoring must be consistent with routine operational practice. Systems collecting samples after a bank filtration process may not receive treatment credit for the bank filtration under 43.11(10)“c.”

(4) Multiple sources. Systems with plants that use multiple water sources, including multiple surface water sources and blended surface water and groundwater sources, must collect samples as follows:
   1. The use of multiple sources during monitoring must be consistent with routine operational practice.
   2. If a sampling tap is available where the sources are combined prior to treatment, the system must collect samples from that tap.
   3. If a sampling tap where the sources are combined prior to treatment is not available, the system must collect samples at each source near the intake on the same day and must use either of the following options for sample analysis:
      - Physically composite the source samples into a single sample for analysis. Systems may composite the sample from each source into one sample prior to analysis. The volume of the sample from each source must be weighted according to the proportion of the source in the total plant flow at the time the sample is collected.
      - Analyze the samples separately and mathematically composite the results. Systems may analyze samples from each source separately and calculate a weighted average of the analytical results for each sampling date. The weighted average must be calculated by multiplying the analytical result for each source by the fraction that source contributed to the total plant flow at the time the sample was collected and then summing the weighted analytical results.

   e. Analytical methodology, laboratory certification, and data reporting requirements. Systems must have samples analyzed pursuant to the specifications listed in this paragraph. The system must report, in a format acceptable to the department, the analytical results from the source water monitoring no later than ten days after the end of the first month following the month when the sample is collected.

(1) Cryptosporidium. Systems must have Cryptosporidium samples analyzed by a laboratory that is approved under EPA’s Laboratory Quality Assurance Evaluation Program for Analysis of Cryptosporidium in Water.
   1. These are the approved analytical methods for Cryptosporidium:
2. Using one of the approved methods, the laboratory must analyze at least a 10 L sample or a packed pellet volume of at least 2 mL. Systems unable to process a 10 L sample must analyze as much sample volume as can be filtered by two filters specified in the method, up to a packed pellet volume of at least 2 mL.

3. A matrix spike (MS) sample must be spiked and filtered by the laboratory according to the approved method. If the volume of the MS sample is greater than 10 L, the system may filter all but 10 L of the MS sample in the field and ship the filtered sample and the remaining 10 L of source water to the laboratory. In this case, the laboratory must spike the remaining 10 L of water and filter it through the filter used to collect the balance of the sample in the field.

4. Flow cytometer-counted spiking suspensions must be used for the matrix spike samples and the ongoing precision and recovery samples.

5. The following data elements must be reported for each Cryptosporidium analysis:
   - PWSID.
   - Facility ID.
   - Sample collection date.
   - Sample type (i.e., field or matrix spike).
   - Sample volume filtered (L), to the nearest 0.25 L.
   - Whether 100 percent of the filtered volume was examined by the laboratory.
   - Number of oocysts counted.
   - For matrix spike samples: sample volume spiked and estimated number of oocysts spiked.
   - For samples in which less than 10 L is filtered or less than 100 percent of the sample volume is examined: the number of filters used and the packed pellet volume.
   - For samples in which less than 100 percent of sample volume is examined: the volume of resuspended concentrate and the volume of this resuspension processed through immunomagnetic separation.

2) E. coli. Systems must have the E. coli samples analyzed by a laboratory certified by EPA, the National Environmental Laboratory Accreditation Conference, or the department for total coliform or fecal coliform analysis in drinking water samples using the same approved E. coli method for the analysis of source water.

1. The approved analytical methods for the enumeration of E. coli in source water are shown in Table 2.

<table>
<thead>
<tr>
<th>Method</th>
<th>EPA</th>
<th>Standard Methods</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most probable number with multiple</td>
<td>9223 B11</td>
<td>991.154</td>
<td></td>
</tr>
<tr>
<td>tube or multiple well1, 2</td>
<td></td>
<td>Colilert5, 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Colilert-183, 5, 6</td>
<td></td>
</tr>
<tr>
<td>Membrane filtration, single step1,</td>
<td>16039</td>
<td>m-ColiBlue2410</td>
<td></td>
</tr>
<tr>
<td>7, 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Membrane filtration, two step</td>
<td>9222D/9222G12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Tests must be conducted to provide organism enumeration (i.e., density). Select the appropriate configuration of tubes/filtrations and dilutions/volumes to account for the quality, consistency, and anticipated organism density in the water sample.

2Samples shall be enumerated by the multiple-tube or multiple-well procedure. Using multiple-tube procedures, employ an appropriate tube and dilution configuration of the sample as needed and report the Most Probable Number (MPN). Samples tested with Colilert® may be enumerated with the multiple-well procedures, Quanti-Tray®, Quanti-Tray® 2000, and the MPN calculated from the table provided by the manufacturer.

3These tests are collectively known as defined enzyme substrate tests, where, for example, a substrate is used to detect the enzyme beta-glucuronidase produced by E. coli.

Escherichia coli within Colilert® bacteria, retain for 43.5 hours, IDEXX Inc., 1966.

5 The filter must be a 0.45 micron membrane filter or a membrane filter with another pore size certified by the manufacturer to fully retain organisms to be cultivated and to be free of extractables which could interfere with organism growth.

6 When the membrane filter method has been used previously to test waters with high turbidity or large numbers of noncoliform bacteria, a parallel test should be conducted with a multiple-tube technique to demonstrate applicability and comparability of results.


7 A description of the m-ColiBlue24® test, Total Coliforms and E. coli, is available from Hach Company, 100 Dayton Ave., Ames, IA 50010.


2. The holding time (the time period from sample collection to initiation of analysis) shall not exceed 30 hours. The department may approve on a case-by-case basis an extension of the holding time to 48 hours, if the 30-hour holding time is not feasible. If the extension is allowed, the laboratory must use the Colilert® reagent version of the Standard Methods 9223B to conduct the analysis.

3. The samples must be maintained between 0 and 10 degrees C during storage and transit to the laboratory.

4. The following data elements must be reported for each E. coli analysis:
   - PWSID.
   - Facility ID.
   - Sample collection date.
   - Analytical method number.
   - Method type.
   - Source type (flowing stream or river; lake or reservoir; or influenced groundwater).
   - Number of E. coli per 100 mL.
   - Turbidity in NTU.

(3) Turbidity. The approved analytical methods for turbidity are listed in 43.5(4)“a”(1). Measurements of turbidity must be made by a party approved by the department, and reported on the laboratory data sheet with the corresponding E. coli sample.

43.11(4) Disinfection profiling and benchmarking.
   a. General requirements. Following completion of the first round of source water monitoring, a system that plans to make a significant change to its disinfection practice must develop disinfection profiles and calculate disinfection benchmarks for Giardia lamblia and viruses.

   (1) Notification to the department. The system must notify the department prior to changing its disinfection practice and must include in the notice the completed disinfection profile and disinfection benchmark for Giardia lamblia and viruses, a description of the proposed change in disinfection practice, and an analysis of how the proposed change will affect the current level of disinfection.

   (2) Definition of “significant change.” A significant change to the disinfection practice is defined as follows:
      1. Any change to the point of disinfection;
      2. Any change to the disinfectant(s) used in the treatment plant;
      3. Any change to the disinfection process; or
      4. Any other modification identified by the department as a significant change to disinfection practice.
   b. Developing the disinfection profile. In order to develop a disinfection profile, a system must monitor at least weekly for a period of 12 consecutive months to determine the total log inactivation for
*Giardia lamblia* and viruses. If a system monitors more frequently, the monitoring frequency must be evenly spaced. A system that operates for fewer than 12 months per year must monitor weekly during the period of operation. A system must determine log inactivation for *Giardia lamblia* through the entire plant, based on CT99.9 values in Appendix A, Tables 1 through 6, as applicable. Systems must determine log inactivation for viruses through the entire treatment plant based on a protocol approved by the department.

1. Monitoring requirements. Systems with a single point of disinfectant application prior to the entrance to the distribution system must conduct the monitoring listed in this subparagraph. Systems with multiple points of disinfectant application must conduct the same monitoring for each disinfection segment. Systems must monitor the parameters necessary to determine the total inactivation ratio. The analytical methods for the parameters are listed in 43.5(4)“a.” All measurements must be taken during peak hourly flow.

2. For systems using a disinfectant other than UV, the temperature of the disinfected water must be measured in degrees Celsius at each residual disinfectant concentration sampling point or at an alternative location approved by the department.

3. The disinfectant contact time must be determined in minutes.

4. The residual disinfectant concentrations of the water must be determined in mg/L before or at the first customer and prior to each additional point of disinfectant application.

5. A system may use existing data to meet the monitoring requirements if the data are substantially equivalent to the required data, the system has not made any significant change to its treatment practice, and the system has the same source water as it had when the data were collected. Systems may develop disinfection profiles using up to three years of existing data.

6. A system may use disinfection profiles developed under 43.9(2) or 43.10(2) if the system has not made a significant change to its treatment practice and has the same source water as it had when the profile was developed. The virus profile must be developed using the same data on which the *Giardia lamblia* profile is based.

2. Calculation of the total inactivation ratio for *Giardia lamblia*.

1. Systems using only one point of disinfectant application may determine the total inactivation ratio (CT_{calc}/CT_{99.9}) for the disinfection segment using either of the following methods.

   * Determine one inactivation ratio before or at the first customer during peak hourly flow.
   * Determine successive sequential inactivation ratios between the point of disinfectant application and a point before or at the first customer during peak hourly flow. Calculate the total inactivation ratio by determining the inactivation ratio for each sequence (CT_{calc}/CT_{99.9}) and adding the values together.

2. Systems using more than one point of disinfectant application before the first customer must determine the CT value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow. Calculate the (CT_{calc}/CT_{99.9}) value of each segment and add the values together to determine the total inactivation ratio.

3. Systems must then determine the total logs of inactivation by multiplying the total inactivation ratio by 3.0.

3. Calculation of the total inactivation ratio for viruses. The system must calculate the log of inactivation for viruses using a protocol approved by the department.

   c. Calculation of the disinfection benchmark.

1. For each year of profiling data collected and calculated under this subrule, systems must determine the lowest mean monthly level of both *Giardia lamblia* and virus inactivation. Systems must determine the mean *Giardia lamblia* and virus inactivation for each calendar month for each year of profiling data by dividing the sum of daily or weekly *Giardia lamblia* and virus log inactivation by the number of values calculated for that month.
(2) For a system with one year of profiling data, the disinfection benchmark is the lowest monthly mean value. For a system with more than one year of profiling data, the disinfection benchmark is the mean of the lowest monthly mean values of *Giardia lamblia* and virus log inactivation in each year of profiling data.

**43.11(5) Bin classification.** Upon completion of the first round of source water monitoring, systems must calculate an initial *Cryptosporidium* bin concentration for each plant for which monitoring was required. Calculation of the bin concentration must use the *Cryptosporidium* results reported under 43.11(3) “a.”

a. **Calculation of mean *Cryptosporidium* or bin concentration value.**

(1) Systems that collect at least 48 samples. For systems that collect a total of at least 48 samples, the bin concentration is equal to the arithmetic mean of all sample concentrations.

(2) Systems that collect 24 to 47 samples. For systems that collect at least 24 samples but not more than 47 samples, the bin concentration is equal to the highest arithmetic mean of all sample concentrations in any 12 consecutive months during which *Cryptosporidium* samples were collected.

(3) Systems serving fewer than 10,000 people and monitoring for only one year. For systems that serve fewer than 10,000 people and monitor *Cryptosporidium* for only one year (i.e., 24 samples in 12 months), the bin concentration is equal to the arithmetic mean of all sample concentrations.

(4) Systems with plants operating on a part-time basis. For systems with plants operating only part of the year that monitor fewer than 12 months per year, the bin concentration is equal to the highest arithmetic mean of all sample concentrations during any year of *Cryptosporidium* monitoring.

(5) If the monthly *Cryptosporidium* sampling frequency varies, systems must first calculate a monthly average for each month of monitoring. Systems must then use these monthly average concentrations, rather than individual sample concentrations, in the applicable calculation for bin classification.

b. **Determination of bin classification.**

(1) First monitoring round. A system must determine the bin classification from Table 3, using its calculated bin concentration from 43.11(5) “a.”

**Table 3: Bin Classification Table**

<table>
<thead>
<tr>
<th>System Type</th>
<th>Cryptosporidium Concentration, in oocysts/L</th>
<th>Bin Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems required to monitor for <em>Cryptosporidium</em> under 43.11(3) “b”(1) or 43.11(3) “b”(2)“3”</td>
<td>Fewer than 0.075 oocysts/L</td>
<td>Bin 1</td>
</tr>
<tr>
<td></td>
<td>Between 0.075 and fewer than 1.0 oocysts/L</td>
<td>Bin 2</td>
</tr>
<tr>
<td></td>
<td>Between 1.0 and fewer than 3.0 oocysts/L</td>
<td>Bin 3</td>
</tr>
<tr>
<td></td>
<td>3.0 oocysts/L or greater</td>
<td>Bin 4</td>
</tr>
<tr>
<td>Systems serving fewer than 10,000 and not required to monitor for <em>Cryptosporidium</em>, pursuant to 43.11(3) “b”(2)“1”</td>
<td>Not applicable</td>
<td>Bin 1</td>
</tr>
</tbody>
</table>

(2) Second monitoring round. Following completion of the second round of source water monitoring, a system must recalculate its bin concentration and determine its new bin classification, using the same protocols outlined in 43.11(5) “a” and “b.”

c. **Reporting bin classification to the department.** Within six months of the end of the sampling period, the system must report its bin classification to the department for approval. The report must also include a summary of the source water monitoring data and the calculation procedure used to determine the bin classification.

d. **Treatment technique violation.** Failure to comply with 43.11(5) “b” and “c” is a violation of the treatment technique requirement.

**43.11(6) Additional Cryptosporidium treatment requirements.** A system must provide the level of additional treatment for *Cryptosporidium* specified in Table 4 based on its bin classification determined in 43.11(5) and according to the schedule in 43.11(7).
a. **Determination of additional Cryptosporidium treatment requirements.** Using Table 4, a system must determine any additional treatment requirements based upon its bin classification. The Bin 1 classification does not require any additional treatment. Bins 2 through 4 require additional *Cryptosporidium* treatment.

**Table 4: Additional *Cryptosporidium* Treatment Requirements**

<table>
<thead>
<tr>
<th>Bin Classification</th>
<th>Treatment Used by the System for Compliance with 43.5, 43.9, and 43.10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conventional filtration (including softening)</td>
</tr>
<tr>
<td>Bin 1</td>
<td>No additional treatment</td>
</tr>
<tr>
<td>Bin 2</td>
<td>1-log treatment</td>
</tr>
<tr>
<td>Bin 3</td>
<td>2-log treatment</td>
</tr>
<tr>
<td>Bin 4</td>
<td>2.5-log treatment</td>
</tr>
</tbody>
</table>

¹The total *Cryptosporidium* removal and inactivation must be at least this value, as determined by the department.

b. **Treatment requirements for Bins 2 through 4.** A system that is classified as Bin 2, 3, or 4 must use one or more of the treatment and management options listed in 43.11(8) to comply with the required additional *Cryptosporidium* treatment. Systems classified as Bins 3 and 4 must achieve at least 1-log of the additional *Cryptosporidium* treatment required by using either one or a combination of the following: bag filters, bank filtration, cartridge filters, chlorine dioxide, membranes, ozone, or UV, as listed in 43.11(9) through 43.11(13).

c. **Treatment technique violation.** Failure by a system in any month to achieve treatment credit by meeting criteria in 43.11(9) through 43.11(13) that is at least equal to the level of treatment required in 43.11(6) “a” is a violation of the treatment technique requirement.

d. **Significant changes to the watershed.** If, after the system’s completion of source water monitoring (either round), the department determines during a sanitary survey or an equivalent source water assessment that significant changes occurred in the system’s watershed that could lead to increased contamination of the source water by *Cryptosporidium*, the system must take actions specified by the department to address the contamination. These actions may include additional source water monitoring and implementing microbial toolbox options listed in 43.11(8).

43.11(7) **Schedule for compliance with Cryptosporidium treatment requirements.** Following the initial bin classification under 43.11(5), systems must provide the level of treatment for *Cryptosporidium* required in 43.11(6), according to the schedule in Table 5. If the bin classification of a system changes following the second round of source water monitoring, the system must provide the level of treatment for *Cryptosporidium* required in 43.11(6), on a schedule approved by the department.

**Table 5: *Cryptosporidium* Treatment Compliance Dates**

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Population Served by System</th>
<th>Compliance Date for <em>Cryptosporidium</em> treatment requirements¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At least 100,000 people</td>
<td>April 1, 2012</td>
</tr>
<tr>
<td>2</td>
<td>From 50,000 to 99,999 people</td>
<td>October 1, 2012</td>
</tr>
<tr>
<td>3</td>
<td>From 10,000 to 49,999 people</td>
<td>October 1, 2013</td>
</tr>
<tr>
<td>4</td>
<td>Fewer than 10,000 people</td>
<td>October 1, 2014</td>
</tr>
</tbody>
</table>

¹The department may allow up to an additional two years for compliance with the treatment requirement if the system must make capital improvements.

43.11(8) **Microbial toolbox options for meeting Cryptosporidium treatment requirements.** Systems receive the treatment credits listed in Table 6 by meeting the conditions for microbial toolbox options.
described in 43.11(9) through 43.11(13). Systems apply these treatment credits to meet the treatment requirements in 43.11(6). Table 6 summarizes options in the microbial toolbox.

Table 6: Microbial Toolbox Summary Table: Options, Treatment Credits, and Criteria

<table>
<thead>
<tr>
<th>Toolbox Option</th>
<th>Specific Criteria Rule</th>
<th>Cryptosporidium treatment credit with design and implementation criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Protection and Management Toolbox Options</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watershed control program</td>
<td>43.11(9)</td>
<td>0.5-log credit for department-approved program comprising required elements, annual program status report to department, and regular watershed survey.</td>
</tr>
<tr>
<td>Alternative source/intake management</td>
<td>43.11(9)&quot;b&quot;</td>
<td>No prescribed credit. Systems may conduct simultaneous monitoring for treatment bin classification at alternative intake locations or under alternative intake management strategies.</td>
</tr>
<tr>
<td>Prefiltration Toolbox Options</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presedimentation basin with coagulation</td>
<td>43.11(10)&quot;a&quot;</td>
<td>0.5-log credit during any month that presedimentation basins achieve a monthly mean reduction of 0.5-log or greater in turbidity or alternative department-approved performance criteria. Basins must be operated continuously with coagulant addition and all plant flow must pass through the basins.</td>
</tr>
<tr>
<td>Two-stage lime softening</td>
<td>43.11(10)&quot;b&quot;</td>
<td>0.5-log credit for two-stage softening where chemical addition and hardness precipitation occur in both stages. All plant flow must pass through both stages. Single-stage softening is credited as equivalent to conventional treatment.</td>
</tr>
<tr>
<td>Bank filtration</td>
<td>43.11(10)&quot;c&quot;</td>
<td>0.5-log credit for 25-foot setback; 1.0-log credit for 50-foot setback; aquifer must be unconsolidated sand containing at least 10 percent fines; average turbidity in wells must be less than 1 NTU. A system using a well followed by filtration when conducting source water monitoring must sample the well to determine bin classification and is not eligible for additional credit.</td>
</tr>
<tr>
<td>Treatment Performance Toolbox Options</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined filter performance</td>
<td>43.11(11)&quot;a&quot;</td>
<td>0.5-log credit for combined filter effluent turbidity less than or equal to 0.15 NTU in at least 95 percent of measurements each month.</td>
</tr>
<tr>
<td>Individual filter performance</td>
<td>43.11(11)&quot;b&quot;</td>
<td>0.5-log credit (in addition to the 0.5-log combined filter performance credit) if individual filter effluent turbidity is less than or equal to 0.15 NTU in at least 95 percent of samples each month in each filter and is never greater than 0.3 NTU in two consecutive measurements in any filter.</td>
</tr>
<tr>
<td>Demonstration of performance</td>
<td>43.11(11)&quot;c&quot;</td>
<td>Credit awarded to unit process or treatment train based on a demonstration to the department with a department-approved protocol.</td>
</tr>
<tr>
<td>Additional Filtration Toolbox Options</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bag or cartridge filters (individual filters)</td>
<td>43.11(12)&quot;a&quot;</td>
<td>Up to 2-log credit based on the removal efficiency demonstrated during challenge testing with a 1.0-log factor of safety.</td>
</tr>
</tbody>
</table>
## Toolbox Option | Specific Criteria Rule | Cryptosporidium treatment credit with design and implementation criteria
--- | --- | ---
Bag or cartridge filters (in series) | 43.11(12)“a” | Up to 2.5-log credit based on the removal efficiency demonstrated during challenge testing with a 0.5-log factor of safety.
Membrane filtration | 43.11(12)“b” | Log credit equivalent to removal efficiency demonstrated in challenge test for device if supported by direct integrity testing.
Second-stage filtration | 43.11(12)“c” | 0.5-log credit for second separate granular media filtration stage if treatment train includes coagulation prior to first filter.
Slow sand filtration | 43.11(12)“d” | 2.5-log credit as a secondary filtration step; 3.0-log credit as a primary filtration process. No prior chlorination for either option.

### Inactivation Toolbox Options

<table>
<thead>
<tr>
<th>Toolbox Option</th>
<th>Specific Criteria Rule</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine dioxide</td>
<td>43.11(13)</td>
<td>Log credit based on measured CT in relation to CT table.</td>
</tr>
<tr>
<td>Ozone</td>
<td>43.11(13)</td>
<td>Log credit based on measured CT in relation to CT table.</td>
</tr>
<tr>
<td>Ultraviolet light (UV)</td>
<td>43.11(13)</td>
<td>Log credit based on validated UV dose in relation to UV dose table; reactor validation testing required to establish UV dose and associated operating conditions.</td>
</tr>
</tbody>
</table>

### 43.11(9) Source toolbox components.

- **Watershed control program.** Systems receive 0.5-log Cryptosporidium treatment credit for implementing a watershed control program that meets the requirements of this paragraph.

  1. **Notification.** Systems that intend to apply for the watershed control program credit must notify the department of this intent no later than two years prior to the treatment compliance date in 43.11(7) applicable to the system.

  2. **Proposed watershed control plan.** Systems must submit to the department a proposed watershed control plan no later than one year before the applicable treatment compliance date in 43.11(7). The department must approve the watershed control plan for the system to receive watershed control program treatment credit. The watershed control plan must include the following elements:

     1. Identification of an “area of influence” outside of which the likelihood of Cryptosporidium or fecal contamination affecting the treatment plant intake is not significant. This is the area to be evaluated in future watershed surveys under 43.11(9)“a”(5)“2.”

     2. Identification of both potential and actual sources of Cryptosporidium contamination and an assessment of the relative impact of these sources on the system’s source water quality.

     3. An analysis of the effectiveness and feasibility of control measures that could reduce Cryptosporidium loading from sources of contamination to the system’s source water.

     4. A statement of goals and specific actions the system will undertake to reduce source water Cryptosporidium levels. The plan must explain how the actions are expected to contribute to specific goals, identify watershed partners and their roles, identify resource requirements and commitments, and include a schedule for plan implementation with deadlines for completing specific actions identified in the plan.

   3. **Existing watershed control programs.** Systems with watershed control programs that were in place on January 5, 2006, are eligible to seek this credit. The systems’ watershed control plans must meet the criteria in 43.11(9)“a”(2) and must specify ongoing and future actions that will reduce source water Cryptosporidium levels.

   4. **Department response to submitted plan.** If the department does not respond to a system regarding approval of a watershed control plan submitted under this subrule and the system meets the other requirements of this subrule, the watershed control program will be considered approved and
0.5-log *Cryptosporidium* treatment credit will be awarded unless and until the department subsequently withdraws such approval.

(5) System requirements to maintain 0.5-log credit. Systems must complete the following actions to maintain the 0.5-log credit.

1. Submit an annual watershed control program status report to the department. The annual watershed control program status report must describe the system’s implementation of the approved plan and assess the adequacy of the plan to meet its goals. The plan must explain how the system is addressing any shortcomings in plan implementation, including those previously identified by the department or as a result of the watershed survey conducted under 43.11(9)”a”(5)”2.” It must also describe any significant changes that have occurred in the watershed since the last watershed sanitary survey. If a system determines during implementation that making a significant change to its approved watershed control program is necessary, the system must notify the department prior to making any such changes. If any change is likely to reduce the level of source water protection, the system must also list in its notification the actions the system will take to mitigate this effect.

2. Undergo a watershed sanitary survey every three years for community water systems and every five years for noncommunity water systems and submit the survey report to the department. The survey must be conducted according to department guidelines and by persons acceptable to the department.
   - The watershed sanitary survey must meet the following criteria: encompass the region identified in the department-approved watershed control plan as the area of influence; assess the implementation of actions to reduce source water *Cryptosporidium* levels; and identify any significant new sources of *Cryptosporidium*.
   - If the department determines that significant changes may have occurred in the watershed since the previous watershed sanitary survey, systems must undergo another watershed sanitary survey by the date specified by the department, which may be earlier than the regular schedule of a three- or five-year frequency.

3. The system must make the watershed control plan, annual status reports, and watershed sanitary survey reports available to the public upon request. These documents must be in a plain language style and include criteria by which to evaluate the success of the program in achieving plan goals. The department may approve systems to withhold portions of an annual status report, watershed control plan, and watershed sanitary survey from the public, based on water supply security considerations.

(6) Withdrawal of watershed control program treatment credit. If the department determines that a system is not carrying out the approved watershed control plan, the department may withdraw the watershed control program treatment credit.

b. *Alternative source.* A system may conduct source water monitoring that reflects a different intake location (either in the same source or for an alternate source) or a different procedure for the timing or level of withdrawal from the source (alternative source monitoring). If the department approves, a system may determine its bin classification under 43.11(5) based on alternative source monitoring results.

1. Systems conducting alternative source monitoring must also monitor their current plan intake concurrently, as described in 43.11(3).

2. Alternative source monitoring must meet the requirements for source monitoring to determine bin classification, as described in 43.11(3). Systems must report to the department the alternative source monitoring results and provide supporting information documenting the operating conditions under which the samples were collected.

3. If a system determines its bin classification under 43.11(5) using alternative source monitoring results that reflect a different intake location or a different procedure for managing the timing or level of withdrawal from the source, the system must relocate the intake or permanently adopt the withdrawal procedure, as applicable, no later than the applicable treatment compliance date in 43.11(7).

### 43.11(10) Prefiltration treatment toolbox components.

a. *Presedimentation.* Systems receive 0.5-log *Cryptosporidium* treatment credit for a presedimentation basin during any month the process meets the criteria in this paragraph.

1. The presedimentation basin must be in continuous operation and must treat the entire plant flow taken from a surface water or influenced groundwater source.
The system must continuously add a coagulant to the presedimentation basin.

The presedimentation basin must achieve either of the following performance criteria:

1. Demonstrates at least 0.5-log mean reduction of influent turbidity. This reduction must be determined using daily turbidity measurements in the presedimentation process influent and effluent and must be calculated as follows: \( \log_{10}(\text{monthly mean of daily influent turbidity}) - \log_{10}(\text{monthly mean of daily effluent turbidity}) \).

2. Complies with department-approved performance criteria that demonstrate at least 0.5-log mean removal of micron-sized particulate material through the presedimentation process.

   a. Two-stage lime softening. Systems receive an additional 0.5-log Cryptosporidium treatment credit for a two-stage lime softening plant if chemical addition and hardness precipitation occur in two separate and sequential softening stages prior to filtration. Both softening stages must treat the entire plant flow taken from a surface water or influenced groundwater source.

   b. Bank filtration. Systems receive Cryptosporidium treatment credit for bank filtration that serves as pretreatment to a filtration plant by meeting the criteria in this paragraph. Systems using bank filtration when they begin source water monitoring under 43.11(3)“a” must collect samples as described in 43.11(3)“d”(3) and are not eligible for this credit.

      (1) Treatment credit. Wells with a groundwater flow path of at least 25 feet receive 0.5-log treatment credit; wells with a groundwater flow path of at least 50 feet receive 1.0-log treatment credit. The groundwater flow path must be determined as specified in 43.11(10)“c”(4).

      (2) Granular aquifers only. Only wells in granular aquifers are eligible for treatment credit. Granular aquifers are those comprised of sand, clay, silt, rock fragments, pebbles or larger particles, and minor cement. A system must characterize the aquifer at the well site to determine aquifer properties. Systems must extract a core from the aquifer and demonstrate that in at least 90 percent of the core length, grains less than 1.0 mm in diameter constitute at least 10 percent of the core material.

      (3) Horizontal and vertical wells only. Only horizontal and vertical wells are eligible for treatment credit.

      (4) Measurement of groundwater flow path. For vertical wells, the groundwater flow path is the measured distance from the edge of the surface water body under high flow conditions (determined by the 100-year floodplain elevation boundary or by the floodway, as defined in Federal Emergency Management Agency flood hazard maps) to the well screen. For horizontal wells, the groundwater flow path is the measured distance from the bed of the river under normal flow conditions to the closest horizontal well lateral screen.

      (5) Turbidity monitoring at the wellhead. Systems must monitor each wellhead for turbidity at least once every four hours while the bank filtration process is in operation. If monthly average turbidity levels, based on daily maximum values in the well, exceed 1 NTU, the system must report this result to the department and conduct an assessment within 30 days to determine the cause of the high turbidity levels in the well. If the department determines that microbial removal has been compromised, the department may revoke treatment credit until the system implements corrective actions approved by the department to remediate the problem.

      (6) Springs and infiltration galleries. This treatment credit is not eligible for springs and infiltration galleries. Springs and infiltration galleries are eligible for credit through demonstration of performance study under 43.11(11)“c.”

      (7) Bank filtration demonstration of performance. The department may approve Cryptosporidium treatment credit for bank filtration based on a demonstration of performance study that meets the criteria in this subparagraph. This treatment credit may be greater than 1.0-log and may be awarded to bank filtration that does not meet the criteria in 43.11(10)“c”(1) to (5).

      1. The study must follow a protocol approved by the department and must involve the collection of data on the removal of Cryptosporidium or a surrogate for Cryptosporidium and related hydrogeologic and water quality parameters during the full range of operating conditions.
2. The study must include sampling both from the production well(s) and from monitoring wells that are screened and located along the shortest flow path between the surface water source and the production well(s).

43.11(11) Treatment performance toolbox components. This option pertains to physical treatment processes.

a. Combined filter performance. Systems using conventional filtration treatment or direct filtration treatment receive an additional 0.5-log Cryptosporidium treatment credit during any month the system meets the criteria in this paragraph. Combined filter effluent (CFE) turbidity must be less than or equal to 0.15 NTU in at least 95 percent of the measurements. Turbidity must be measured as described in 43.5(4) and, if applicable, 43.10(4).

b. Individual filter performance. Systems using conventional filtration treatment or direct filtration treatment receive 0.5-log Cryptosporidium treatment credit during any month the system meets the criteria in this paragraph, which can be in addition to the CFE 0.5-log credit from 43.11(11)“a.” Compliance with these criteria must be based on individual filter turbidity monitoring as described in 43.9(4) or 43.10(5), as appropriate.

1. The filtered water turbidity for each individual filter must be less than or equal to 0.15 NTU in at least 95 percent of the measurements recorded each month.

2. No individual filter may have a measured turbidity greater than 0.3 NTU in two consecutive measurements taken 15 minutes apart.

3. Any system that has received treatment credit for individual filter performance and fails to meet the requirements of 43.11(11)“b”(2) and (3) during any month shall not receive a treatment technique violation under 43.11(6) if the department determines the following:

   1. The failure was due to unusual and short-term circumstances that could not reasonably be prevented through optimizing the treatment plant design, operation, and maintenance.

   2. The system has experienced no more than two such failures in any calendar year.

   c. Demonstration of performance. The department may approve Cryptosporidium treatment credit for drinking water treatment processes based on a demonstration of performance study that meets the criteria in this paragraph. This treatment credit may be greater than or less than the prescribed treatment credits in 43.11(6) or 43.11(10) through 43.11(13) and may be awarded to treatment processes that do not meet the criteria for the prescribed credits.

   1. Systems cannot receive the prescribed treatment credit for any toolbox option in 43.11(10) through 43.11(13) if that toolbox option is included in a demonstration of performance study for which treatment credit is awarded under this paragraph.

   2. The demonstration of performance study must follow a department-approved protocol and must demonstrate the level of Cryptosporidium reduction the treatment process will achieve under the full range of expected operating conditions for the system.

   3. Approval by the department must be in writing and may include monitoring and treatment performance criteria that the system must demonstrate and report on an ongoing basis to remain eligible for the treatment credit. The department may designate such criteria where necessary to verify that the conditions under which the demonstration of performance credit was approved are maintained during routine operation.

43.11(12) Additional filtration toolbox components.

a. Bag and cartridge filters. By meeting the criteria in this paragraph, systems receive Cryptosporidium treatment credit of up to 2.0-log for the use of individual bag or cartridge filters and up to 2.5-log for the use of bag or cartridge filters operated in series. To be eligible for this credit, systems must report the results of challenge testing that meets the requirements of 43.11(12)“a”(2) through 43.11(12)“a”(9) to the department. The filters must treat the entire plant flow taken from a surface water or influenced groundwater source.

   1. The Cryptosporidium treatment credit awarded for use of bag or cartridge filters must be based on the removal efficiency demonstrated during challenge testing that is conducted in accordance with the criteria in 43.11(12)“a”(2) through 43.11(12)“a”(9). A safety factor equal to 1-log for individual bag or cartridge filters and 0.5-log for bag or cartridge filters in series must be applied to challenge testing
results to determine removal credit. Systems may use results from challenge testing conducted prior to January 5, 2006, if the prior testing was consistent with the criteria specified in this paragraph.

(2) Challenge testing must be performed on full-scale bag or cartridge filters, and the associated filter housing or pressure vessel, that are identical in material and construction to the filters and housings the system will use for removal of Cryptosporidium. Bag or cartridge filters must be challenge tested in the same configuration that the system will use, either as individual filters or as a series configuration of filters.

(3) Challenge testing must be conducted using Cryptosporidium or a surrogate that is removed no more efficiently than Cryptosporidium. The microorganism or surrogate used during challenge testing is referred to as the challenge particulate. The concentration of the challenge particulate must be determined using a method capable of discretely quantifying the specific microorganisms or surrogate used in the test; gross measurements such as turbidity shall not be used.

(4) The maximum feed water concentration that can be used during a challenge test must be based on the detection limit of the challenge particulate in the filtrate (i.e., filtrate detection limit) and must be calculated using this equation:

\[ \text{Maximum Feed Water Concentration} = 10,000 \times \text{Filtrate Detection Limit} \]

(5) Challenge testing must be conducted at the maximum design flow rate for the filter as specified by the manufacturer.

(6) Each filter evaluated must be tested for a duration sufficient to reach 100 percent of the terminal pressure drop, which thereby establishes the maximum pressure drop under which the filter may be used to comply with the requirements of this paragraph.

(7) Removal efficiency of a filter must be determined from the results of the challenge test and expressed in terms of log removal values using the following equation:

\[ \text{LRV} = \text{LOG}_{10}(C_f) - \text{LOG}_{10}(C_p) \]

Where:

- \( LRV \) = log removal value demonstrated during challenge test;
- \( C_f \) = the feed concentration measured during the challenge test; and
- \( C_p \) = the filtrate concentration measured during the challenge test.

Equivalent units must be used for the feed and filtrate concentrations. If the challenge particulate is not detected in the filtrate, the term \( C_p \) must be set equal to the detection limit.

(8) Each filter tested must be challenged with the challenge particulate during three periods over the filtration cycle: within two hours of start-up of a new filter; when the pressure drop is between 45 and 55 percent of the terminal pressure drop; and at the end of the cycle after the pressure drop has reached 100 percent of the terminal pressure drop. An LRV must be calculated for each of these challenge periods for each filter tested. The LRV for the filter (LRV\text{filter}) must be assigned the value of the minimum LRV observed during the three challenge periods for that filter.

(9) If fewer than 20 filters are tested, the overall removal efficiency for the filter product line must be set equal to the lowest LRV\text{filter} among the filters tested. If 20 or more filters are tested, the overall removal efficiency for the filter product line must be set equal to the tenth percentile of the set of LRV\text{filter} values for the various filters tested. The percentile is defined by \([i/(n+1)]\) where “i” is the rank of “n” individual data points ordered lowest to highest. If necessary, the tenth percentile may be calculated using linear interpolation.

(10) If a previously tested filter is modified in a manner that could change the removal efficiency of the filter product line, challenge testing to demonstrate the removal efficiency of the modified filter must be conducted and submitted to the department.

b. Membrane filtration.

(1) Systems receive Cryptosporidium treatment credit for using membrane filtration that meets the criteria of this paragraph. Systems using membrane cartridge filters that meet the definition of membrane filtration in 567—40.2(455B) are eligible for this credit. The level of treatment credit a system receives is equal to the lower of the values determined under the following two paragraphs:
1. The removal efficiency demonstrated during challenge testing conducted under the criteria in 43.11(12)“b”(2).
2. The maximum removal efficiency that can be verified through direct integrity testing used with the membrane filtration process under the conditions in 43.11(12)“b”(3).

(2) Challenge testing. The membrane used by the system must undergo challenge testing to evaluate removal efficiency, and the system must report the results of challenge testing to the department. Challenge testing must be conducted according to the criteria listed in this subparagraph. Systems may use data from challenge testing conducted prior to January 5, 2006, if the prior testing was consistent with the criteria listed in this subparagraph.

1. Challenge testing must be conducted on either a full-scale membrane module, identical in material and construction to the membrane modules used in the system’s treatment facility, or a smaller-scale membrane module, identical in material and similar in construction to the full-scale module. A module is defined as the smallest component of a membrane unit in which a specific membrane surface area is housed in a device with a filtrate outlet structure.
2. Challenge testing must be conducted using Cryptosporidium oocysts or a surrogate that is removed no more efficiently than Cryptosporidium oocysts. The organisms or surrogate used during challenge testing is referred to as the challenge particulate. The concentration of the challenge particulate, in both the feed and filtrate water, must be determined using a method capable of discretely quantifying the specific challenge particulate used in the test; gross measurements such as turbidity shall not be used.
3. The maximum feed water concentration that can be used during a challenge test is based on the detection limit of the challenge particulate in the filtrate and must be determined according to the following equation:

Maximum Feed Water Concentration = 3,160,000 × Filtrate Detection Limit

4. Challenge testing must be conducted under representative hydraulic conditions at the maximum design flux and maximum design process recovery specified by the manufacturer for the membrane module. Flux is defined as the throughput of a pressure-driven membrane process expressed as flow per unit of membrane area. Recovery is defined as the volumetric percent of feed water that is converted to filtrate over the course of an operating cycle uninterrupted by events such as chemical cleaning or a solids removal process (i.e., backwashing).
5. Removal efficiency of a membrane module must be calculated from the challenge test results and expressed as a log removal value according to the following equation:

\[ \text{LRV} = \log_{10}(C_f) - \log_{10}(C_p) \]

Where:
- \( \text{LRV} \) = log removal value demonstrated during challenge test;
- \( C_f \) = the feed concentration measured during the challenge test; and
- \( C_p \) = the filtrate concentration measured during the challenge test.

Equivalent units must be used for the feed and filtrate concentrations. If the challenge particulate is not detected in the filtrate, the term \( C_p \) must be set equal to the detection limit for the purpose of calculating the LRV. An LRV must be calculated for each membrane module evaluated during the challenge test.

6. The removal efficiency of a membrane filtration process demonstrated during challenge testing must be expressed as a log removal value (\( \text{LRV}_{\text{C-Test}} \)). If fewer than 20 modules are tested, then \( \text{LRV}_{\text{C-Test}} \) is equal to the lowest of the representative LRVs among the modules tested. If 20 or more modules are tested, then \( \text{LRV}_{\text{C-Test}} \) is equal to the tenth percentile of the representative LRVs among the modules tested. The percentile is defined by \( \left[ \frac{i}{n+1} \right] \) where “i” is the rank of “n” individual data points ordered lowest to highest. If necessary, the tenth percentile may be calculated using linear interpolation.

7. The challenge test must establish a quality control release value (QCRV) for a nondestructive performance test that demonstrates the Cryptosporidium removal capability of the membrane filtration module. In order to verify Cryptosporidium removal capability, this performance test must be applied to each production membrane module that was not directly challenge tested but was used by the system.
Production modules that do not meet the established QCRV are not eligible for the treatment credit demonstrated during the challenge test.

8. If a previously tested membrane is modified in a manner that could change the removal efficiency of the membrane or the applicability of the nondestructive performance test and associated QCRV, additional challenge testing to demonstrate the removal efficiency of the modified membrane must be conducted and submitted to the department, along with determination of a new QCRV.

(3) Direct integrity testing. Systems must conduct direct integrity testing in a manner that demonstrates a removal efficiency equal to or greater than the removal credit awarded for the membrane filtration process and meets the requirements described in this subparagraph. A direct integrity test is defined as a physical test applied to a membrane unit in order to identify and isolate integrity breaches (i.e., one or more leaks that could result in contamination of the filtrate).

1. The direct integrity test must be independently applied to each membrane unit in service. A membrane unit is defined as a group of membrane modules that share common valving that allows the unit to be isolated from the rest of the system for the purpose of integrity testing or other maintenance.

2. The direct integrity method must have a resolution of 3 micrometers or less, where resolution is defined as the size of the smallest integrity breach that contributes to a response from the direct integrity test.

3. The direct integrity test must have a sensitivity sufficient to verify the log treatment credit awarded by the department for the membrane filtration process, where sensitivity is defined as the maximum log removal value that can be reliably verified by a direct integrity test. Sensitivity must be determined using the approach in either of the following paragraphs as applicable to the type of direct integrity test the system uses.

- For direct integrity tests using applied pressure or vacuum, the direct integrity test sensitivity must be calculated according to the following equation:
  \[ LRV_{DIT} = \log_{10} \left( \frac{Q_p}{VCF \times Q_{breach}} \right) \]
  Where:
  - \( LRV_{DIT} \) = the sensitivity of the direct integrity test;
  - \( Q_p \) = total design filtrate flow from the membrane unit;
  - \( Q_{breach} \) = flow of water from an integrity breach associated with the smallest integrity test response that can be reliably measured; and
  - \( VCF \) = volumetric concentration factor, which is the ratio of the suspended solids concentration on the high-pressure side of the membrane relative to that in the feed water.

- For direct integrity tests using a particulate or molecular marker, the direct integrity test sensitivity must be calculated according to the following equation:
  \[ LRV_{DIT} = \log_{10} \left( \frac{C_f}{C_p} \right) - \log_{10} \left( \frac{C_f}{C_p} \right) \]
  Where:
  - \( LRV_{DIT} \) = the sensitivity of the direct integrity test;
  - \( C_f \) = the typical feed concentration of the marker used in the test; and
  - \( C_p \) = the filtrate concentration of the marker from an integral membrane unit.

4. Systems must establish a control limit within the sensitivity limits of the direct integrity test that is indicative of an integral membrane unit capable of meeting the removal credit awarded by the department.

5. If the result of a direct integrity test exceeds the control limit established under 43.11(12)"b"(3)"4," the system must remove the membrane unit from service. Systems must conduct a direct integrity test to verify any repairs and may return the membrane unit to service only if the direct integrity test is within the established control limit.

6. Systems must conduct direct integrity testing on each membrane unit at a frequency of not less than once each day that the membrane unit is in operation. The department may approve less frequent testing, based on demonstrated process reliability, the use of multiple barriers effective for Cryptosporidium, or reliable process safeguards.
(4) Indirect integrity monitoring. Systems must conduct continuous indirect integrity monitoring on each membrane unit according to the following criteria. Indirect integrity monitoring is defined as monitoring some aspect of filtrate water quality that is indicative of the removal of particulate matter. A system that implements continuous direct integrity testing of membrane units in accordance with the criteria in 43.11(12)"b"(3) is not subject to the requirements for continuous indirect integrity monitoring. Systems must submit a monthly report to the department summarizing all continuous indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken in each case.

1. Unless the department approves an alternative parameter, continuous indirect integrity monitoring must include continuous filtrate turbidity monitoring.
2. Continuous monitoring must be conducted at a frequency of no less than once every 15 minutes.
3. Continuous monitoring must be separately conducted on each membrane unit.
4. If indirect integrity monitoring includes turbidity and if the filtrate turbidity readings are above 0.15 NTU for a period greater than 15 minutes (i.e., two consecutive 15-minute readings above 0.15 NTU), direct integrity testing must immediately be performed on the associated membrane unit as specified in 43.11(12)"b"(3)“1” through 43.11(12)"b"(3)“5.”
5. If indirect integrity monitoring includes a department-approved alternative parameter and if the alternative parameter exceeds a department-approved control limit for a period greater than 15 minutes, direct integrity testing must immediately be performed on the associated membrane units as specified in 43.11(12)"b"(3)“1” through 43.11(12)"b"(3)“5.”

c. **Second-stage filtration.** Systems receive 0.5-log Cryptosporidium treatment credit for using a separate second stage of filtration that consists of sand, dual media, GAC, or other fine-grain media following granular media filtration if the department approves. To be eligible for this credit, the first stage of filtration must be preceded by a coagulation step and both filtration stages must treat the entire plant flow taken from a surface water or influenced groundwater source. A cap, such as GAC, on a single stage of filtration is not eligible for this credit. The department must approve the treatment credit based on an assessment of the design characteristics of the filtration process.

d. **Slow sand filtration (as secondary filter).** Systems are eligible to receive 2.5-log Cryptosporidium treatment credit for using a slow sand filtration process that follows a separate stage of filtration if both filtration stages treat entire plant flow taken from a surface water or influenced groundwater source and no disinfectant residual is present in the influent water to the slow sand filtration process. The department must base its approval of the treatment credit on an assessment of the design characteristics of the filtration process. This does not apply to treatment credit awarded for slow sand filtration used as a primary filtration process.

43.11(13) **Inactivation toolbox components.**

a. **Calculation of CT values.**

1. CT is the product of the disinfectant contact time (T, in minutes) and disinfectant concentration (C, in milligrams per liter). Systems with treatment credit for chlorine dioxide or ozone under 43.11(13)"b” or “c” must calculate CT at least once each day, with both C and T measured during peak hourly flow as specified in 43.5(4).

2. Systems with several disinfection segments in sequence may calculate CT for each segment, where a disinfection segment is defined as a treatment unit process with a measurable disinfectant residual level and a liquid volume. Under this approach, systems must add the Cryptosporidium CT values in each segment to determine the total CT for the treatment plant.

b. **CT values for chlorine dioxide and ozone.**

1. As described in 43.11(13)“a, ” systems receive the Cryptosporidium treatment credit listed in Table 1 of Appendix B by meeting the corresponding chlorine dioxide CT value for the applicable water temperature.

2. As described in 43.11(13)“a,” systems receive the Cryptosporidium treatment credit listed in Table 2 of Appendix B by meeting the corresponding ozone CT value for the applicable water temperature.
c. Site-specific study. The department may approve alternative chlorine dioxide or ozone CT values to those listed in 43.11(13)“b” on a site-specific basis. The department must base its approval on a site-specific study conducted by the system. The study must follow a department-approved protocol.

d. Ultraviolet light. Systems receive Cryptosporidium, Giardia lamblia, and virus treatment credits for ultraviolet (UV) light reactors by achieving the corresponding UV dose values shown in Table 3 of Appendix B. Systems must use the following procedures to validate and monitor UV reactors in order to demonstrate that the reactors are achieving a particular UV dose value for treatment credit.

(1) Reactor validation testing. Systems must use UV reactors that have undergone validation testing to determine the operating conditions under which the reactor delivers the required UV dose (i.e., validated operating conditions). These operating conditions must include flow rate, UV intensity as measured by a UV sensor, and UV lamp status.

   1. When determining validated operating conditions, systems must account for the following factors: UV absorbance of the water; lamp fouling and aging; measurement uncertainty of on-line sensors; UV dose distributions arising from the velocity profiles through the reactor; failure of UV lamps or other critical system components; and inlet and outlet piping or channel configurations of the UV reactor.

   2. Validation testing must include the following: full-scale testing of a reactor that conforms uniformly to the UV reactors used by the system and inactivation of a test microorganism whose dose response characteristics have been quantified with a low-pressure mercury vapor lamp.

   3. The department may approve an alternative approach to validation testing.

(2) Reactor monitoring.

   1. Systems must monitor their UV reactors to determine if the reactors are operating within validated conditions, as determined under 43.11(13)“d”(1). This monitoring must include UV sensor, flow rate, lamp status, and other parameters the department designates based on UV reactor operation. Systems must verify the calibration of UV sensors and must recalibrate sensors in accordance with a protocol approved by the department.

   2. To receive treatment credit for UV light, systems must treat at least 95 percent of the water delivered to the public during each month by UV reactors operating within validated conditions for the required UV dose. Systems must demonstrate compliance with this condition by the monitoring required under 43.11(13)“d”(2)“1.”

43.11(14) Reporting requirements.

a. Sampling schedules and monitoring results. Systems must report source water sampling schedules and monitoring results under 43.11(3)“c” and 43.11(3)“e,” unless the systems notify the department that they will not conduct source water monitoring due to meeting the criteria of 5.5-log treatment for Cryptosporidium under 43.11(3)“a.”

b. Cryptosporidium bin classification. Systems must report their Cryptosporidium bin classification determined under 43.11(5).

c. Disinfection profiles and benchmarks. Systems must report disinfection profiles and benchmarks to the department as described in 43.11(4)“a” and 43.11(4)“b” prior to making a significant change in disinfection practice.

d. Microbial toolbox options. Systems must report to the department in accordance with Table 7 for any microbial toolbox options used to comply with treatment requirements under 43.11(6).
Table 7: Microbial Toolbox Reporting Requirements

<table>
<thead>
<tr>
<th>Toolbox Option</th>
<th>Systems must submit this information</th>
<th>Information must be submitted on this schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Watershed control program</td>
<td>Notice of intention to develop a new or continue an existing watershed control program</td>
<td>No later than two years before the applicable treatment compliance date in 43.11(7)</td>
</tr>
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<td></td>
<td>Watershed control plan</td>
<td>No later than one year before the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td></td>
<td>Annual watershed control program status report</td>
<td>Every 12 months, beginning one year after the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td></td>
<td>Watershed sanitary survey report</td>
<td>- For community water systems, every three years beginning three years after the applicable treatment compliance date in 43.11(7)</td>
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<tr>
<td></td>
<td></td>
<td>- For noncommunity water systems, every five years beginning five years after the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td>2. Alternative source/intake management</td>
<td>Verification that system has relocated the intake or adopted the intake withdrawal procedure reflected in monitoring results</td>
<td>No later than the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td>3. Presedimentation</td>
<td>Monthly verification of the following:</td>
<td>Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td></td>
<td>- Continuous basin operation</td>
<td></td>
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<td></td>
<td>- Treatment of 100 percent of the flow</td>
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<tr>
<td></td>
<td>- Continuous addition of a coagulant</td>
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<tr>
<td></td>
<td>- At least 0.5-log mean reduction of influent turbidity or compliance with alternative department-approved performance criteria</td>
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</tr>
<tr>
<td>4. Two-stage lime softening</td>
<td>Monthly verification of the following:</td>
<td>Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td></td>
<td>- Chemical addition and hardness precipitation occurred in two separate and sequential softening stages prior to filtration</td>
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<tr>
<td></td>
<td>- Both stages treated 100 percent of plant flow</td>
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<tr>
<td>5. Bank filtration</td>
<td>Initial demonstration of the following:</td>
<td>No later than the applicable treatment compliance date in 43.11(7)</td>
</tr>
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<td></td>
<td>- Unconsolidated, predominantly sandy aquifer</td>
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<tr>
<td></td>
<td>- Setback distance of at least 25 feet for 0.5-log credit or 50 feet for 1.0-log credit</td>
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<tr>
<td></td>
<td>If monthly average of daily maximum turbidity is greater than 1 NTU, then system must report result and submit an assessment of the cause.</td>
<td>Report within 30 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td>6. Combined filter performance</td>
<td>Monthly verification of combined filter effluent (CFE) turbidity levels less than or equal to 0.15 NTU in at least 95 percent of the 4-hour CFE measurements taken each month</td>
<td>Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td>Toolbox Option</td>
<td>Systems must submit this information</td>
<td>Information must be submitted on this schedule</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 7. Individual filter performance | Monthly verification of the following:  
- Individual filter effluent (IFE) turbidity levels less than or equal to 0.15 NTU in at least 95 percent of samples each month in each filter  
- No individual filter effluent turbidity levels greater than 0.3 NTU in two consecutive readings 15 minutes apart | Monthly reporting within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)                                                                 |
| 8. Demonstration of performance | Results from testing following a department-approved protocol                                                                                                                                                                      | No later than the applicable treatment compliance date in 43.11(7)                                                                     |
|                                | As required by the department, monthly verification of operation within conditions of department approval for demonstration of performance credit                                                                                   | Within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)               |
| 9. Bag filters and cartridge filters | Demonstration that the following criteria are met:  
- Process meets the definition of bag or cartridge filtration  
- Removal efficiency established through challenge testing that meets criteria in this subpart  
- Monthly verification that 100 percent of plant flow was filtered | No later than the applicable treatment compliance date in 43.11(7)                                                                     |
| 10. Membrane filtration         | Results of verification testing demonstrating the following:  
- Removal efficiency established through challenge testing that meets criteria  
- Integrity test method and parameters, including resolution, sensitivity, test frequency, control limits, and associated baseline  
- Monthly report summarizing the following:  
  - All direct integrity tests above the control limit  
  - If applicable, any turbidity or alternative department-approved indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken | No later than the applicable treatment compliance date in 43.11(7)                                                                     |
<p>| 11. Second-stage filtration     | Monthly verification that 100 percent of flow was filtered through both stages and that first stage was preceded by coagulation step                                                                                                      | Within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)               |</p>
<table>
<thead>
<tr>
<th>Toolbox Option</th>
<th>Systems must submit this information</th>
<th>Information must be submitted on this schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Slow sand filtration as a secondary filter</td>
<td>Monthly verification that both a slow sand filter and a preceding separate stage of filtration treated 100 percent of the flow from surface or influenced groundwater sources</td>
<td>Within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td>13. Chlorine dioxide</td>
<td>Summary of CT values for each day as described in 43.11(13)</td>
<td>Within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td>14. Ozone</td>
<td>Summary of CT values for each day as described in 43.11(13)</td>
<td>Within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td>15. Ultraviolet light (UV)</td>
<td>Validation test results demonstrating operating conditions that achieve required UV dose</td>
<td>No later than the applicable treatment compliance date in 43.11(7)</td>
</tr>
<tr>
<td></td>
<td>Monthly report summarizing the percentage of water entering the distribution system that was not treated by UV reactors operating within validated conditions for the required dose as specified in 43.11(13)“d”</td>
<td>Within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 43.11(7)</td>
</tr>
</tbody>
</table>

43.11(15) Record-keeping requirements.

a. Source water monitoring records. Systems must keep results from the initial round of source water monitoring under 43.11(3)"a" and the second round of source water monitoring under 43.11(3)"b" until three years after bin classification under 43.11(5) for the particular round of monitoring.

b. Systems meeting 5.5-log treatment for Cryptosporidium. Systems must keep for three years records of any notification to the department that the systems will meet the 5.5-log Cryptosporidium treatment requirements and avoid source water monitoring.

c. Microbial toolbox treatment monitoring records. Systems must keep the results of treatment monitoring associated with microbial toolbox options under 43.11(8) through 43.11(13) for three years. [ARC 9915B, IAB 12/14/11, effective 1/18/12; ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—43.12(455B) Optimization goals.

43.12(1) Turbidity optimization goals. Surface water and IGW systems must meet the requirements listed in 567—43.5(455B), 567—43.9(455B), and 567—43.10(455B). To encourage operational optimization, the department has adopted the following goals for systems using surface water or influenced groundwater and that wish to pursue the optimization of their existing treatment processes. These goals are voluntary. Data collected for optimization purposes will not be used to determine compliance with the requirements in 567—43.5(455B), 567—43.9(455B), 567—43.10(455B), or 567—43.11(455B) unless the optimization data are identical to the compliance data.

a. Sedimentation performance goals. The sedimentation performance goals are based upon the average annual raw water turbidity levels.

(1) When the annual average raw water turbidity is less than or equal to 10 NTU over the course of the calendar year, the turbidity should be less than or equal to 1 NTU in at least 95 percent of measurements based on the maximum daily value of readings taken at least once every four hours from each sedimentation basin while the plant is operating.

(2) When the annual average raw water turbidity is more than 10 NTU over the course of the calendar year, the turbidity should be less than or equal to 2 NTU in at least 95 percent of measurements based on the maximum daily value of readings taken at least once every four hours from each sedimentation basin while the plant is operating.
b. Individual filter performance goals. The individual filter performance goals depend upon the system’s capability of filtering to waste.

(1) For systems that have the capability of filtering to waste, the individual filter turbidity should be less than or equal to 0.10 NTU in at least 95 percent of measurements over the course of the calendar year, based on the daily maximum value of readings recorded at least once per minute while the plant is in operation. The maximum individual filter turbidity must not exceed 0.30 NTU at any time. The filter must return to service with a turbidity of 0.10 NTU or less.

(2) For systems that do not have the capability of filtering to waste, the individual filter turbidity should be less than or equal to 0.10 NTU in at least 95 percent of measurements over the course of the calendar year, excepting the 15 minutes following the completion of the backwash process, based on the daily maximum value of readings recorded at least once per minute while the plant is in operation. The maximum individual filter turbidity must not exceed 0.30 NTU following backwash and must return to a level at or below 0.10 NTU within 15 minutes of returning the filter to service.

c. Combined filter performance goal. The combined filter performance goal has two components:

(1) Combined filter effluent turbidity should be less than or equal to 0.10 NTU in at least 95 percent of measurements over the course of the calendar year, based on daily maximum value of readings recorded at least once per minute while the plant is operating.

(2) The maximum individual filter turbidity must not exceed 0.30 NTU at any time.

43.12(2) Disinfection optimization goals. Reserved.

[TABLE A: SEPARATION DISTANCES FROM WELLS
Rescinded IAB 1/7/04, effective 2/11/04]

TABLE B
Minimum Self-Monitoring Requirements
Public Water Supply Systems
[Prior to 12/12/90, appeared in 567—Ch 41, Table D]
Rescinded IAB 8/11/99, effective 9/15/99
APPENDIX A: CT\textsubscript{99.9} TABLES FOR DISINFECTION PROFILING

TABLE 1: CT Values (CT\textsubscript{99.9}) for 99.9 Percent Inactivation of \textit{Giardia lamblia} Cysts by Free Chlorine at 0.5°C or Lower\textsuperscript{1}

<table>
<thead>
<tr>
<th>Free Residual Chlorine, mg/L</th>
<th>pH</th>
<th>(&lt;6.0)</th>
<th>6.5</th>
<th>7.0</th>
<th>7.5</th>
<th>8.0</th>
<th>8.5</th>
<th>(&lt;9.0)</th>
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</thead>
<tbody>
<tr>
<td>(\leq 0.4)</td>
<td></td>
<td>137</td>
<td>163</td>
<td>195</td>
<td>237</td>
<td>277</td>
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<td>168</td>
<td>200</td>
<td>239</td>
<td>286</td>
<td>342</td>
<td>407</td>
</tr>
<tr>
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<td></td>
<td>145</td>
<td>172</td>
<td>205</td>
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<td>295</td>
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<td>460</td>
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</table>

\textsuperscript{1}These CT values achieve greater than a 99.99 percent inactivation of viruses. Any CT values between the indicated pH values may be determined by linear interpolation. Any CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT\textsubscript{99.9} value at the lower temperature and at the higher pH.

TABLE 2: CT Values (CT\textsubscript{99.9}) for 99.9 Percent Inactivation of \textit{Giardia lamblia} Cysts by Free Chlorine at 5.0°C\textsuperscript{1}

<table>
<thead>
<tr>
<th>Free Residual Chlorine, mg/L</th>
<th>pH</th>
<th>(&lt;6.0)</th>
<th>6.5</th>
<th>7.0</th>
<th>7.5</th>
<th>8.0</th>
<th>8.5</th>
<th>(&lt;9.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\leq 0.4)</td>
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<td>97</td>
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<td>120</td>
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<td>244</td>
<td>291</td>
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<tr>
<td>0.8</td>
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</tr>
</tbody>
</table>

\textsuperscript{1}These CT values achieve greater than a 99.99 percent inactivation of viruses. Any CT values between the indicated pH values may be determined by linear interpolation. Any CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT\textsubscript{99.9} value at the lower temperature and at the higher pH.
TABLE 3: CT Values (CT$_{99.9}$) for 99.9 Percent Inactivation of *Giardia lamblia* Cysts by Free Chlorine at 10.0°C

<table>
<thead>
<tr>
<th>Free Residual Chlorine, mg/L</th>
<th>pH</th>
<th>≤6.0</th>
<th>6.5</th>
<th>7.0</th>
<th>7.5</th>
<th>8.0</th>
<th>8.5</th>
<th>≤9.0</th>
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</thead>
<tbody>
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<td>137</td>
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<td>292</td>
</tr>
</tbody>
</table>

$^{1}$These CT values achieve greater than a 99.99 percent inactivation of viruses. Any CT values between the indicated pH values may be determined by linear interpolation. Any CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT$_{99.9}$ value at the lower temperature and at the higher pH.

TABLE 4: CT Values (CT$_{99.9}$) for 99.9 Percent Inactivation of *Giardia lamblia* Cysts by Free Chlorine at 15.0°C

<table>
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<th>pH</th>
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<th>7.0</th>
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<td>72</td>
<td>86</td>
<td>105</td>
<td>127</td>
<td>153</td>
<td>184</td>
</tr>
<tr>
<td>2.6</td>
<td></td>
<td>61</td>
<td>73</td>
<td>88</td>
<td>107</td>
<td>129</td>
<td>156</td>
<td>188</td>
</tr>
<tr>
<td>2.8</td>
<td></td>
<td>62</td>
<td>74</td>
<td>89</td>
<td>109</td>
<td>132</td>
<td>159</td>
<td>191</td>
</tr>
<tr>
<td>3.0</td>
<td></td>
<td>63</td>
<td>76</td>
<td>91</td>
<td>111</td>
<td>134</td>
<td>162</td>
<td>195</td>
</tr>
</tbody>
</table>

$^{1}$These CT values achieve greater than a 99.99 percent inactivation of viruses. Any CT values between the indicated pH values may be determined by linear interpolation. Any CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT$_{99.9}$ value at the lower temperature and at the higher pH.
TABLE 5: CT Values (CT$_{99.9}$) for 99.9 Percent Inactivation of *Giardia lamblia* Cysts by Free Chlorine at 20.0°C$^1$

<table>
<thead>
<tr>
<th>Free Residual Chlorine, mg/L</th>
<th>pH ≤6.0</th>
<th>6.5</th>
<th>7.0</th>
<th>7.5</th>
<th>8.0</th>
<th>8.5</th>
<th>≤9.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤0.4</td>
<td>36</td>
<td>44</td>
<td>52</td>
<td>62</td>
<td>74</td>
<td>89</td>
<td>105</td>
</tr>
<tr>
<td>0.6</td>
<td>38</td>
<td>45</td>
<td>54</td>
<td>64</td>
<td>77</td>
<td>92</td>
<td>109</td>
</tr>
<tr>
<td>0.8</td>
<td>39</td>
<td>46</td>
<td>55</td>
<td>66</td>
<td>79</td>
<td>95</td>
<td>113</td>
</tr>
<tr>
<td>1.0</td>
<td>39</td>
<td>47</td>
<td>56</td>
<td>67</td>
<td>81</td>
<td>98</td>
<td>117</td>
</tr>
<tr>
<td>1.2</td>
<td>40</td>
<td>48</td>
<td>57</td>
<td>69</td>
<td>83</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>1.4</td>
<td>41</td>
<td>49</td>
<td>58</td>
<td>70</td>
<td>85</td>
<td>103</td>
<td>123</td>
</tr>
<tr>
<td>1.6</td>
<td>42</td>
<td>50</td>
<td>59</td>
<td>72</td>
<td>87</td>
<td>105</td>
<td>126</td>
</tr>
<tr>
<td>1.8</td>
<td>43</td>
<td>51</td>
<td>61</td>
<td>74</td>
<td>89</td>
<td>108</td>
<td>129</td>
</tr>
<tr>
<td>2.0</td>
<td>44</td>
<td>52</td>
<td>62</td>
<td>75</td>
<td>91</td>
<td>110</td>
<td>132</td>
</tr>
<tr>
<td>2.2</td>
<td>44</td>
<td>53</td>
<td>63</td>
<td>77</td>
<td>93</td>
<td>113</td>
<td>135</td>
</tr>
<tr>
<td>2.4</td>
<td>45</td>
<td>54</td>
<td>65</td>
<td>78</td>
<td>95</td>
<td>115</td>
<td>138</td>
</tr>
<tr>
<td>2.6</td>
<td>46</td>
<td>55</td>
<td>66</td>
<td>80</td>
<td>97</td>
<td>117</td>
<td>141</td>
</tr>
<tr>
<td>2.8</td>
<td>47</td>
<td>56</td>
<td>67</td>
<td>81</td>
<td>99</td>
<td>119</td>
<td>143</td>
</tr>
<tr>
<td>3.0</td>
<td>47</td>
<td>57</td>
<td>68</td>
<td>83</td>
<td>101</td>
<td>122</td>
<td>146</td>
</tr>
</tbody>
</table>

$^1$These CT values achieve greater than a 99.99 percent inactivation of viruses. Any CT values between the indicated pH values may be determined by linear interpolation. Any CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT$_{99.9}$ value at the lower temperature and at the higher pH.

TABLE 6: CT Values (CT$_{99.9}$) for 99.9 Percent Inactivation of *Giardia lamblia* Cysts by Free Chlorine at 25.0°C and Higher$^1$

<table>
<thead>
<tr>
<th>Free Residual Chlorine, mg/L</th>
<th>pH ≤6.0</th>
<th>6.5</th>
<th>7.0</th>
<th>7.5</th>
<th>8.0</th>
<th>8.5</th>
<th>≤9.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤0.4</td>
<td>24</td>
<td>29</td>
<td>35</td>
<td>42</td>
<td>50</td>
<td>59</td>
<td>70</td>
</tr>
<tr>
<td>0.6</td>
<td>25</td>
<td>30</td>
<td>36</td>
<td>43</td>
<td>51</td>
<td>61</td>
<td>73</td>
</tr>
<tr>
<td>0.8</td>
<td>26</td>
<td>31</td>
<td>37</td>
<td>44</td>
<td>53</td>
<td>63</td>
<td>75</td>
</tr>
<tr>
<td>1.0</td>
<td>26</td>
<td>31</td>
<td>37</td>
<td>45</td>
<td>54</td>
<td>65</td>
<td>78</td>
</tr>
<tr>
<td>1.2</td>
<td>27</td>
<td>32</td>
<td>38</td>
<td>46</td>
<td>55</td>
<td>67</td>
<td>80</td>
</tr>
<tr>
<td>1.4</td>
<td>27</td>
<td>33</td>
<td>39</td>
<td>47</td>
<td>57</td>
<td>69</td>
<td>82</td>
</tr>
<tr>
<td>1.6</td>
<td>28</td>
<td>33</td>
<td>40</td>
<td>48</td>
<td>58</td>
<td>70</td>
<td>84</td>
</tr>
<tr>
<td>1.8</td>
<td>29</td>
<td>34</td>
<td>41</td>
<td>49</td>
<td>60</td>
<td>72</td>
<td>86</td>
</tr>
<tr>
<td>2.0</td>
<td>29</td>
<td>35</td>
<td>41</td>
<td>50</td>
<td>61</td>
<td>74</td>
<td>88</td>
</tr>
<tr>
<td>2.2</td>
<td>30</td>
<td>35</td>
<td>42</td>
<td>51</td>
<td>62</td>
<td>75</td>
<td>90</td>
</tr>
<tr>
<td>2.4</td>
<td>30</td>
<td>36</td>
<td>43</td>
<td>52</td>
<td>63</td>
<td>77</td>
<td>92</td>
</tr>
<tr>
<td>2.6</td>
<td>31</td>
<td>37</td>
<td>44</td>
<td>53</td>
<td>65</td>
<td>78</td>
<td>94</td>
</tr>
<tr>
<td>2.8</td>
<td>31</td>
<td>37</td>
<td>45</td>
<td>54</td>
<td>66</td>
<td>80</td>
<td>96</td>
</tr>
<tr>
<td>3.0</td>
<td>32</td>
<td>38</td>
<td>46</td>
<td>55</td>
<td>67</td>
<td>81</td>
<td>97</td>
</tr>
</tbody>
</table>

$^1$These CT values achieve greater than a 99.99 percent inactivation of viruses. Any CT values between the indicated pH values may be determined by linear interpolation. Any CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT$_{99.9}$ value at the lower temperature and at the higher pH.
TABLE 7: CT Values (CT$_{99.9}$) for 99.9 Percent Inactivation of *Giardia lamblia* Cysts by Chlorine Dioxide and Ozone$^1$

<table>
<thead>
<tr>
<th>Disinfectant</th>
<th>Temperature, °C</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>≥25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Chlorine Dioxide</td>
<td>63</td>
<td>26</td>
<td>23</td>
<td>19</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Ozone</td>
<td>2.9</td>
<td>1.9</td>
<td>1.4</td>
<td>0.95</td>
<td>0.72</td>
<td>0.48</td>
</tr>
</tbody>
</table>

$^1$These CT values achieve greater than a 99.99 percent inactivation of viruses. Any CT values between the indicated temperatures may be determined by linear interpolation. If no interpolation is used, use the CT$_{99.9}$ value at the lower temperature for determining CT$_{99.9}$ values between indicated temperatures.

TABLE 8: CT Values (CT$_{99.9}$) for 99.9 Percent Inactivation of *Giardia lamblia* Cysts by Chloramines$^1$

<table>
<thead>
<tr>
<th>Disinfectant</th>
<th>Temperature, °C</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Chloramines</td>
<td>3800</td>
<td>2200</td>
<td>1850</td>
<td>1500</td>
<td>1100</td>
<td>750</td>
</tr>
</tbody>
</table>

$^1$These values are for pH values of 6 to 9. These CT values may be assumed to achieve greater than 99.99 percent inactivation of viruses only if chlorine is added and mixed in the water prior to the addition of ammonia. If this condition is not met, the system must demonstrate, based on on-site studies or other information, as approved by the department, that the system is achieving at least 99.99 percent inactivation of viruses. Any CT values between the indicated temperatures may be determined by linear interpolation. If no interpolation is used, use the CT$_{99.9}$ value at the lower temperature for determining CT$_{99.9}$ values between indicated temperatures.
APPENDIX B: CT TABLES FOR CRYPTOSPORIDIUM INACTIVATION

TABLE 1: CT Values (mg-min/L) for Cryptosporidium Inactivation by Chlorine Dioxide

<table>
<thead>
<tr>
<th>Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>≤0.5</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
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<td>30</td>
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</tr>
<tr>
<td>1.0</td>
<td>637</td>
</tr>
<tr>
<td>1.5</td>
<td>956</td>
</tr>
<tr>
<td>2.0</td>
<td>1275</td>
</tr>
<tr>
<td>2.5</td>
<td>1594</td>
</tr>
<tr>
<td>3.0</td>
<td>1912</td>
</tr>
</tbody>
</table>

1 Systems may use this equation to determine log credit between the indicated values:

\[ \text{Log credit} = \frac{0.001506 \times (1.09116^{\text{Temp}})}{\text{CT}} \]

TABLE 2: CT Values (mg-min/L) for Cryptosporidium Inactivation by Ozone

<table>
<thead>
<tr>
<th>Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>≤0.5</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td>0.25</td>
<td>6.0</td>
</tr>
<tr>
<td>0.5</td>
<td>12</td>
</tr>
<tr>
<td>1.0</td>
<td>24</td>
</tr>
<tr>
<td>1.5</td>
<td>36</td>
</tr>
<tr>
<td>2.0</td>
<td>48</td>
</tr>
<tr>
<td>2.5</td>
<td>60</td>
</tr>
<tr>
<td>3.0</td>
<td>72</td>
</tr>
</tbody>
</table>

1 Systems may use this equation to determine log credit between the indicated values:

\[ \text{Log credit} = \frac{0.0397 \times (1.09757^{\text{Temp}})}{\text{CT}} \]

TABLE 3: UV Dose for Cryptosporidium, Giardia lamblia, and Virus Inactivation Credit

<table>
<thead>
<tr>
<th>Log Credit</th>
<th>Cryptosporidium UV dose (mJ/cm²)</th>
<th>Giardia lamblia UV dose (mJ/cm²)</th>
<th>Virus UV dose (mJ/cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>1.6</td>
<td>1.5</td>
<td>39</td>
</tr>
<tr>
<td>1.0</td>
<td>2.5</td>
<td>2.1</td>
<td>58</td>
</tr>
<tr>
<td>1.5</td>
<td>3.9</td>
<td>3.0</td>
<td>79</td>
</tr>
<tr>
<td>2.0</td>
<td>5.8</td>
<td>5.2</td>
<td>100</td>
</tr>
<tr>
<td>2.5</td>
<td>8.5</td>
<td>7.7</td>
<td>121</td>
</tr>
<tr>
<td>3.0</td>
<td>12</td>
<td>11</td>
<td>143</td>
</tr>
<tr>
<td>3.5</td>
<td>15</td>
<td>15</td>
<td>163</td>
</tr>
<tr>
<td>4.0</td>
<td>22</td>
<td>22</td>
<td>186</td>
</tr>
</tbody>
</table>

1 The treatment credits listed in Table 3 are for UV light at a wavelength of 254 nm as produced by a low-pressure mercury vapor lamp. To receive treatment credit for other lamp types, systems must demonstrate an equivalent germicidal dose through reactor validation testing. The UV dose values in this table are applicable only to post-filter applications of UV in filtered systems.

[ARC 9915B, IAB 12/14/11, effective 1/18/12]
APPENDIX C: CT TABLES FOR VIRUS INACTIVATION UNDER THE GROUNDWATER RULE, 567—41.7(455B)

TABLE 1: CT Values (mg-min/L) for Inactivation of Viruses by Free Chlorine, pH 6.0-9.0

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>5.8</td>
<td>5.3</td>
<td>4.9</td>
<td>4.4</td>
<td>4.0</td>
<td>3.8</td>
<td>3.6</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>8.7</td>
<td>8.0</td>
<td>7.3</td>
<td>6.7</td>
<td>6.0</td>
<td>5.6</td>
<td>5.2</td>
<td>4.8</td>
<td>4.4</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>11.6</td>
<td>10.7</td>
<td>9.8</td>
<td>8.9</td>
<td>8.0</td>
<td>7.6</td>
<td>7.2</td>
<td>6.8</td>
<td>6.4</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>3.0</td>
<td>2.8</td>
<td>2.6</td>
<td>2.4</td>
<td>2.2</td>
<td>2.0</td>
<td>1.8</td>
<td>1.6</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>4.0</td>
<td>3.8</td>
<td>3.6</td>
<td>3.4</td>
<td>3.2</td>
<td>3.0</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>6.0</td>
<td>5.6</td>
<td>5.2</td>
<td>4.8</td>
<td>4.4</td>
<td>4.0</td>
<td>3.8</td>
<td>3.6</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>1.4</td>
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<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>2.4</td>
<td>2.2</td>
<td>2.0</td>
<td>1.8</td>
<td>1.6</td>
<td>1.4</td>
<td>1.2</td>
<td>1.0</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>3.4</td>
<td>3.2</td>
<td>3.0</td>
<td>2.8</td>
<td>2.6</td>
<td>2.4</td>
<td>2.2</td>
<td>2.0</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

TABLE 2: CT Values (mg-min/L) for Inactivation of Viruses by Free Chlorine, pH 9.1-10.0

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
<th>0.5</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
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<td>45</td>
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<td>22</td>
<td>15</td>
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<td>7</td>
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<tr>
<td>3</td>
<td></td>
<td>66</td>
<td>44</td>
<td>33</td>
<td>22</td>
<td>16</td>
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<tr>
<td>4</td>
<td></td>
<td>90</td>
<td>60</td>
<td>45</td>
<td>30</td>
<td>22</td>
<td>15</td>
</tr>
</tbody>
</table>
TABLE 3: CT Values (mg-min/L) for Inactivation of Viruses by Chlorine Dioxide, pH 6.0-9.0

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>8.4</td>
</tr>
<tr>
<td>3</td>
<td>25.6</td>
</tr>
<tr>
<td>4</td>
<td>50.1</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>4.2</td>
</tr>
<tr>
<td>3</td>
<td>12.8</td>
</tr>
<tr>
<td>4</td>
<td>25.1</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>4</td>
<td>14.2</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

TABLE 4: CT Values (mg-min/L) for Inactivation of Viruses by Ozone

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0.90</td>
</tr>
<tr>
<td>3</td>
<td>1.40</td>
</tr>
<tr>
<td>4</td>
<td>1.80</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>0.80</td>
</tr>
<tr>
<td>4</td>
<td>1.00</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

<table>
<thead>
<tr>
<th>Inactivation Log Credit</th>
<th>Water Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>0.27</td>
</tr>
<tr>
<td>3</td>
<td>0.44</td>
</tr>
<tr>
<td>4</td>
<td>0.54</td>
</tr>
</tbody>
</table>

1CT values provided in the table are modified by linear interpolation between 0.5°C increments.

No CT table is provided for chloramines or total chlorine because the CT values would be prohibitively high for groundwater systems.
Tables are from the EPA Groundwater Rule Implementation Guidance, EPA 816-R-09-004, January 2009, pages 97-98.
[ARC 3735C, IAB 4/11/18, effective 5/16/18]

These rules are intended to implement Iowa Code sections 455B.171 through 455B.188 and 455B.190 through 455B.192.

1 Effective date of 43.2(3)“b”(1) to (9) and 43.3(3)“b”(1) and (2) delayed until adjournment of the 1995 General Assembly by the Administrative Rules Review Committee at its meeting held March 13, 1995.
CHAPTER 49
NONPUBLIC WATER SUPPLY WELLS
[Prior to 7/1/83, Health Dept. Ch 45]
[Prior to 12/3/86, Water, Air and Waste Management[900]]

567—49.1(455B) Purpose. The purpose of this chapter is to protect the public health by protecting groundwater supplies from contamination by establishing uniform minimum standards and methods for well construction and reconstruction for nonpublic water supply wells. This chapter also provides minimum standards for installation of water well pumps or equipment employed in withdrawing or obtaining water from a well for any use, except monitoring wells, including such seals and safeguards as may be necessary to protect from contamination the water in the aquifer and water being pumped from the well.

567—49.2(455B) Definitions.

“Abandoned well” means a well whose use has been permanently discontinued. A well shall be considered abandoned when its condition is such that continued use is impractical or no longer desired.

“Administrative authority” means the local boards of health.

“Anaerobic lagoon” means an impoundment, the primary function of which is to store and stabilize organic wastes. The impoundment is designed to receive wastes on a regular basis, and the design waste loading rates are such that the predominant biological activity in the impoundment will be anaerobic. An anaerobic lagoon does not include:

1. A runoff control basin which collects and stores only precipitation-induced runoff from an open feedlot feeding operation; or
2. A waste slurry storage basin which receives waste discharges from confinement feeding operations and which is designed for complete removal of accumulated wastes from the basin at least semiannually; or
3. Any anaerobic treatment system which includes collection and treatment facilities for all off-gases.

“Annular space” means the open space between the well hole excavation and the well casing.

“Backflow prevention device” means any device, method or type of construction to prevent backflow of water, liquids, mixtures, or substances into a well or into the distribution pipes of a potable supply of water from any source other than its intended source.

“Cesspool” means a covered excavation, lined or unlined, into which wastes from toilets or urinals are discharged for disposal. Cesspools are not an approved method of sewage disposal.

“Class 1 well” means a well 100 feet or less in depth and 18 inches or more in diameter.

“Class 2 well” means a well more than 100 feet in depth or less than 18 inches in diameter or a bedrock well. Bedrock wells include:

1. Wells completed in a single confined aquifer;
2. Wells completed in a single unconfined aquifer; and
3. Wells completed in multiple aquifers.

“Class 3 well” means a sandpoint well 50 feet or less in depth and having a casing inside diameter of 2 inches or less constructed by joining a screened drive point with lengths of pipe and driving the assembly into a shallow sand and gravel aquifer.

“Compensation for well interference” means payment to the owner of a nonregulated well for damages caused by a lowered water level in the well due to withdrawal of water for a permitted use.

“Confinement building” means a building used in conjunction with a confinement feeding operation to house animals.

“Conforming well” means a well that complies with the standards of this chapter, including wells properly plugged according to 567—Chapter 39.

“Deep well” means a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.
“Earthen manure storage basin” means an earthen cavity, either covered or uncovered, which, on a regular basis, receives waste discharges from a confinement feeding operation if accumulated wastes from the basin are completely removed at least once each year.

“Established grade” means the permanent point of contact of the ground to artificial surface with the casing or curbing of the well.

“Formed manure storage structure” means a structure, either covered or uncovered, used to store manure from a confinement feeding operation, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Similar materials may include, but are not limited to, plastic, rubber, fiberglass, or other synthetic materials. Materials used in a formed manure storage structure shall have the structural integrity to withstand expected internal and external load pressures.

“Grout” means a material used to seal the annular space between the casing and the borehole and shall consist of neat cement, concrete, high solids bentonite slurry, or hydrated bentonite chips.

“Health-related problem” means well water that contains any contaminant at a level that exceeds MCLs (maximum contaminant levels), or HALs (health advisory levels) as adopted by the department of natural resources.

“Heavy drilling fluid” means water used for drilling which because of the natural clay content of the borehole or by addition of bentonite grout has a solids density of at least 10 percent by weight or a mud weight of at least 9.25 lb/gal.

“Low permeability material” means a geological unit of unconsolidated material (usually clay or till) or bedrock (usually shale) that is all or partially saturated, and having permeability low enough (10^-7 cm/sec) to give water in the aquifer artesian head.

“Nonpublic water supply well” means a well that does not supply a public water supply system.

“Nonregulated well” means a well used to supply water for a nonregulated use (a use of water less than 25,000 gallons per day which is not required to have a water use permit).

“Open feedlot” means an unroofed or partially roofed animal feeding operation in which no crop, vegetation, or forage growth or residue cover is maintained during the period that animals are confined in the operation.

“Permitted use” means a use of water in excess of 25,000 gallons per day which requires a water use permit pursuant to 567—Chapters 50 through 52 and Iowa Code chapter 455B, division III, part 4.

“Pitless adapter” means a device designed for attachment to one or more openings through a well casing. It shall be constructed so as to prevent the entrance of contaminants into the well through such openings, conduct water from the well, protect the water from freezing or extremes of temperature, and provide access to water system parts within the well.

“Pitless unit” means an assembly which extends the upper end of the well casing to above grade. It shall be constructed so as to prevent the entrance of contaminants into the well, conduct water from the well, and protect the water from freezing or extremes of temperature, and shall provide full access to the well and to water system parts within the well. It shall provide a pitless well cap for the top terminal of the well.

“Public water supply” means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. The term includes (1) any collection, treatment, storage, and distribution facilities under control of the supplier of water and used primarily in connection with the system; and (2) any collection (including wells) or pretreatment storage facilities not under the control of the supplier which are used primarily in connection with the system.

“Pump installer” means a person certified by the department to perform pump services.

“Pumps and pumping equipment” means any equipment or materials, including seals, tanks, fittings and controls utilized or intended for use in withdrawing or obtaining water for any use.

“Pump services” means the installation, repair, and maintenance of water systems; modification of the upper terminus of a well; well plugging; well rehabilitation; or the construction of Class 3 wells.

“Runoff control basin” means an impoundment designed and operated to collect and store runoff from an open feedlot.
“Shallow well” means a well located and constructed in such a manner that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

“Stuffing box” means an approved receptacle in which packing may be compressed to form a watertight or airtight junction between two objects.

“Upper terminus” means the upper ten feet of the well casing as measured from the finished surface grade.

“Water systems” means any part of the mechanical portion of a water well that delivers water from the well to a valve that separates the well from the plumbing system. “Water systems” includes the pump, drop pipe to the well, electrical wire from the pump to the first electrical panel or connection outside the casing, piping from the well to the pressure tank or first valve outside the casing, pitless unit or adapter, and all related miscellaneous fittings necessary to operate the pump. “Water systems” does not include any outside piping to other buildings and does not include the piping that carries the water in the remainder of the distribution system.

“Well” means any excavation that is drilled, cored, driven, dug, bored, augered, jetted, washed or is otherwise constructed for the purpose of exploring for groundwater, monitoring groundwater, utilizing the geothermal properties of the ground, or extracting water from or injecting water into the aquifer. “Well” does not include an open ditch, drain tile, an excavation made for obtaining or prospecting for oil, natural gas, minerals, or products mined or quarried, lateral geothermal heat exchange systems less than 20 feet deep, nor temporary dewatering wells such as those used during the construction of subsurface facilities only for the duration of the construction.

“Well construction” means constructing a water well and installing necessary casing, screen, liners, grout, seals, and other appurtenances.

“Well driller” means a person certified by the department to perform well drilling services.

“Well drilling services” means new well construction, well reconstruction, well repair, well rehabilitation, installation of pitless equipment, or well plugging.

“Well liner” means a pipe used to line the inside of a well hole but not designed to hold hydraulic or structural loading. Liners must be installed within a casing or in an ungrouted open borehole.

“Well plugging” means the closure of an abandoned well with plugging materials by procedures which will permanently seal the well from contamination by surface drainage and permanently seal off the well from contamination into an aquifer. “Well plugging” includes the proper application of filling and sealing materials.

“Well reconstruction” means modification of the original construction of a well. “Well reconstruction” includes, but is not limited to, deepening the well, installing a liner, installing or replacing a screen with one of a different diameter or length, installing a pitless adapter, extending the casing, or hydrofracturing a well. Replacing a screen with one of identical diameter and length or replacing a pitless adapter is considered repair, not reconstruction.

“Well rehabilitation” means the physical or chemical cleaning of a well.

“Well seal” means a device used to cover or seal a well that establishes or maintains a junction between the casing of the well and the piping, electric conduit or equipment installed, so as to prevent water or other foreign material from entering the well at the uppermost terminal.

1. “Well cap” means a snug-fitting, watertight device used above flood level that excludes dust and vermin and allows for screened venting.
2. “Sanitary seal” means a watertight fitting which uses mechanical compression that is installed on wells that terminate in a wellhouse.

“Well services” means both well drilling services and pump services.

567—49.3(455B) Applicability. The provisions contained herein apply to all nonpublic water supply wells constructed for the purpose of domestic, livestock, irrigation, recreation, and commercial or industrial use. They shall also apply to existing water wells undergoing reconstruction.
Ponds and surface water supplies are not covered by these standards. Information regarding use of these sources of water should be sought from the administrative authority prior to the development of the sources.

49.3(1) Nonconforming well construction installations. Certified well drilling contractors shall ensure that the reconstruction of nonconforming wells adheres to all applicable provisions of this chapter or to comparable construction or installation requirements approved by the administrative authority.

When any construction or reconstruction is done on a nonconforming feature of a well, that feature shall be upgraded and brought into compliance with the material and installation standards contained in this chapter.

49.3(2) Nonconforming water system installations. Certified pump installers shall ensure that the reconstruction or repair of nonconforming water systems adheres to all applicable provisions of this chapter or to construction or installation requirements approved by the administrative authority. When pump services are to be performed on a well that has a contamination problem, the well shall be upgraded and shall be brought into compliance with installation standards contained in this chapter. When pump services are to be performed on a well that does not have a contamination problem, the well may be put back into service with nonconforming features. However, the certified installer shall notify the owner of the well in writing of the defects with recommendations as to what should be done to correct these deficiencies.

49.3(3) Exemptions. This chapter shall not apply to public water supply wells, horizontal heat pump installations, elevator shafts, underground storage tank monitoring wells as covered under 567—Chapter 135, or monitoring wells for solid waste disposal facilities as covered in 567—Chapter 110.

567—49.4(455B) General. The administrative authority shall have the authority to visit well sites during any phase of the work without prior notice. The administrative authority shall by rule require the issuance of permits and the submission of water well logs. No well construction or reconstruction shall be initiated until a permit has been issued by the proper authority. The administrative authority may also require posting of performance bonds and collection and submission of other data. The issuance of permits is covered in 567—Chapter 38 and shall be coordinated with the water withdrawal permits issued by the Iowa department of natural resources as covered in 567—Chapters 51 and 52. All well services shall be performed by a certified well contractor or the property owner as specified in 567—Chapter 82.

It shall be the responsibility of the certified well contractor to ensure that a well construction permit has been issued prior to initiation of well construction or reconstruction. It shall also be the responsibility of the certified well contractor to ensure that all well services are performed in accordance with the provisions of this chapter.

567—49.5(455B) Variances. Variances to these rules may be granted by the administrative authority if sufficient information is provided to substantiate equal protection and the need for such action. Variance requests and reasoning shall be in writing. Variance approvals or rejections shall also be in writing. Where permitting authority has not been delegated to the county, the department will review and grant or deny any variance requests within that jurisdiction.

567—49.6(455B) Location of wells. Wells shall be located with consideration given to the lot size, contour, porosity and absorbency of the soil, local groundwater conditions, flooding, and other factors necessary to implement the rules. The lack of specific distances to other possible sources of contamination, such as refuse disposal sites and high-pressure gas lines, does not minimize their potential hazard. These must be evaluated in each particular situation and a distance arrived at that is based on pertinent facts. The well contractor shall consult the administrative authority for assistance in determining a proper distance in such cases.

49.6(1) Minimum distances. The following minimum lateral distances from all private wells shall apply for the common structures or sources of contamination listed in the following table.
Table 49.6(1) Minimum Lateral Distances, Private Wells

<table>
<thead>
<tr>
<th>Structure or Source of Contamination</th>
<th>Minimum Lateral Distance (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shallow Well^1</td>
</tr>
<tr>
<td>Public water supply well</td>
<td>400</td>
</tr>
<tr>
<td>Formed manure storage structure, confinement building, feedlot solids settling facility, open feedlot</td>
<td>200</td>
</tr>
<tr>
<td>Transmission pipelines (including, but not limited to, fertilizer, liquid petroleum, or anhydrous ammonia) if a more restrictive setback is not set by the pipeline owner</td>
<td>200</td>
</tr>
<tr>
<td>Earthen manure storage basin, runoff control basins and anaerobic lagoons (see subrule 49.6(2) below)</td>
<td>1000</td>
</tr>
<tr>
<td>Drainage wells</td>
<td>1000</td>
</tr>
<tr>
<td>Solid waste landfills and disposal sites^2</td>
<td>1000</td>
</tr>
<tr>
<td>Domestic wastewater lagoon</td>
<td>400</td>
</tr>
<tr>
<td>Preparation or storage area for spray materials, commercial fertilizers or chemicals that may result in groundwater contamination</td>
<td>150</td>
</tr>
<tr>
<td>Existing wells that do not conform to this chapter</td>
<td>100</td>
</tr>
<tr>
<td>Liquid hydrocarbon storage tanks, except for liquid propane gas (LPG)</td>
<td>100</td>
</tr>
<tr>
<td>Private sewage disposal systems – open portion of treatment system^3</td>
<td>100</td>
</tr>
<tr>
<td>Private sewage disposal systems – closed portion of treatment system^3</td>
<td>100</td>
</tr>
<tr>
<td>Flowing streams or other surface water bodies</td>
<td>50</td>
</tr>
<tr>
<td>LPG storage tanks</td>
<td>15</td>
</tr>
<tr>
<td>Roadside ditch and road rights-of-way</td>
<td>15</td>
</tr>
<tr>
<td>Existing wells that conform to this chapter</td>
<td>10</td>
</tr>
<tr>
<td>Sewer of cast iron with leaded or mechanical joints, sewer of plastic pipe with glued or compression joints, independent clear water drains, cisterns, well pits, or pump house floor drains</td>
<td>10</td>
</tr>
<tr>
<td>Yard hydrants</td>
<td>10</td>
</tr>
<tr>
<td>Frost pit</td>
<td>10</td>
</tr>
<tr>
<td>Property lines (unless a mutual easement is signed and recorded by both parties)</td>
<td>4</td>
</tr>
</tbody>
</table>

^1“Deep well” and “shallow well” are defined in 567—49.2(455B).

^2Solid waste means garbage, refuse, rubbish, and other similar discarded solid or semisolid materials, including but not limited to such materials resulting from industrial, commercial, agricultural, and domestic activities.

^3Private sewage disposal system is defined in 567—subrule 69.1(2). Open portions of treatment systems include subsurface absorption systems, mound systems, intermittent sand filters, constructed wetlands, open bottom media filters, and waste stabilization ponds. Closed portions of treatment systems include septic tanks, aerobic treatment units, fully contained media filters, and impervious vault toilets. These separation distances also apply to septic systems that are not considered privately owned.
49.6(2) Exception to minimum lateral distances. The minimum separation distance between a well and an anaerobic lagoon, earthen manure slurry storage basin, earthen manure storage basin, or runoff control basin shall be 400 feet if the lagoon or basin was permitted by the department after January 1, 1989, or if the applicant demonstrates through percolation testing that the seepage loss through the lagoon or basin does not exceed 1/16 inch per day (0.0625 inch/day). The percolation test shall meet the requirements of ASTM-1587 and 567—subrule 65.15(11).

49.6(3) Frost pits. Wells are not permitted to be located within frost pits. Frost pits that do not contain wells are permitted for the purpose of housing pressure tanks and valves, for example, provided the frost pits are not located closer than ten feet from any well.

49.6(4) Relation to buildings. The well shall be located so that no building interferes with reasonable access for cleaning, treatment, repair, testing, inspection and other maintenance. Wells shall not be located in basements.

49.6(5) Easements. No well shall be located on a property not owned by the well owner unless an easement allowing such placement is reviewed and approved by the administrative authority and the easement is legally recorded.

[ARC 6190C, IAB 2/9/22, effective 3/16/22]

567—49.7(455B) General construction requirements. Wells shall be planned and constructed to adapt to the geologic and groundwater conditions of the proposed well site to ensure reasonable utilization of every natural protection against contamination of the water-bearing formation(s) and the exclusion of possible sources of contamination, to attempt to produce bacterially safe water which is free of health-related problems.

49.7(1) Water used in construction. Water used in the construction process shall be obtained from a potable water source that will not result in contamination of the well. Water used for drilling shall be treated with 3 pints of 5.25 percent sodium hypochlorite solution per 100 gallons of water or 0.25 pounds of 65 percent calcium hypochlorite per 100 gallons of water or other additives to produce an equivalent concentration of chlorine residual (50 ppm).

49.7(2) Wellhead. The upper terminal casing of all wells shall extend at least 12 inches above established grade or pump house floor, or the 100-year flood level, whichever is higher. A well cap or sanitary seal shall be installed immediately following well completion. A well cap shall be used on an exposed well, a sanitary seal only on a well terminating within a wellhouse. Any openings in the cap or seal, such as for pump wiring or water depth measurement, shall be properly grommeted or sealed except properly screened and oriented vent openings.

The ground surface immediately adjacent to the well casing shall be compacted and graded so that surface water is diverted away from the casing. Well platforms are not recommended other than those used as pump house floors as in 49.12(2).

49.7(3) Criteria for well interference protection. 567—Chapter 54 provides an administrative process for owners of nonregulated wells to receive compensation for well interference caused by permitted uses. To be eligible for compensation due to well interference, nonregulated wells constructed after July 1, 1986, must be constructed to allow for some potential well interference.

Allowance for potential well interference is accomplished by constructing a nonregulated well to anticipate a lowering of the static head of the well which may be caused by interference from a nearby permitted use well.
a. The well must be drilled deep enough to allow for setting the pump at least 10 feet or half the normal pumping drawdown, whichever is greater, below the initial recommended setting depth.

b. If the well draws from an unconfined aquifer, the static water level may drop to half the saturated thickness of the aquifer before well interference is considered, if the calculation in “a” above should indicate a shallower depth. Shallow aquifers that are only slightly confined may be classified as unconfined aquifers for this purpose.

c. Where a well penetrates a confined aquifer, the static water level is protected only to the top of the aquifer if the calculation in “a” above should indicate a deeper level.

d. Protected levels for flowing wells will be considered the top of the confined aquifer or 100 feet below the surface, whichever is higher. Flowing wells must be constructed to accommodate a pump capable of supplying a sufficient water supply at protected levels.

The well design also needs to consider drought and reduced well efficiency. (Additional information is contained in 567—Chapter 54.)

A well that is used to withdraw more than 25,000 gallons of water per day requires a water use permit from the Iowa department of natural resources. Upon obtaining such a permit, the well is called
a permitted use. If a permitted use exists prior to the construction of a well without a water use permit, no compensation for well interference will be allowed unless a significant change in the permitted use occurs. A physical change to withdrawal facilities may be considered a significant change to a permitted use (e.g., moving the withdrawal location, installing a new well, or installing a higher capacity pump). A person desiring to construct a well not requiring a water use permit should first obtain information concerning nearby permitted use wells. The department of natural resources will provide information on permitted use wells upon request.

49.7(4) Access port for measurement of water levels. Permitted use wells shall be equipped with an access port having a minimum diameter of ¾ inch. The access port shall be fitted with a threaded cap or plug and be located to allow insertion of a steel tape or electric probe into the well for measurement of water levels. When a spool type of pitless adapter is used which obstructs clear access to the water, a ¾-inch pipe shall be attached to the spool and brought to the surface below the well cap to allow water level measurements. Wells not requiring a water use permit should be constructed with an access port for water level measurement for possible future well interference concerns.

49.7(5) Interconnection of aquifers. There may be local confining beds that serve an important protective function. Permitted use wells shall use casing and grouting to maintain a hydraulic separation between distinct aquifers separated by confining intervals. Extreme caution should be exercised in the construction of non-permitted use wells if allowing the well to connect aquifers across confining intervals, particularly in areas where that would open the aquifer to surficial contamination, i.e., in areas where the upper rock unit is unconfined or contains less than 40 feet of unconsolidated materials. The administrative authority shall be consulted for possible local regulations when interconnection of aquifers across confining intervals is anticipated.

567—49.8(455B) Types of well construction.

49.8(1) Drilled wells.

a. Drilled wells in unconsolidated materials.

(1) Depth. In no case shall less than 20 feet of permanent casing be installed in wells drilled in unconsolidated materials. If the alluvial aquifer where the water is to be drawn from is covered by less than 40 feet of low permeability materials, the well screen shall be set at the bottom of the water-bearing aquifer or at least 60 feet from the surface. (Deeper depths may be required if nitrate contamination is excessive.) If more than 40 feet of low permeability materials are present above the aquifer, the casing shall extend down at least to the top of the aquifer.

(2) Grouting. Grout shall be placed to a minimum depth of 40 feet or along the full length of the casing where less than 40 feet of casing is set. Grouting the full length of the casing below 40 feet may be necessary to isolate any contaminated water lenses or aquifers. If a layer of low permeability material at least 5 feet thick is encountered less than 40 feet from the surface, the grout may be terminated no less than 5 feet below the top of this low permeability material, but in no case less than 20 feet from the ground surface. Grout must be placed in accordance with 49.9(3), except when driving casing. When driving casing a #8 mesh bentonite or bentonite grout must be maintained around the outside of the casing. The bottom of driven casing must be equipped with a drive shoe.

(3) Annular space. The diameter of the borehole shall be at least 3 inches greater than the outside diameter of the well casing to the minimum grouting depth. When steel well casing pipe is installed using percussion methods, the annular space shall be at least 5 inches greater than the outside diameter of the well casing to a minimum depth of 25 feet.

(4) If the depth of casing is greater than 40 feet, the annular space below 40 feet may be filled with heavy drilling fluid taken from the borehole as long as the top 40 feet of annular space is properly grouted. In this case, the annular space below 40 feet shall be kept as small as possible to avoid settling.

b. Drilled wells in consolidated material.

(1) Minimum casing depth. Casing shall extend to a depth of at least 40 feet and be seated in firm rock. When the uppermost bedrock consists of creviced limestone or dolomite that does not produce water, the casing shall extend through the creviced formation, be seated in firm rock and be properly grouted.
(2) Grouting. For bedrock wells, full-length grouting of the casing is strongly recommended. Grout shall be placed to a minimum depth of 40 feet in accordance with 49.9(3), except when driving casing using percussion or casing-hammer/rotary drilling. When driving casing, #8 mesh bentonite or bentonite grout must be maintained around the outside of the casing. The bottom of driven casing must be equipped with a drive shoe. If a layer of low permeability material at least 5 feet thick is encountered less than 40 feet from the surface, the grout may be terminated no less than 5 feet below the top of this low permeability material, but in no case less than 20 feet from the ground surface. Where local conditions warrant, the administrative authority may require more extensive grouting to protect any aquifer(s) that are penetrated.

(3) Annular space. The borehole shall be at least 3 inches greater than the outside diameter of the well casing for the upper 40 feet or the minimum grouting depth. When steel casing pipe is installed using percussion, or casing-hammer/rotary methods, the annular space shall be at least 5 inches greater than the outside diameter of the well casing to a minimum depth of 25 feet. When bedrock wells are full-length pressure-grouted through the casing, the borehole diameter shall be 3 inches larger than the outside diameter of the casing for the minimum depth of at least 25 feet.

(4) If the depth of casing is greater than 40 feet, the annular space below 40 feet may be filled with heavy drilling fluid taken from the borehole as long as the top 40 feet of annular space is properly grouted. In this case, the annular space below 40 feet shall be kept as small as possible to avoid settling.

(5) In fractured rock, where circulation of slurry cannot be maintained, grouting may be done with bentonite chips. The chips shall be hydrated with one gallon of water per bag of bentonite.

49.8(2) Bored and augered wells in unconsolidated materials. For bored or augered wells with concrete or clay tile casings at least 18 inches in diameter, buried-slab construction is required.

a. Casing. The concrete or vitrified clay pipe casing shall be terminated not less than 10 feet below ground surface and extend to a minimum depth of 20 feet. The casing shall be fitted with a reinforced concrete or steel plate into which a watertight steel or thermoplastic casing is firmly imbedded in or connected to a pipe cast or welded into the plate. This casing shall be at least 5 inches in diameter and shall extend from the plate to not less than 12 inches above established grade or the 100-year flood level, whichever is higher. A pitless adapter shall be installed below frost depth on the newly installed plastic or steel casing.

b. Backfilling annular space. A 12-inch grout seal shall be poured over and around the plate. The annular space between the steel or thermoplastic casing and the borehole shall be backfilled with clean compacted soil free of debris or large organic material. During the backfilling process, the earth shall be thoroughly tamped to minimize settling. Grading around the well shall then be accomplished in accordance with subrule 49.7(2).

49.8(3) Driven and direct push wells. Sandpoint wells are typically constructed in sandy areas with a high water table. Groundwater in these areas is often susceptible to contamination. This type of construction is not recommended for potable water supply. Sandpoint wells shall meet the requirements of this chapter except for casing depth and grouting requirements.

49.8(4) Flowing artesian wells. Drilling operations shall extend into but not through the formation confining the water. The casing shall then be installed and the annular space full-length pressure-grouted and allowed to set. After the grout is set, the drill hole shall be extended into the confined water-bearing formation. Flow control from the well shall be provided by valved pipe connections or a receiving tank set at an altitude corresponding to that of the artesian head. Under no circumstances shall the water flow uncontrolled to waste. A direct connection between the discharge pipe and a receiving tank, sewer, or other source of contamination is prohibited.

567—49.9(455B) Material standards. All materials utilized in well water construction shall conform to the standards of the American Water Works Association (AWWA), the American Petroleum Institute (API), the American Society for Testing and Materials (ASTM), and the National Ground Water Association (NGWA) except as modified by these standards.

49.9(1) Water well casing.

a. Steel well casing and couplings.
(1) Steel well casing pipe shall have the dimensions and weights specified in Table 49.9(1)“a”(4). Well casing pipe shall be new steel pipe meeting one of the following standards:
1. ASTM A 53-96,
2. ASTM A 106-95,
3. ASTM A 589-95a - Type I, II or III,
4. API 5CT (5th Edition, 4/1/95),
5. API 5D (3rd Edition, 8/1/92), or

(Copies of these standards are available for inspection at the Des Moines office of the department of natural resources records center or may be obtained for personal use from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, or the American Petroleum Institute, 1220 L Street NW, Washington, DC 20005.)

(2) Each length of casing shall be legibly marked in accordance with API or ASTM marking specifications showing the manufacturer’s or processor’s name or trademark, size in inches, weight in pounds per foot, whether seamless or welded (type of weld) and the API or ASTM specification or trade monogram.

(3) All casing pipe joints shall be watertight welded construction or threaded couplings.

(4) Minimum casing pipe and coupling weights and dimensions are as follows:

Table 49.9(1)“a”(4)
Minimum Casing Pipe and Couplings Weights and Dimensions

<table>
<thead>
<tr>
<th>Size (inches)</th>
<th>Weight (lbs/ft)</th>
<th>Thickness (inches)</th>
<th>Internal Diameter (inches)</th>
<th>Threads per inch</th>
<th>Length (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Threads &amp; Coupling</td>
<td>Plain End</td>
<td>Pipe</td>
<td>Couplings</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1.70</td>
<td>1.68</td>
<td>.133</td>
<td>1.315</td>
<td>1.049</td>
</tr>
<tr>
<td>1-1/4</td>
<td>2.30</td>
<td>2.27</td>
<td>.140</td>
<td>1.660</td>
<td>1.380</td>
</tr>
<tr>
<td>1-1/2</td>
<td>2.75</td>
<td>2.72</td>
<td>.145</td>
<td>1.900</td>
<td>1.610</td>
</tr>
<tr>
<td>2</td>
<td>3.75</td>
<td>3.65</td>
<td>.154</td>
<td>2.375</td>
<td>2.067</td>
</tr>
<tr>
<td>2-1/2</td>
<td>5.90</td>
<td>5.79</td>
<td>.203</td>
<td>2.875</td>
<td>2.469</td>
</tr>
<tr>
<td>3</td>
<td>7.70</td>
<td>7.58</td>
<td>.216</td>
<td>3.500</td>
<td>3.068</td>
</tr>
<tr>
<td>3-1/2</td>
<td>9.25</td>
<td>9.11</td>
<td>.226</td>
<td>4.000</td>
<td>3.548</td>
</tr>
<tr>
<td>4</td>
<td>11.00</td>
<td>10.79</td>
<td>.237</td>
<td>4.500</td>
<td>4.026</td>
</tr>
<tr>
<td>5</td>
<td>15.00</td>
<td>14.62</td>
<td>.258</td>
<td>5.563</td>
<td>5.047</td>
</tr>
<tr>
<td>6</td>
<td>19.46</td>
<td>18.97</td>
<td>.280</td>
<td>6.625</td>
<td>6.065</td>
</tr>
<tr>
<td>6-5/8 OD</td>
<td>20.00</td>
<td>19.49</td>
<td>.288</td>
<td>6.625</td>
<td>6.049</td>
</tr>
<tr>
<td>7 OD</td>
<td>20.00</td>
<td>19.54</td>
<td>.272</td>
<td>7.000</td>
<td>6.366</td>
</tr>
<tr>
<td>8</td>
<td>29.35</td>
<td>28.55</td>
<td>.322</td>
<td>8.625</td>
<td>8.071</td>
</tr>
<tr>
<td>10</td>
<td>41.85</td>
<td>40.48</td>
<td>.365</td>
<td>10.750</td>
<td>10.136</td>
</tr>
<tr>
<td>12</td>
<td>51.15</td>
<td>49.56</td>
<td>.375</td>
<td>12.750</td>
<td>12.090</td>
</tr>
<tr>
<td>14 OD</td>
<td>57.00</td>
<td>54.57</td>
<td>.375</td>
<td>14.000</td>
<td>13.250</td>
</tr>
<tr>
<td>16 OD</td>
<td>65.30</td>
<td>62.58</td>
<td>.375</td>
<td>16.000</td>
<td>15.250</td>
</tr>
<tr>
<td>18 OD</td>
<td>73.00</td>
<td>70.59</td>
<td>.375</td>
<td>18.000</td>
<td>17.250</td>
</tr>
<tr>
<td>20 OD</td>
<td>81.00</td>
<td>78.60</td>
<td>.375</td>
<td>20.000</td>
<td>19.250</td>
</tr>
</tbody>
</table>

R = Round Threads

b. Thermoplastic casing and couplings.
(1) Materials. Thermoplastic well casing pipe and couplings shall be new polyvinyl chloride (PVC) or acrylonitrile-butadiene-styrene (ABS) material produced to and meeting the ASTM F 480 standard and shall have a standard dimension ratio (SDR) of 21, 17, or 13.5, a dimension ratio (DR) of 18 or 14, or a schedule 40 or 80 rating depending upon the specification. Styrene-rubber thermoplastic well casing pipe, including ASTM F 480, may not be used.

(2) Potable water standards. The thermoplastic well casing pipe, pipe couplings, cement, primer and other components used shall be approved for well casing pipe in potable water supplies by the NSF Standard Number 61 or the health effects portion of Standard Number 14 as they relate to well casing pipe, or an approved equivalent organization.

(3) Markings. Each length of casing shall be legibly marked showing the manufacturer’s or processor’s name or trademark, size in inches, and the ASTM F 480 specification or trade monogram.

(4) Casing joints. The thermoplastic pipe shall be assembled with either flush-threaded joints, integral-bell, solvent-cemented joints, one-piece solvent-cemented couplings or nonmetallic restrained joint system in a manner according to the specifications in ASTM F 480.

(5) Hydraulic collapse pressure for plastic casing. The following table provides specifications for maximum hydraulic collapse pressure (in feet of water head) to which PVC well casing of different strengths can be installed.

<table>
<thead>
<tr>
<th>PVC WELL CASING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Hydraulic Loading (in feet of water head) (1)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ASTM F 480 or ASTM 2241</th>
<th>C-900</th>
<th>ASTM 1785</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SDR</td>
<td>SDR</td>
<td>SDR</td>
</tr>
<tr>
<td>4”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
<tr>
<td>4½”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
<tr>
<td>5”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
<tr>
<td>6”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
<tr>
<td>8”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
<tr>
<td>10”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
<tr>
<td>12”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
<tr>
<td>16”</td>
<td>257’</td>
<td>496’</td>
<td>1,024’</td>
</tr>
</tbody>
</table>

(1) Determined by formulae in ASTM F 480 with Poisson’s ratio of .38

(6) When cement grout is used with thermoplastic casing, the manufacturer’s specifications for use shall be followed except in the top 40 feet.

(7) Thermoplastic pipe extending above ground shall be protected from ultraviolet light exposure.

(8) Under no circumstances shall thermoplastic water well casing be driven.

**49.9(2) Grouting guides.** Casing that is to be grouted shall have a minimum of two sets of centering guides attached to the casing so as to permit the unobstructed flow and deposition of grout.

**49.9(3) Grouting.** Materials and procedures for grouting shall be as follows:

a. **Concrete grout.** The mixture, used with bored and augered wells, shall consist of cement, sand aggregate and water, in the proportion of one bag cement (94 lbs.) and an equal volume of aggregate to not more than six gallons of clean water. Concrete grout shall not be used below the water table. Admixtures to reduce permeability or control setting time must meet ASTM Standard C 494-92. Concrete grout may be used with permission of the administrative authority where large void spaces need to be filled.
b. Neat cement grout. The mixture shall consist of one bag of cement (94 lbs.) to not more than six gallons of clean water. Admixtures to reduce permeability or control setting time must meet ASTM Standard C 494-92.

c. Bentonite grout. This is a mixture of water and commercial sodium-bentonite clay manufactured for the purpose of water well grouting. Mixing shall be per manufacturer’s specifications. Sodium-bentonite mixtures that have high viscosity but contain less than 10 percent solids are designed for drilling purposes and shall not be used as grout. Organic polymers used in grout mixtures must meet NSF Standard 60.

d. Exclusion. Drilling fluids and cuttings may not be used as grouting material to satisfy the minimum grouting requirements.

e. Application. Grouting shall be performed by pumping the mixture into the annular space from the bottom upward through the casing or through a tremie pipe until the annular space is filled. Grouting shall be done in one continuous operation, if possible. The bottom of the tremie pipe must remain submerged in grout while grouting.

f. Exceptions. The exceptions to this method of application are the use of buried-slab, percussion, or casing-hammer/rotary methods to construct a well. The proper grouting methods for these types of wells are specified in 49.8(1) and 49.8(2). Another exception is where dry bentonite is required because circulation cannot be maintained as described in 49.8(1) "b" (5).

49.9(4) Pitless adapters and pitless units. Rescinded IAB 7/21/04, effective 8/25/04.

1 Effective date of 49.9(1) “a” delayed 70 days by the Administrative Rules Review Committee at its meeting held May 12, 1998.

567—49.10(455B) Well reconstruction. All well reconstruction must meet the requirements of this chapter. If the well feature in need of reconstruction cannot be brought into compliance with these rules, the well must be properly plugged.

49.10(1) Installing a liner. If the reconstruction will involve the placement of a liner, the certified well contractor must then determine whether the proposed reconstruction will be done in order to correct a health-related problem. The work to be performed must then be done in accordance with paragraph “a” or “b” below.

a. Standards for installation of a liner to correct a health-related problem.

(1) The liner shall have a minimum of two sets of centering guides to allow the proper placement of grout. In no case shall the liner be driven into place.

(2) The liner shall extend to the ground surface or top of the pitless adapter.

(3) The annular space between the old casing and the liner shall be pressure-grouted in place throughout its entire length using an approved grout.

b. Standards for installation of a liner to correct a problem that is not health-related.

(1) The liner shall extend at least ten feet above the static water level or, if a caving zone is present, shall extend above this region.

(2) The liner may be pressure-grouted in place if there is a sufficient annular space for proper application of the grout.

c. Liner material standards. Liners must meet well casing standards as defined in 49.9(1). Liners may be composed of either steel or thermoplastic with a minimum inside diameter of 4 inches. Steel liners must be new and have a minimum wall thickness of .188 inches. Plastic liners must have a standard dimension ratio of 26 or less or a schedule rating of SCH 40 or SCH 80. If the installation does not meet the definition of a liner, then casing material shall be used.

49.10(2) Upper terminus. All well reconstruction performed on the upper terminus of a well must meet the standards of this chapter.

567—49.11(455B) Disposal of drilling mud. Drilling fluid and mud remaining after construction of a well shall not be disposed of in a stream or storm sewer nor shall these materials be discharged into a sanitary sewer without permission of the owner and operator of the wastewater treatment facility.
567—49.12(455B) Pumps and pumping equipment.

49.12(1) General pump installation requirements. The installation of pumps shall be planned and carried out so the pump will be:
   a. Installed so that it and its surroundings are not exposed to chemical or biological contamination;
   b. Properly sized so as to provide the volume of water necessary, where obtainable, for an adequate water supply;
   c. Designed to meet the well characteristics and not exceed the yield of the well except for low yield seepage/storage wells;
   d. Installed for operation without repriming or breaking suction;
   e. Installed in such a manner as to provide adequate protection against contamination of the water supply from any surface or subsurface sources;
   f. Installed in a manner so that it is accessible for maintenance, repair, and removal.

49.12(2) Lubrication. Pump motor lubricant or coolant oil shall be United States Department of Agriculture- or United States Food and Drug Administration-approved food contact grade formulations.

49.12(3) Other power pumps. Other power pumps located over the well shall be mechanically joined to the casing or on a pump foundation or stand in such a manner as to effectively seal the top of the well. A sanitary seal shall be used where the pump is not located over the well, and the pump delivery or suction pipe emerges from the top.

49.12(4) Hand pumps or similar devices.
   a. A hand pump, hand pump head, hand pump stand or similar device shall be constructed so that there are no openings into the interior of the pump or well casing where rain water, insects or vermin can enter. Hand pumps shall be provided with a casing vent as defined in 567—49.17(455B), and shall have a closed, downward-directed spout and a sealed pump rod packing assembly.
   b. A hand pump shall be attached to a well casing by a sealed flange or other method approved by the administrative authority to adequately prevent the entrance of surface water, dirt, animals, insects, or other foreign matter. The flange shall not be less than 12 inches above a concrete slab or the ground surface.
   c. Where a well casing functions as a hand pump cylinder wall, the plunger shall not be less than 25 feet below the ground surface. A casing wall weep hole is not permitted.

567—49.13(455B) Drop pipe.

49.13(1) Discharge pipe. Galvanized, black, or stainless steel drop pipe shall be minimum schedule 40 wall thickness. PVC drop pipe shall be minimum schedule 80 wall thickness. Schedule 80 machined PVC, brass, or stainless steel couplings shall be used with PVC pipe. Polyethylene drop pipe shall be minimum ASTM Standard PE3406 SDR9. Only brass or stainless steel fittings are permitted for use on polyethylene drop pipe. If polyethylene drop pipe is used, the outside diameter of the pump must be at least one inch smaller than the inside diameter of the well casing.

49.13(2) Check valve. For potable water installations, all pumps shall have a check valve within 20 feet of the pump for pump installations without drain-back aeration. For pump installations with drain-back aeration, the check valve shall be below the pitless adapter.

567—49.14(455B) Pump wiring. Pump wiring within the well shall be double-jacketed copper wire and shall meet the National Electrical Code specifications for wire sizing, unless the pump manufacturer requires a non-jacketed wire. Wire outside of the casing must meet, at a minimum, National Electrical Code specifications. Wire shall be secured to the drop pipe at a minimum of 20-foot intervals.

567—49.15(455B) Pitless adapters and pitless units.

49.15(1) Pitless adapters and pitless units conforming to Pitless Adapter Standard—1997 (PAS-97) as promulgated by the Water Systems Council are considered as complying with these rules. A copy of the standard is available for inspection at the Des Moines office of the department of natural resources records center or may be obtained for personal use from the Pitless Adapter Division, Water Systems Council, 1101 30th Street, NW, Suite 500, Washington, DC 20007.
49.15(2) No well casing shall be cut off or cut into below ground surface except to install a pitless well adapter below the frost level.

49.15(3) A pitless subsurface pipe connection to a well casing pipe shall be made with a weld-on, clamp-on, or bolt-on pitless adapter or weld-on or threaded pitless unit. Aboveground discharge pitless adapters with a drain-back into the well are prohibited on systems under continuous pressure.

49.15(4) If the pitless adapter is gasketed, the opening in the casing shall be sawed to the diameter recommended by the manufacturer with a hole saw and not cut with a torch. The pitless adapter used shall have the correct curvature to fit the diameter of the casing.

567—49.16(455B) Well caps and seals. A well cap shall be used on any well not protected by a wellhouse and must seal tightly against the casing to exclude surface water, dirt, insects or any foreign matter from entering the well. The well casing shall terminate at least one foot above the finished grade surface. A split-top sanitary seal may only be used on a well terminating within a wellhouse. Any openings in the cap or seal, such as for pump wiring, water depth measurement, or chemical feed, shall be properly grommeted or sealed, except properly screened and oriented vent openings. There shall be no openings through the well cap except for a factory installed vent, air line chemical feed, and power supply wiring, unless a proposal is submitted to and approved by the administrative authority. To be approved, the proposal must show that any entrance into the well cap is watertight and meets the following conditions: prevents surface water from entering the water supply, is secured in position, is removable with tools only, and is resistant to weathering and corrosion.

Well pump systems that are not under continuous pressure and have no pressure tank may discharge out of the top of the well if all connections are watertight welds or grommeted openings. Venting, heights and other cap requirements shall be met.

567—49.17(455B) Vents. A well cap used on a well that has a pitless adapter or pitless unit must have a screened vent hole, pointing downward, with not less than 24-mesh noncorrosive screen, and that is at least ½ inch in diameter. Vent openings shall terminate at least 12 inches above finished ground surface. Venting is required on all wells except Class 3 wells or flowing water wells.

567—49.18(455B) Underground piping. Underground piping from the well casing to the pressure tank shall be a minimum 100 psi pressure rating, NSF Standard 61, and meet ASTM standards for potable water.

567—49.19(455B) Underground wiring. Underground wiring from the well shall be enclosed in a watertight electrical conduit extending from the entrance of the conduit into the casing to a minimum of three feet below ground level, threaded into the well cap, or sealed into the cap or casing in a watertight manner. The internal passage of the conduit shall be sealed around the wire with a nonhardening, pliable sealing compound.

567—49.20(455B) Sampling faucets. In all pressure water systems, provision shall be made for collection of water samples directly from the well by installation of a sampling faucet before the pressure tank, and prior to encountering any water treatment equipment. The sampling faucet shall be installed at least 12 inches above the floor, have a downturned spout and be in an accessible location. All sample faucets shall be metal and have a smooth (nonthreaded) outlet.

567—49.21(455B) Hydropneumatic (pressure) tanks.

49.21(1) Sizing. The pressure tank shall have an effective water volume large enough to require the well pump to operate at least one minute between low-pressure activation and high-pressure shut off while no water is being used by the system. The minimum allowable pressure at the pressure tank shall be 30 psi.

49.21(2) Constant pressure pump. Constant pressure/variable speed pumps shall operate at a minimum pressure of 30 psi. Pressure tank size shall be according to manufacturer’s recommendation.
49.21(3) **Pressure relief valve.** The tank shall have a pressure relief valve of a size based on the pump capacity if the pump is capable of developing pressure greater than the working pressure of any component of the system. The pressure relief valve shall be located prior to any shut-off valve on the distribution system side of the tank.

49.21(4) **Pressure gauge.** The pressure tank shall have a pressure gauge capable of reading at least 100 psi.

49.21(5) **Tank appurtenances.** If a non-bladder tank is used, it shall be equipped with a means of adding or venting air from the tank to maintain the proper air-water ratio.

49.21(6) **Tank location.** Buried pressure tanks shall not be permitted after July 1, 2009. If pressure tanks are not located in a residence or other heated structure, they should be housed in the following manner:

a. **Buried vault (frost pit).** The vault and vault opening shall be sized to allow ease of access for the installation and maintenance of necessary equipment. The vault shall be as watertight as possible. The outside of the vault should be completely tiled at the base and either drain to daylight or to a sump pit that is equipped with a sump pump. The trench should be backfilled with pea gravel to one foot above the tile. All wiring in the vault shall be in watertight conduit. No buried vault shall be allowed within a 100-year flood plain. Buried vaults are not recommended because of the hazard associated with confined space entry.

b. **Aboveground structure.** The structure and access opening shall be sized to allow the installation and maintenance of necessary equipment with a minimum of inconvenience. The structure shall be of an all-seasons design. It shall be insulated and heated to prevent freezing of the tank. If a poured concrete floor is provided, the top of the floor shall be at least four inches above the surrounding ground and be sloped to a drain or to the door to facilitate drainage of the room. It is recommended that the structure be located no closer than ten feet from the well. If the structure is located over the well, it must have a hinged roof or removable hatch over the well or have other provisions for pulling the well pump.

567—49.22(455B) **Electrical connections.** At a minimum, all electrical installation shall be performed and maintained in accordance with the current National Electrical Code. A certified pump installer may perform wiring from the pump to the electrical panel unless local ordinances require additional licensing.

567—49.23(455B) **Interconnections and cross connections.** No connection between a well or boring and another well, boring, water supply system, any chemical injection or contamination source is allowed unless the connection is:

1. Protected by an air gap;
2. Protected by a backflow prevention device; or
3. Between wells or borings that meet the construction standards of this chapter, are used for the same purpose, and have equivalent quality water supply.

567—49.24(455B) **Backflow prevention for chemical injection systems for nonpotable water wells.**

49.24(1) **Backflow protection for irrigation.** Where a chemical injection system is connected directly to a water well used for irrigation and that is not used as a potable water supply, a single-check spring-loaded backflow preventer shall be installed between the point of chemical injection on the pump discharge piping and the water well in accordance with the manufacturer’s instructions. The check valve shall withstand a minimum hydraulic pressure of 150 psi without leaking. The backflow device shall be provided with the following:

a. Valving so that water can be drained from the system to prevent freezing.

b. A vacuum relief valve to prevent backsp honing of chemicals into the well.

c. An automatic low-pressure drain at least ¾ inches in diameter, positioned so that when draining occurs liquid will flow away from the well. The low-pressure drain shall be at least six inches above grade. The automatic low-pressure drain shall quickly drain the check valve body of water when operation of the water well pump is discontinued.

d. A watertight seal around the check valve.
**e.** An inspection port four inches in diameter to allow inspection of the operation of the check valve.

49.24(2) *Pump control interconnection.* The water well pump and the chemical injection pump shall be electrically connected so that, when the water well pump stops, the chemical pump will shut off automatically.

567—49.25(455B) **Filters and water treatment equipment.** Filters and water treatment equipment shall be installed and operated in accordance with manufacturers’ directions.

567—49.26(455B) **Well disinfection.** All new, repaired or rehabilitated wells shall be pumped to waste until the water is free of drilling mud, drill cuttings and sand, and the water is clear. Wells and water systems shall be disinfected by the contractor following completion of construction and whenever any well services have been performed. A chlorine solution such as a sodium or calcium hypochlorite shall be used. Chlorine compounds used for well disinfection must meet NSF Standard 61 and have no additives.

49.26(1) The disinfectant shall be dispersed throughout the entire water column in the well. The disinfectant shall also be brought into contact with the inside of the well casing pipe above the static water level.

49.26(2) The disinfectant shall remain in the well for a minimum of 2 hours if a concentration of at least 100 mg/L chlorine is achieved, or a minimum of 24 hours if at least 50 mg/L is achieved.

49.26(3) For emergency situations, a contact time of a minimum of 30 minutes shall be provided at a chlorine concentration of at least 200 mg/L.

49.26(4) The amount of HTH or household bleach required for a chlorine concentration of 200 mg/L is given in the following table:

<table>
<thead>
<tr>
<th>Well casing diameter (in inches)</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>12</th>
<th>18</th>
<th>24</th>
<th>30</th>
<th>36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of pelleted HTH (in ounces containing approx. 70 percent Ca(OCl)₂)</td>
<td>0.7</td>
<td>1.5</td>
<td>2.6</td>
<td>5.6</td>
<td>13</td>
<td>23</td>
<td>36</td>
<td>52</td>
</tr>
<tr>
<td>Amount of chlorine bleach (in pints containing 5.25 percent NaOCl)</td>
<td>0.5</td>
<td>1.2</td>
<td>2.1</td>
<td>4.7</td>
<td>10.6</td>
<td>18.8</td>
<td>29.3</td>
<td>42.2</td>
</tr>
</tbody>
</table>

49.26(5) Dry disinfectant shall be dissolved in a separate container of water before introduction into the well. The solution shall contain not more than eight ounces of pelleted HTH disinfectant per five gallons of water.

567—49.27(455B) **Water sampling and analysis.**

49.27(1) The owner of a new, reconstructed, or rehabilitated well shall be responsible for submitting a water sample to a certified laboratory for coliform bacteria and nitrate analysis. The water sample shall be collected at least 10 days and not more than 30 days after a well is put into service following the construction, reconstruction, or rehabilitation. The analysis results shall be submitted to the administrative authority.

49.27(2) If the water sample analysis detects presence of bacteria, the disinfection procedure described in rule 567—49.26(455B) shall be repeated.

567—49.28(455B) **Abandonment of wells.** Abandoned wells are a contamination hazard to the water bearing formation as well as a physical hazard for people.

49.28(1) *Plugging rules.* Abandoned wells shall be properly plugged as required in 567—Chapter 39.
**49.28(2) Waste disposal prohibition.** Under no circumstances shall abandoned wells be used for the disposal of debris, solid waste, septic tank sludge or effluents, or for any other type of unauthorized disposal of waste materials, or as a receptacle for field tile drainage.

**567—49.29(455B) Closed circuit vertical heat exchangers.** These provisions apply to closed circuit vertical heat exchanger construction.

- **49.29(1)** Piping used must be 160 psi pressure-rated high-density polyethylene or polybutylene.
- **49.29(2)** Connection to piping must use socket fusion or butt fusion joining methods.
- **49.29(3)** Piping must be pressure-tested with air or potable water for 15 minutes at a pressure of 1.5 times the system operating pressure after installation in the borehole.
- **49.29(4)** The annular space between the vertical heat exchanger piping and the borehole must be grouted as required in subrule 49.9(3) using an approved grouting method and material. Grout shall be placed at least in the top 40 feet. Any confining layers between aquifers shall be replaced with grout. Grouting must be performed within 24 hours of completion of the borehole.
- **49.29(5)** Only food-grade or USP-grade propylene glycol or calcium chloride may be used as heat transfer fluid. Any other materials or additives must be NSF-approved for drinking water applications. A permanent sign must be attached to the heat pump specifying that only approved heat transfer fluids may be used.
- **49.29(6)** A flow measurement device must be installed on each system.
- **49.29(7)** Water make-up lines to the vertical heat exchanger must be protected with a backflow prevention device.

These rules are intended to implement Iowa Code chapter 455B.

[Filed 5/20/80, Notice 11/14/79—published 6/11/80, effective 10/1/80]
[Filed emergency 2/20/81 after Notice 12/24/80—published 3/18/81, effective 2/28/81]
[Filed 11/19/82, Notice 7/7/82—published 12/8/82, effective 1/12/83]
[Filed emergency 6/3/83—published 6/22/83, effective 7/1/83]
[Filed 5/2/86, Notice 1/1/86—published 5/21/86, effective 6/25/86]
[Filed emergency 11/14/86—published 12/3/86, effective 12/3/86]
[Filed 4/29/88, Notice 1/13/88—published 5/18/88, effective 7/1/88]
[Filed 1/26/96, Notice 11/8/95—published 2/14/96, effective 3/20/96]
[Filed 3/19/98, Notice 11/19/97—published 4/8/98, effective 5/13/98]
[Filed 7/1/04, Notice 3/17/04—published 7/21/04, effective 8/25/04]
[Filed ARC 6190C (Notice ARC 6037C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]

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1 Effective date of Chapter 49 [Health Dept. Ch 45] delayed 70 days by the Administrative Rules Review Committee [Published 10/1/80]. Effective date of Chapter 49 [Health Dept. Ch 45] delayed by the Administrative Rules Review Committee 45 days after convening of the next General Assembly pursuant to §17A.8(9) [Published 11/26/80].

2 Effective date of 49.9(1)”a” delayed 70 days by the Administrative Rules Review Committee at its meeting held May 12, 1998.
567—60.1(455B,17A) Scope of title. The department has jurisdiction over the surface water and groundwater of the state to prevent, abate and control water pollution by establishing standards for water quality and for direct or indirect discharges of wastewater to waters of the state and by regulating potential sources of water pollution through a system of general rules or specific permits. The construction and operation of any wastewater disposal system and the discharge of any pollutant to a water of the state require a specific permit from the department, unless exempted by the department.

This chapter provides general definitions applicable in this title and rules of practice, including forms, applicable to the public in the department’s administration of the subject matter of this title.

567—Chapter 61 contains the water quality standards of the state, including classification of surface waters. 567—Chapter 62 contains the standards or methods for establishing standards relevant to the discharge of pollutants to waters of the state. 567—Chapter 63 identifies monitoring, analytical and reporting requirements pertaining to permits for the operation of wastewater disposal systems. 567—Chapter 64 contains the standards and procedures for obtaining construction, operation and NPDES permits for wastewater disposal systems other than those associated with animal feeding operations. 567—Chapter 65 specifies minimum waste control requirements and permit requirements for animal feeding operations. 567—Chapter 66 specifies restrictions on pesticide application to waters. 567—Chapter 67 contains standards for the land application of sewage sludge. 567—Chapter 68 contains standards and licensing requirements applicable to commercial septic tank cleaners. 567—Chapter 69 specifies guidelines for private sewage disposal systems.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—60.2(455B) Definitions. The following definitions apply to this title, unless otherwise specified in the particular chapter of this title:


“Acute toxicity” means that level of pollutants which would rapidly induce a severe and unacceptable impact on organisms.

“Application for a construction permit” means the engineering report, plans and specifications and other data deemed necessary by the department for the construction of a proposed wastewater disposal system or part thereof.

“Application for an operation permit” means a written application for an operation or NPDES permit made on forms provided by the department.

“Approved pretreatment program” means a program administered by a publicly owned treatment works that meets the criteria established in 40 CFR Part 403 and which has been approved by the director.

“Aquatic pesticide” means any pesticide, as defined in Iowa Code section 206.2, that is labeled for application to surface water.


“Average dry weather flow” or “ADW” means the daily average flow when the groundwater is at or near normal and runoff is not occurring.

“Average wet weather flow” or “AWW” means the daily average flow for the wettest 30 consecutive days for mechanical plants or for the wettest 180 consecutive days for controlled discharge lagoons.

“Best management practice (BMP)” means a practice or combination of practices that is determined, after problem assessment, examination of alternative practices, and appropriate public participation, to be the most effective, practicable (including technological, economic and institutional
considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

“Biochemical oxygen demand (five-day)” means the amount of oxygen consumed in the biological processes that break down organic matter in water by aerobic biochemical action in five days at 20°C.

“Bypass” means the diversion of waste streams from any portion of a treatment facility or collection system. A bypass does not include internal operational waste stream diversions that are part of the design of the treatment facility, maintenance diversions where redundancy is provided, diversions of wastewater from one point in a collection system to another point in a collection system, or wastewater backups into buildings that are caused in the building lateral or private sewer line.

“Carbonaceous biochemical oxygen demand (five-day)” means the amount of oxygen consumed in the biological processes that break down carbonaceous organic matter in water by aerobic biochemical action in five days at 20°C.

“CFR” or “Code of Federal Regulations” means the federal administrative rules adopted by the United States in effect as of July 1, 2021. The amendment of the date contained in this definition shall constitute the amendment of all CFR references contained in 567—Chapters 60 to 69, Title IV, unless a date of adoption is set forth in a specific rule.

“Chronic toxicity” means that level of pollutants which would, over long durations or recurring exposure, cause a continuous, adverse or unacceptable response in organisms.

“Combined sewer overflow” means the discharge from a combined sewer system at a point prior to the treatment works.

“Combined sewer system” means a wastewater collection system owned by a municipality which conveys sanitary wastewater (domestic, commercial, and industrial) and storm water through a single pipe system to the treatment plant.

“Construction permit” means a written approval from the director to construct a wastewater disposal system or part thereof in accordance with the plans and specifications approved by the department.

“Continuing planning process (CPP)” means the continuing planning process, including any revision thereto, required by Sections 208 and 303(e) of the Act (33 U.S.C. §§1288 and 1313(e)) for state water pollution control agencies. The continuing planning process is a time-phased process by which the department, working cooperatively with designated areawide planning agencies:

a. Develops a water quality management decision-making process involving elected officials of state and local units of government and representatives of state and local executive departments that conduct activities related to water quality management.

b. Establishes an intergovernmental process which provides for water quality management decisions to be made on an areawide or local basis and for the incorporation of such decisions into a comprehensive and cohesive statewide program. Through this process, state regulatory programs and activities will be incorporated into the areawide water quality management decision process.

c. Develops a broad-based public participation (such as utilization of such mechanisms as basin advisory committees composed of local elected officials, representatives of areawide planning agencies, the public at large, and conservancy district committees) aimed at both informing and involving the public in the water quality management program.

d. Prepares and implements water quality management plans, which identify water quality goals and established state water quality standards, defines specific programs, priorities and targets for preventing and controlling water pollution in individual approved planning areas and establishes policies which guide decision making over at least a 20-year span of time (in increments of 5 years).

e. Based on the results of the statewide (state and areawide) planning process, develops the state strategy to be updated annually, which sets the state’s major objectives, approach, and priorities for preventing and controlling pollution over a five-year period.

f. Translates the state strategy into the annual state program plan (required under Section 106 of the federal Act), which establishes the program objectives, identifies the resources committed for the state program each year, and provides a mechanism for reporting progress toward achievement of program objectives.
g. Periodically reviews and revises water quality standards as required under Section 303(c) of the federal Act.

“Crossover point” means that location in a river or stream in which the flow shifts from being principally along one bank to the opposite bank. This crossover point usually occurs within two curves or an S-shaped curve of a water course.

“Culture water” means reconstituted water or other acceptable water used for culturing test organisms.

“Deep well” means a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

“Diluted effluent sample” means a sample of effluent diluted with culture water at the same ratio as the dry weather design flow to the applicable receiving stream flow contained in the zone of initial dilution as allowed in 567—subrule 61.2(4), regulatory mixing zones, including paragraphs “b,” “c,” and “d.”

“Dilution ratio” means, for a specific wastewater discharger, the ratio of the seven-day, ten-year low stream flow to the effluent design flow, e.g., a dilution ratio of 2:1 has two parts stream flow to one part effluent flow.

“Discharge of a pollutant” means any addition of any pollutant or combination of pollutants to navigable waters or waters of the state from any point source. “Discharge of a pollutant” includes additions of pollutants into navigable waters or waters of the state from surface runoff which is collected or channeled by human activity; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. “Discharge of a pollutant” does not include an addition of pollutants by any indirect discharger.

“Disposal system” means a system for disposing of sewage, industrial waste, or other wastes, or for the use or disposal of sewage sludge. “Disposal system” includes sewer systems, treatment works, point sources, dispersal systems, and any systems designed for the usage or disposal of sewage sludge.

“Effluent toxicity test” means a test to determine the toxicity of a chemical or chemicals contained in a wastewater discharge on living organisms in a static 48-hour exposure under laboratory conditions.

“Excessive infiltration/inflow (I/I)” as referred to in the discussion of secondary treatment is the quantity of I/I which is more economical to remove from the sewer system than to transport and treat at a wastewater facility. Within the cost-effectiveness analysis performed to determine excessive I/I, the transportation and treatment costs will be based on the percent removal requirements specified in the appropriate subrule, 567—subrule 62.3(1) or 62.3(3).

“Fecal coliform” means the portion of the coliform group which is present in the gut or the feces of warm-blooded animals. It includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5 + / - 0.2°C.


“General permit” means an NPDES permit issued to a class of facilities which could be conditioned and described by a single permit.

“Human health criteria” means that level of pollution which, in the case of noncarcinogens, prevents adverse health effects in humans, and in the case of carcinogens, represents a level of incremental cancer risk of 1 in 100,000. The numerical criteria are based on the human consumption of an average of 6.5 grams of fish and shellfish per day by a 70-kilogram individual for a life span of 70 years.

“Indirect discharger” means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

“Individual non-storm water permit” means a site-specific NPDES or operation permit that is not an individual storm water permit and that authorizes discharges of sewage, industrial waste, or other waste and allowable discharges of storm water associated with industrial activity, as specifically noted in the permit.
“Individual storm water permit” means an individual site-specific NPDES permit that authorizes discharges composed entirely of storm water associated with industrial activity or construction activity and other allowable non-storm water discharges as specifically noted in the permit.

“Industrial waste” means any liquid, gaseous, radioactive, or solid waste substance resulting from any process of industry, manufacturing, trade, or business, or from the development of any natural resource.

“Interference” means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

1. Inhibits or disrupts a POTW, its treatment process or operations, or its sludge processes, use or disposal; and
2. Is a cause of a violation of any requirement of a POTW NPDES permit including an increase in the magnitude or duration of a violation or the prevention of sewage sludge use or disposal.

“Intermittent watercourses” means watercourses which contain flow associated with rainfall/runoff events and which periodically go dry even in pooled areas.

“Local public works department” means a city or county public works department, a board of trustees of a city utility organized pursuant to Iowa Code chapter 388, or a sanitary sewer district organized pursuant to Iowa Code chapter 358.

“Losing streams” means streams which lose 30 percent or more of their flow during the seven-day, ten-year low stream flow periods to cracks and crevices of rock formations, sand and gravel deposits, or sinkholes in the streambed.

“Low permeability” means a soil layer of well-sorted, fine grain-sized sediments or of rock that under normal hydrostatic pressures would not be significantly permeable. Low permeability soils may include homogeneous clays below the zone of weathering, mudstone, claystone, shale, and some glacial till.

“Major,” for municipalities, means a facility having an average wet weather design flow of 1.0 million gallons per day (MGD) or greater. For industries “major” means a facility which is designated by EPA as being a major industry based on the EPA point rating system.

“Major permit amendment” or “major modification” means a permit modification that is not a minor permit amendment as defined in this rule.

“Maximum wet weather flow” or “MWW” means the total maximum flow received during any 24-hour period when the groundwater is high and runoff is occurring.

“Milligrams per liter (mg/l)” means milligrams of solute per liter of solution (equivalent to parts per million-assuming unit density). A microgram (μg) is 1/1000 of a milligram.

“Minimum flow” means that established stream flow in lieu of the seven-day, ten-year low stream flow to which the provisions of 567—Chapter 61 apply.

“Minor” means all remaining municipal and industrial facilities which have wastewater discharge flows and which are not designated as major facilities.

“Minor permit amendment” or “minor modification” means a permit modification made with the consent of the permittee that occurs as a result of any of the following:

1. Correction of a typographical error;
2. Modification of the monitoring and reporting requirements in the permit to include more frequent monitoring or reporting;
3. Revision of an interim date in a compliance schedule, provided that the new date is not more than 120 days after the date specified in the permit and does not interfere with the attainment of the final compliance date;
4. Change in facility name or ownership;
5. Deletion of a point source outfall that does not result in the discharge of pollutants from other outfalls; or
6. Incorporation of an approved local pretreatment program.

“Mixing zone” means a delineated portion of a stream or river in which wastewater discharges will be allowed to combine and disperse into the water body. The chronic criteria of 567—subrule 61.3(3) will apply at the boundary of this zone.
“Mortality” means, for the purpose of the 48-hour acute toxicity test, death, immobilization, or serious incapacitation of the test organisms.

“Navigable water” means a water of the United States as defined in 40 CFR Part 122.2.

“Nephelometric” means the nephelometric method of determining turbidity as stated in Standard Methods, pp. 132-134.

“New discharger” means any building, structure, facility, or installation:
1. From which there is or may be a “discharge of pollutants”;
2. That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;
3. Which is not a “new source”; and
4. Which has never received a finally effective NPDES permit for discharges at that “site.”

This definition includes an “indirect discharger” which commences discharging into “waters of the United States” after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant that begins discharging at a “site” for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a “site” under EPA’s permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be an area of biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR 125.122(a)(1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a “new discharger” only for the duration of its discharge in an area of biological concern.

“New source” means any building, structure, facility or installation from which there is or may be a discharge of pollutants to a navigable water, the construction of which commenced after the promulgation of standards of performance under Section 306 of the Act which are applicable to such source, provided that:
1. The building, structure, facility or installation is constructed at a site at which no other source is located; the building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or the production or wastewater generating processes of the building, structure, facility or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors, such as the extent to which the new facility is integrated with the existing plant and the extent to which the new facility is engaged in the same general type of activity as the existing source, should be considered.
2. Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility or installation meeting the criteria of paragraph “1” but otherwise alters, replaces, or adds to existing process or production equipment.
3. Construction of a new source as defined pursuant to this rule has commenced if the owner or operator has:
   a. Begun, or caused to begin, as part of a continuous on-site construction program, any placement, assembly, or installation of facilities or equipment; or significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
   b. Entered into a binding contractual obligation for the purchase of facilities or equipment which is intended to be used in the operation of the new source within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this definition.

“Nonpoint source” means a source of pollutants that is not a point source.
"NPDES permit" means an operation permit, issued after the department has obtained approval of its National Pollutant Discharge Elimination System (NPDES) program from the administrator, that authorizes the discharge of any pollutant into a navigable water.

"Operation permit" means a written permit by the director authorizing the operation of a wastewater disposal system or part thereof or discharge source and, if applicable, the discharge of wastes from the disposal system or part thereof or discharge source to waters of the state. An NPDES permit will constitute the operation permit in cases where there is a discharge to a water of the United States and an NPDES permit is required by the Act.

"Other waste" means heat, garbage, municipal refuse, lime, sand, ashes, offal, oil, tar, chemicals, and all other wastes which are not sewage or industrial waste.

"Pass through" means a discharge which, alone or in conjunction with a discharge or discharges entering the treatment facility from other sources, exits a POTW or semipublic sewage disposal system in quantities or concentrations which cause a violation of any requirement of the treatment facility's NPDES permit including an increase in the magnitude or duration of a violation.

"Pathogen" means any microorganism or virus that can cause disease.

"Permit rationale" means a document that sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing a draft operation or NPDES permit.

"Pesticide" shall have the definition as stated in Iowa Code section 206.2.

"pH" means the hydrogen ion activity of a solution expressed as the logarithm of the reciprocal of the hydrogen ion activity in moles per liter at 25°C. pH is a measure of the relative acidity or alkalinity of the solution. The range extends from 0 to 14; 7 being neutral, 0 to 7 being acidic, and 7 to 14 being alkaline.

"Point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

"Pollutant" means sewage, industrial waste, or other waste.

"Population equivalent" means the calculated number of people who would contribute an equivalent amount of biochemical oxygen demand (BOD) per day as the system in question, assuming that each person contributes 0.167 pounds of five-day, 20 degrees Celsius, BOD per day.

"Positive toxicity test result" means a statistical significant difference of mortality rate between the control and the diluted effluent test.

"POTW" or "publicly owned treatment works" means any device or system used in the treatment of municipal sewage or industrial wastes of a liquid nature which is owned by a municipal corporation or other public body created by or under Iowa law and having jurisdiction over disposal of sewage, industrial wastes or other wastes, or a designated and approved management agency under Section 208 of the Act.

"Pretreatment" means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration may be obtained by physical, chemical, or biological processes, by process changes, or by other means, except as prohibited in 40 CFR 403.6(d).

"Pretreatment requirements" means any substantive or procedural requirement related to pretreatment, other than a national pretreatment standard, imposed on an industrial user.

"Pretreatment standard" or "national pretreatment standard" means any regulation containing pollutant discharge limits promulgated by EPA in accordance with Section 307(b) and (c) of the Act, which applies to industrial users. "Pretreatment standard" includes prohibitive discharge limits established pursuant to 40 CFR 403.5.

"Primary contact" means any recreational or other water use in which there is direct human contact with the water involving considerable risk of ingestion of water or contact with sensitive body organs such as the eyes, ears and nose, in quantities sufficient to pose a significant health hazard.
“Private sewage disposal system” means a system which provides for the treatment or disposal of domestic sewage from four or fewer dwelling units or the equivalent of less than 16 individuals on a continuing basis, including domestic waste, whether residential or nonresidential, but not including industrial waste of any flow rate except as provided for in 567—68.11(455B). “Private sewage disposal system” includes, but is not limited to, septic tanks, holding tanks for waste, chemical toilets, impervious vault toilets and portable toilets.

“Qualified volunteer” means a person or group of people acting on their own behalf, and not for a government agency or under contract with the department, to produce water quality monitoring data in accordance with a department-approved volunteer monitoring plan. Qualified volunteers must have the training and experience to ensure quality assurance and quality control for the data being produced, or be under the direct supervision of a person having such qualifications. A person or persons identified as participants in a department-approved volunteer monitoring plan will be considered qualified volunteers.

“Records of operation” means department of natural resources report forms or such other report forms, letters or documents which may be acceptable to the department that are designed to indicate specific physical, chemical, or biological values for wastewater during a stated period of time.

“Regional administrator” means the regional administrator of the United States Environmental Protection Agency, Region VII, 11201 Renner Blvd., Lenexa, Kansas 66219, or the authorized representative of the regional administrator.

“Secondary contact” means any recreational or other water use in which contact with the water is either incidental or accidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, commercial and recreational boating and any limited contact incidental to shoreline activity. This would include users who do not swim or float in the water body while on a boating activity.

“Semipublic sewage disposal system” means a system for the treatment or disposal of domestic sewage which is not a private sewage disposal system and which is not owned by a city, a sanitary sewer district, or a designated and approved management agency under Section 208 of the Act (33 U.S.C. 1288).

“Seven-day average” means the arithmetic mean of pollutant parameter values for samples collected in a period of seven consecutive days.

“Seven-day, ten-year low stream flow” means the lowest average stream flow which would statistically occur for seven consecutive days once every ten years.

“Severe property damage” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. “Severe property damage” does not mean economic loss caused by delays in production.

“Sewage” means the water-carried waste products from residences, public buildings, institutions, or other buildings, including the bodily discharges from human beings or animals together with such groundwater infiltration and surface water as may be present.

“Sewage from vessels” means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under Section 312 of the Act.

“Shallow well” means a well located and constructed in such manner that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

“Significant industrial user” means an industrial user of a POTW that meets any one of the following conditions:

1. Discharges an average of 25,000 gallons per day or more of process wastewater excluding sanitary, noncontact cooling and boiler blowdown wastewater;
2. Contributes a process waste stream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW;
3. Is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or

4. Is designated by the department as a significant industrial user on the basis that the contributing industry, either singly or in combination with other contributing industries, has a reasonable potential for adversely affecting the operation of or effluent quality from the POTW or for violating any pretreatment standards or requirements.

Upon a finding that an industrial user meeting the criteria in paragraph “1” or “2” of this definition has no reasonable potential for adversely affecting the operation of the POTW or for violating any pretreatment standard or requirement, the department may, at any time on its own initiative or in response to a request received from an industrial user or POTW, determine that an industrial user is not a significant industrial user.

“Significantly more stringent limitation” relates to secondary treatment CBOD₅ and SS limitations necessary to meet the percent removal requirements of at least 5 mg/l more stringent than the otherwise applicable concentration-based limitations (i.e., less than 20 mg/l in the case of CBOD₅), or the percent removal limitations in 567—subrules 62.3(1) and 62.3(3), if such limits would, by themselves, force significant construction or other significant capital expenditure.

“Sinkhole” means any depression caused by the dissolution or collapse of subterranean materials in a carbonate formation or in gypsum or rock salt deposits through which water may be drained or lost to the local groundwater system. Such depressions may or may not be open to the surface at times. Intermittently, sinkholes may hold water forming a pond.

“Small municipal separate storm sewer system” means all separate storm sewer systems that are owned or operated by the United States, the state of Iowa or a city, town, county, district, association or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to waters of the United States or of the state of Iowa, and that have a population of less than 100,000 as determined by the 1990 census. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas such as individual buildings.

“Storm water” means storm water runoff, snow melt runoff and surface runoff and drainage. (NOTE: Agricultural storm water runoff is excluded by federal regulation 40 CFR 122.3(e).)

“Storm water discharge associated with industrial activity” means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR Part 122. For the categories of industries identified in paragraphs “1” to “10” of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

For the categories of industries identified in paragraphs “1” to “9” and “11,” the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. To qualify for this exclusion, a storm-resistant shelter is not required for: drums,
barrels, tanks and similar containers that are tightly sealed with bands or otherwise secured and have no
taps or valves, are not deteriorated and do not leak; adequately maintained vehicles used in material
handling; and final products other than products that would be mobilized in storm water discharge.
The term excludes areas located on plant lands separate from the plant’s industrial activities, such as
office buildings and accompanying parking lots as long as the drainage from the excluded areas is not
mixed with storm water drained from the above described areas. Industrial facilities (including industrial
facilities that are federally, state, or municipally owned or operated) that meet the description of the
facilities listed in paragraphs “1” to “11” of this definition include those facilities designated under 40
CFR 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in “industrial
activity” for purposes of this definition:
1. Facilities subject to storm water effluent limitations guidelines, new source performance
standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic
pollutant effluent standards which are exempted under paragraph “11” of this definition);
2. Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and
267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373;
3. Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry)
including active or inactive mining operations (except for areas of coal mining operations meeting the
definition of a reclamation area under 40 CFR 434.11(1)) because the performance bond issued to the
facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining
operations which have been released from applicable state or federal reclamation requirements after
December 17, 1990, and oil and gas exploration, production, processing, or treatment operations, or
transmission facilities that discharge storm water contaminated by contact with, or that has come into
contact with, any overburden, raw material, intermediate products, finished products, by-products or
waste products located on the site of such operations; (inactive mining operations are mining sites that
are not being actively mined, but which have an identifiable owner/operator; inactive mining sites
do not include sites where mining claims are being maintained prior to disturbances associated with
the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are
undertaken for the sole purpose of maintaining a mining claim);
4. Hazardous waste treatment, storage, or disposal facilities, including those that are operating
under interim status or a permit under Subtitle C of RCRA;
5. Landfills, land application sites, and open dumps that have received any industrial wastes (waste
that is received from any of the facilities described under this definition) including those that are subject
to regulation under Subtitle D of RCRA;
6. Facilities involved in the recycling of materials, including metal scrap yards, battery reclaimers,
salvage yards, and automobile junkyards, including, but not limited to, those classified as Standard
Industrial Classifications 5015 and 5093;
7. Steam electric power generating facilities, including coal handling sites;
8. Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except
4221-4225), 43, 44, 45 and 5171 which have vehicle maintenance shops, equipment cleaning operations,
or airport deicing operations. Only those portions of the facility that are either involved in vehicle
maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication),
equipment cleaning operations, airport deicing operations, or which are otherwise identified under
paragraphs “1” to “7” or “9” or “11” of this definition are associated with industrial activity;
9. Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment
device or system used in the storage, treatment, recycling, and reclamation of municipal or domestic
sewage, including land dedicated to the disposal of sewage sludge that are located within the confines
of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment
program under 40 CFR Part 403. Not included are farmlands, domestic gardens or lands used for sludge
management where sludge is beneficially reused and which are not physically located in the confines
of the facility, or areas that are in compliance with 40 CFR Part 503;
10. Construction activity including clearing, grading and excavation activities except operations
that result in the disturbance of less than 5 acres of total land area which is not part of a larger common
plan of development or sale. Effective March 10, 2003, construction activity including clearing, grading and excavation activities except operations that result in the disturbance of less than 1 acre of total land area which is not part of a larger common plan of development or sale;

11. Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-4225 (and which are not otherwise included within paragraphs “2” to “10”).

“Storm water discharge associated with small construction activity” means the discharge of storm water from:

1. Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than 1 acre and less than 5 acres. Small construction activity also includes the disturbance of less than 1 acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb an area equal to or greater than 1 acre and less than 5 acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

2. Any other construction activity designated by the director based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States.

“Storm water point sources” means point sources that serve to collect, channel, direct, and convey storm water and which are subject to Section 402(p) of the federal Clean Water Act and 40 CFR Parts 122, 123, and 124.

“Temperature” means a measure of the heat content of water.

“Thirty-day average” means the arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

“Toxicity reduction evaluation (TRE) program” means a step-wise process, similar to that found in EPA Document/600/2-88/062, which combines effluent toxicity tests and analysis of the chemical characteristics of the effluent to determine the cause of the effluent toxicity or the treatment methods which will reduce the effluent toxicity, or both.

“Turbidity” is a measure of the optical property of the particles of mud, clay, silt, finely divided organic matter, or microscopic organisms suspended in water that interfere with light transmission, causing the light to be scattered and absorbed rather than transmitted through the water in straight lines.

“Uncontrolled sanitary landfill” means a landfill or open dump, whether in operation or closed, that does not meet the requirements for runon or runoff controls established pursuant to subtitle D of the Solid Waste Disposal Act.

“Valid effluent toxicity test” means the mortality in the control test is not greater than 10 percent and all test conditions contained in 567—subrule 63.4(2) “b” “Standard Operating Procedure: Effluent Toxicity Testing, Iowa Department of Natural Resources” are met.

“Water contact recreational canoeing” means the type of activities associated with canoeing outings in which primary contact with the water does occur. This would include users who swim or float in the water body while on a canoeing outing.

“Water of the state” means any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the state or any portion thereof.

“Water quality requirement” means the same as defined in 40 CFR §121.1(n).

“Zone of initial dilution” means a delineated portion of a mixing zone in which wastewater discharges will be allowed to rapidly combine and begin dispersing into the water body. The acute criteria of 567—subrule 61.3(3) will apply at the boundary of this zone.

[ARC 7625B, IAB 3/11/09, effective 4/15/09 (See Delay note at end of chapter); ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 5679C, IAB 6/16/21, effective 7/21/21; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—60.3(455B,17A) Wastewater forms. The following construction permit application forms and operation and NPDES permit forms provided by the department shall be used to apply for departmental
approvals and permits and to report on activities related to the department’s wastewater programs. Electronic forms may be accessed on the department’s website or obtained from the appropriate regional field office. Paper forms, when available, may be obtained from the department’s website or by contacting the appropriate regional field office. Properly completed application forms, reporting forms, and all attachments shall be submitted in accordance with department instructions.

60.3(1) Construction permit application forms.
   a. Schedules 28 — “A” to “S”
      “A” — General Information 542-3129
      “B” — Collection System 542-3095
      “C” — Lateral Sewer System 542-3096
      “D” — Trunk and Interceptor Sewer 542-3097
      “E” — Pump Station 542-3098
      “F” — Treatment Project Site Selection 542-3099
      “G” — Treatment Project Design Data 542-3106
      “H1” — Schematic Flow Diagram 542-3101
      “H2” — Treatment Process Removal Efficiency 542-3102
      “H3” — Mechanical Plant Reliability 542-3239
      “I” — Screening, Grit Removal and Flow Measurement 542-3089
      “J” — Septic Tank System 542-3090
      “K1” — Controlled Discharge Pond 542-3091
      “K2” — Aerated Pond 542-3092
      “K3” — Anaerobic Lagoon 542-3093
      “L” — Settling Tanks 542-3094
      “M” — Fixed Film Reactor—Stationary Media 542-3081
      “N” — Rotating Biological Contactor 542-3082
      “O” — Aeration Tanks or Basins 542-3083
      “P” — Gas Chlorination 542-3084
      “Q” — Sludge Dewatering and Disposal 542-3085
      “R1” — Sludge Dewatering and Disposal 542-3086
      “R2A” — Low Rate Land Application of Sludge (Part I) 542-3087
      “R2B” — Low Rate Land Application of Sludge (Part II) 542-3088
      “S” — Land Application of Wastewater (To be developed)
   b. Form 29 — Sewage Treatment Agreement 542-3219

60.3(2) Operation and NPDES permit application forms. Rescinded IAB 2/9/22, effective 3/16/22.

60.3(3) Wastewater records of operation and other report forms. Rescinded IAB 2/9/22, effective 3/16/22.

567—60.4(455B,17A) Application procedures and requirements generally. The following procedures and requirements pertain to applications for wastewater permits. More specific and substantive requirements may be found in 567—Chapters 61 to 65.

60.4(1) Construction permit applications.
   a. General. All applications for a construction permit pursuant to 567—64.2(455B) shall be made in accordance with the instructions for completion of application for wastewater construction permit. The instructions specify the requirements for federal grant and nongrant projects. In addition to the required engineering documents and data the appropriate application schedules (Form 28, “A” to “S”) and Sewage Treatment Agreement Form 29 as applicable shall be submitted. The applicant will be promptly notified if the application is incomplete or improperly filled out, and an application will not be reviewed until such time as a complete and proper submission is made. A wastewater construction permit will be denied when the application does not meet all requirements for issuance of a construction permit. For a system with permits conditioned by limitations on additional loads under 567—subrule
64.2(10), paragraphs “a,” “b” or “f;” subsequent construction permit applications must be accompanied by an accounting of connections and additional loading since the time the initial conditioned permit was issued.

b. **Sewer systems.** If Schedule B, “Collection System,” of the construction permit application does not provide sufficient information on which to make a determination to grant or deny a sewer system construction permit under this subrule, additional information, such as the following, may be requested and evaluated:

   1. Sources of extraneous flows,
   2. Population trends and density in area to be served,
   3. Quality and strength of wastes from industrial contributors,
   4. Existing water used data,
   5. Historical and experience data,
   6. Location, capacity, and condition of existing sewer system and stormwater drainage courses,
   7. Probability of annexation or development of adjacent areas,
   8. Service agreements with adjacent communities,
   9. Existence and effectiveness of industrial waste ordinance,
   10. Drainage area limits,
   11. Bypasses and combined sewers,
   12. Municipal sewer map.

c. **Site surveys.** For new or expanded wastewater treatment facilities, an application for a site survey must be submitted, by the applicant’s engineer, generally in advance of a full application for construction permit. The applicant should allow 60 days from the date of application for preliminary approvals. The following minimum information must be submitted:

   1. A preliminary engineering report or a cover letter which contains a brief description of the proposed treatment process and assurance that the project is in conformance with the long-range planning of the area.
   2. Completed Schedule A — General Information
   3. Completed Schedule F — Treatment Project Site Selection
   4. Completed Schedule G — Treatment Project Design Data

   If the application is incomplete it will be returned to the engineer for completion. When the application is complete it will be reviewed and if the data submitted indicates on its face that the site would be unsuitable for its intended purpose, a letter of rejection will be sent to the applicant and the engineer. Clarifications and additional data may be requested of the applicant and the engineer. When the application is complete and indicates on its face that the site may be suitable, a site survey will be conducted by department staff.

d. **Modification.** Persons seeking a modification to plans and specifications after having been issued a construction permit shall submit an addendum to plans and specifications, a change order, or revised plans and specifications, along with the reasons for the proposed changes, to the department. A supplemental written permit or approval will be issued when the changes submitted by the applicant meet department requirements. Construction shall not proceed until such changes have been approved.

e. **Fees.** Required fees shall be submitted with all applications for a construction permit as noted in 567—64.16(455B).

60.4(2) **Operation and NPDES permit applications.**

a. **General.** A person required to obtain or renew a wastewater operation permit or an Iowa NPDES permit pursuant to 567—Chapter 64, 567—Chapter 65, or 567—Chapter 69 must complete the appropriate application form as identified in 567—60.3(455B.17A).

   1. Complete applications. A permit application is complete and approvable when all necessary questions on the application have been completed and the application is signed pursuant to 567—subrule 64.3(8), and when all applicable portions of the application, including the application fee and required attachments, have been submitted. The director may require the submission of an antidegradation alternatives analysis or other additional information deemed necessary to evaluate the application. The due date for a renewal application is 180 days prior to the expiration date of the current permit, as noted
in 567—64.8(455B). For a POTW, permission to submit an application at a later date may be granted by the director. The due date for a new application is 180 days prior to the date the operation is scheduled to begin, unless a shorter period is approved by the director.

(2) Incomplete applications. Incomplete applications may be returned to the applicant for completion. Authorization to discharge will be suspended if a complete application is not submitted to the department before the expiration date of the current permit. In the case of new applications, no discharge will be allowed until an NPDES or operation permit is issued. In the case of existing discharges, if a permit application is incomplete or has not been submitted, the department shall notify the permittee of a violation of this rule and may proceed administratively on the violation or may request that the commission refer the matter to the attorney general for legal action.

(3) Other information. If a permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, the permittee shall promptly submit such facts or information.

b. Amendments. A permittee seeking an amendment to its operation permit shall make a written request to the department which shall include the nature of and the reasons supporting the requested amendment. A waiver or amendment to the terms and conditions of a general permit shall not be granted. If a waiver or amendment to a general permit is desired, the applicant must apply for an individual permit following the procedures in 567—paragraph 64.3(4) “a.”

(1) Schedules of compliance. Requests to amend a permit schedule of compliance shall be made at least 30 days prior to the next scheduled compliance date which the permittee contends it is unable to meet. The request shall include any proposed changes in the existing schedule of compliance, and any supporting documentation for the time extension. An extension may be granted by the department for cause. Cause may include unusually adverse weather conditions, equipment shortages, labor strikes, federal grant regulation requirements, or any other extenuating circumstances beyond the control of the requesting party. Cause does not include economic hardship, profit reduction, or failure to proceed in a timely manner.

(2) Interim effluent limitations. A request to amend interim effluent limitations in an existing permit shall include the proposed amendments to existing effluent limitations and any documentation in support of the proposed limitations. The department will evaluate the request based upon the capability of the disposal system to meet interim effluent limitations, taking into account the contributions to treatment capability which can be made by good operation and maintenance of the disposal system and by minor alterations which can be made to the system to improve its capability. The department may deny a request where the inability of the disposal system to meet interim effluent limitations is due to increased waste loadings on the system over those loadings upon which the interim limitations were based.

(3) Monitoring requirements. An amendment request for a change in the minimum monitoring requirements in an existing permit is considered a waiver request. A request for a waiver shall include a completed Petition for Waiver form (542-1258). This form can be obtained from the department’s website or by contacting the NPDES section. The requesting permittee must provide monitoring results which are frequent enough to reflect variations in actual wastewater characteristics over a period of time and are consistent in results from sample to sample. The department will evaluate the request based upon whether or not less frequent sample results accurately reflect actual wastewater characteristics and whether operational control can be maintained.

Upon receipt of a request, the department may grant, modify, or deny the request. If the request is denied, the department may notify the permittee of any violation of its permit and may proceed administratively on the violation or may request that the commission refer the matter to the attorney general for legal action.

c. Fees. Required fees shall be submitted with all permit applications as noted in 567—64.16(455B).

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 6191C, IAB 2/9/22, effective 3/16/22]

These rules are intended to implement Iowa Code section 17A.3(1) “b” and chapter 455B, division III, part 1.

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\(^1\) April 15, 2009, effective date of Item 2 of ARC 7625B delayed 70 days by the Administrative Rules Review Committee at its meeting held April 8, 2009; at its meeting held April 28, 2009, the Committee voted to lift the delay, effective April 29, 2009.
CHAPTER 61
WATER QUALITY STANDARDS

567—61.1 Rescinded, effective August 31, 1977.

567—61.2(455B) General considerations.

61.2(1) Policy statement. It shall be the policy of the commission to protect and enhance the quality of all the waters of the state. In the furtherance of this policy it will attempt to prevent and abate the pollution of all waters to the fullest extent possible consistent with statutory and technological limitations. This policy shall apply to all point and nonpoint sources of pollution.

These water quality standards establish selected criteria for certain present and future designated uses of the surface waters of the state. The standards establish the areas where these uses are to be protected and provide minimum criteria for waterways having nondesignated uses as well. Many surface waters are designated for more than one use. In these cases the more stringent criteria shall govern for each parameter.

Certain of the criteria are in narrative form without numeric limitations. In applying such narrative standards, decisions will be based on the U.S. Environmental Protection Agency’s methodology described in “Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses,” (1985) and on the rationale contained in “Quality Criteria for Water,” published by the U.S. Environmental Protection Agency (1977), as updated by supplemental Section 304 (of the Act) Ambient Water Quality Criteria documents. To provide human health criteria for parameters not having numerical values listed in 61.3(3) Table 1, the required criteria will be based on the rationale contained in these EPA criteria documents. The human health criterion considered will be the value associated with the consumption of fish flesh and a risk factor of $10^{-5}$ for carcinogenic parameters. For noncarcinogenic parameters, the recommended EPA criterion will be selected. For Class C water, the EPA criteria for fish and water consumption will be selected using the same considerations for carcinogenic and noncarcinogenic parameters as noted above.

All methods of sample collection, preservation, and analysis used in applying any of the rules in these standards shall be in accord with those prescribed in 567—Chapter 63.

61.2(2) Antidegradation policy. It is the policy of the state of Iowa that:

a. Tier 1 protection. Existing surface water uses and the level of water quality necessary to protect the existing uses will be maintained and protected.

b. Tier 2 protection. Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the department finds, after full satisfaction of the intergovernmental coordination and public participation provisions, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the department shall ensure water quality adequate to protect existing uses fully. Further, the department shall ensure the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control before allowing any lowering of water quality.

c. Tier 2½ protection—outstanding Iowa waters. Where high quality waters constitute an outstanding state resource, such as waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

d. Tier 3 protection—outstanding national resource waters. Where high quality waters constitute an outstanding national resource, such as waters of national and state parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. Any proposed activity that would result in a permanent new or expanded source of pollutants in an outstanding national resource water is prohibited.
e. Rescinded IAB 8/31/16, effective 8/12/16.

f. All unapproved facility plans for new or expanded construction permits, except for construction permits issued for nondischarging facilities, shall undergo an antidegradation review if degradation is likely in the receiving water or downstream waters following February 17, 2010.

g. This policy shall be applied in conjunction with water quality certification review pursuant to Section 401 of the Act. In the event that activities are specifically exempted from flood plain development permits or any other permits issued by this department in 567—Chapters 70, 71, and 72, the activity will be considered consistent with this policy. Other activities not otherwise exempted will be subject to 567—Chapters 70, 71, and 72 and this policy.

61.2(3) Minimum treatment required. All wastes discharged to the waters of the state must be of such quality that the discharge will not cause the narrative or numeric criteria limitations to be exceeded. Where the receiving waters provide sufficient assimilative capacity that the water quality standards are not the limiting factor, all point source wastes shall receive treatment in compliance with minimum effluent standards as adopted in rules by the department.

There are numerous parameters of water quality associated with nonpoint source runoff which are of significance to the designated water uses specified in the general and specific designations in 567—63.3(455B), but which are not delineated. It shall be the intent of these standards that the limits on such nonpoint source related parameters when adopted shall be those that can be achieved by best management practices as defined in the course of the continuing planning process from time to time. Existing water quality and nonpoint source runoff control technology will be evaluated in the course of the Iowa continuing planning process, and best management practices and limitations on specific water quality parameters will be reviewed and revised from time to time to ensure that the designated water uses and water quality enhancement goals are met.

61.2(4) Regulatory mixing zones. Mixing zones are recognized as being necessary for the initial assimilation of point source discharges which have received the required degree of treatment or control. Mixing zones shall not be used for, or considered as, a substitute for minimum treatment technology required by subrule 61.2(3). The objective of establishing mixing zones is to provide a means of control over the placement and emission of point source discharges so as to minimize environmental impacts. Waters within a mixing zone shall meet the general water quality criteria of subrule 61.3(2). Waters at and beyond mixing zone boundaries shall meet all applicable standards and the chronic and human health criteria of subrule 61.3(3), Tables 1 and 3, for that particular water body or segment. A zone of initial dilution may be established within the mixing zone beyond which the applicable standards and the acute criteria of subrule 61.3(3) will be met. For waters designated under subrule 61.3(5), any parameter not included in Tables 1, 2 and 3 of subrule 61.3(3), the chronic and human health criteria, and the acute criterion calculated following subrule 61.2(1), will be met at the mixing zone and zone of initial dilution boundaries, respectively.

a. Due to extreme variations in wastewater and receiving water characteristics, spatial dimensions of mixing zones shall be defined on a site-specific basis. These rules are not intended to define each individual mixing zone, but will set maximum limits which will satisfy most biological, chemical, physical and radiological considerations in defining a particular mixing zone. Additional details are noted in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020, for considering unusual site-specific features such as side channels and sand bars which may influence a mixing zone. Applications for operation permits under 567—subrule 64.3(1) may be required to provide specific information related to the mixing zone characteristics below their outfall so that mixing zone boundaries can be determined.

b. For parameters included in Table 1 only (which does not include ammonia nitrogen), the dimensions of the mixing zone and the zone of initial dilution will be calculated using a mathematical model presented in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020, or from instream studies of the mixing characteristics during low flow. In addition, the most restrictive of the following factors will be met:

(1) The stream flow in the mixing zone may not exceed the most restrictive of the following:
1. Twenty-five percent of the design low stream flows noted in subrule 61.2(5) for interior streams and rivers, and the Big Sioux and Des Moines Rivers.
2. Ten percent of the design low stream flows noted in subrule 61.2(5) for the Mississippi and Missouri Rivers.
3. The stream flow contained in the mixing zone at the most restrictive of the applicable mixing zone length criteria, noted below.
   (2) The length of the mixing zone below the point of discharge shall be set by the most restrictive of the following:
      1. The distance to the juncture of two perennial streams.
      2. The distance to a public water supply intake.
      3. The distance to the upstream limits of an established recreational area, such as public beaches, and state, county and local parks.
      4. The distance to the middle of a crossover point in a stream where the main current flows from one bank across to the opposite bank.
      5. The distance to another mixing zone.
      6. Not to exceed a distance of 2000 feet.
      7. The location where the mixing zone contained the percentages of stream flow noted in 61.2(4)“b”(1).
   (3) The width of the mixing zone is calculated as the portion of the stream containing the allowed mixing zone stream flow. The mixing zone width will be measured perpendicular to the basic direction of stream flow at the downstream boundary of the mixing zone. This measurement will only consider the distance of continuous water surface.
   (4) The width and length of the zone of initial dilution may not exceed 10 percent of the width and length of the mixing zone.
   c. The stream flow used in determining wasteload allocations to ensure compliance with the maximum contaminant level (MCL), chronic and human health criteria of Table 1 will be that value contained at the boundary of the allowed mixing zone. This stream flow may not exceed the following percentages of the design low stream flow as measured at the point of discharge:
      (1) Twenty-five percent for interior streams and rivers, and the Big Sioux and Des Moines Rivers.
      (2) Ten percent for the Mississippi and Missouri Rivers.
      The stream flow in the zone of initial dilution used in determining effluent limits to ensure compliance with the acute criteria of Table 1 may not exceed 10 percent of the calculated flow associated with the mixing zone.
   d. For toxic parameters noted in Table 1, the following exceptions apply to the mixing zone requirements:
      (1) No mixing zone or zone of initial dilution will be allowed for waters designated as lakes or wetlands.
      (2) No zone of initial dilution will be allowed in waters designated as cold water.
      (3) The use of a diffuser device to promote rapid mixing of an effluent in a receiving stream will be considered on a case-by-case basis with its usage as a means for dischargers to comply with an acute numerical criterion.
      (4) A discharger to interior streams and rivers, the Big Sioux and Des Moines Rivers, and the Mississippi or Missouri Rivers may provide to the department, for consideration, instream data which technically supports the allowance of an increased percentage of the stream flow contained in the mixing zone due to rapid and complete mixing. Any allowed increase in mixing zone flow would still be governed by the mixing zone length restrictions. The submission of data should follow the guidance provided in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020.
   e. For ammonia criteria noted in Table 3, the dimensions of the mixing zone and the zone of initial dilution will be calculated using a mathematical model presented in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020, or from instream studies of the mixing characteristics during low flow. In addition, the most restrictive of the following factors will be met:
      (1) The stream flow in the mixing zone may not exceed the most restrictive of the following:
1. One hundred percent of the design low stream flows noted in subrule 61.2(5) for locations where the dilution ratio is less than or equal to 2:1.
2. Fifty percent of the design low stream flows noted in subrule 61.2(5) for locations where the dilution ratio is greater than 2:1, but less than or equal to 5:1.
3. Twenty-five percent of the design low stream flows noted in subrule 61.2(5) for locations where the dilution ratio is greater than 5:1.
4. The stream flow contained in the mixing zone at the most restrictive of the applicable mixing zone length criteria, noted below.

(2) The length of the mixing zone below the point of discharge shall be set by the most restrictive of the following:
1. The distance to the juncture of two perennial streams.
2. The distance to a public water supply intake.
3. The distance to the upstream limits of an established recreational area, such as public beaches, and state, county, and local parks.
4. The distance to the middle of a crossover point in a stream where the main current flows from one bank across to the opposite bank.
5. The distance to another mixing zone.
6. Not to exceed a distance of 2000 feet.
7. The location where the mixing zone contained the percentages of stream flow noted in 61.2(4)”e”(1).

(3) The width of the mixing zone is calculated as the portion of the stream containing the allowed mixing zone stream flow. The mixing zone width will be measured perpendicular to the basic direction of stream flow at the downstream boundary of the mixing zone. This measurement will only consider the distance of continuous water surface.

(4) The width and length of the zone of initial dilution may not exceed 10 percent of the width and length of the mixing zone.

f. For ammonia criteria noted in Table 3, the stream flow used in determining wasteload allocations to ensure compliance with the chronic criteria of Table 3 will be that value contained at the boundary of the allowed mixing zone. This stream flow may not exceed the percentages of the design low stream flow noted in 61.2(4)”e”(1) as measured at the point of discharge.

The pH and temperature values at the boundary of the mixing zone used to select the chronic ammonia criteria of Table 3 will be from one of the following sources. The source of the pH and temperature data will follow the sequence listed below, if applicable data exists from the source.

(1) Specific pH and temperature data provided by the applicant gathered at their mixing zone boundary. Procedures for obtaining this data are noted in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020.

(2) Regional background pH and temperature data provided by the applicant gathered along the receiving stream and representative of the background conditions at the outfall. Procedures for obtaining this data are noted in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020.

(3) The statewide median background values as determined by the department.

The stream flow in the zone of initial dilution used in determining effluent limits to ensure compliance with the acute criteria of Table 3 may not exceed 5 percent of the calculated flow associated with the mixing zone for facilities with a dilution ratio of less than or equal to 2:1, and not exceed 10 percent of the calculated flow associated with the mixing zone for facilities with a dilution ratio of greater than 2:1. The pH and temperature values at the boundary of the zone of initial dilution used to select the acute ammonia criteria of Table 3 will be from one of the following sources and follow the sequence listed below, if applicable data exists from the source.

1. Specific effluent pH and temperature data if the dilution ratio is less than or equal to 2:1.
2. If the dilution ratio is greater than 2:1, the logarithmic average pH of the effluent and the regional or statewide pH provided in 61.2(4)”f” will be used. In addition, the flow proportioned average temperature of the effluent and the regional or statewide temperature provided in 61.2(4)”f” will be
used. The procedures for calculating these data are noted in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020.

g. For ammonia criteria noted in Table 3, the following exceptions apply to the mixing zone requirements.

(1) No mixing zone or zone of initial dilution will be allowed for waters designated as lakes or wetlands.

(2) No zone of initial dilution will be allowed in waters designated as cold water.

(3) The use of a diffuser device to promote rapid mixing of an effluent in a receiving stream will be considered on a case-by-case basis with its usage as a means for dischargers to comply with an acute numerical criterion.

(4) A discharger to interior streams and rivers, the Big Sioux and Des Moines Rivers, and the Mississippi and Missouri Rivers may provide to the department, for consideration, instream data which technically supports the allowance of an increased percentage of the stream flow contained in the mixing zone due to rapid and complete mixing. Any allowed increase in mixing zone flow would still be governed by the mixing zone length restrictions. The submission of data should follow the guidance provided in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020.

h. Temperature changes within mixing zones established for heat dissipation will not exceed the temperature criteria in 61.3(3)”b”(5).

i. The appropriateness of establishing a mixing zone where a substance discharged is bioaccumulative, persistent, carcinogenic, mutagenic, or teratogenic will be carefully evaluated. In such cases, effects such as potential groundwater contamination, sediment deposition, fish attraction, bioaccumulation in aquatic life, bioconcentration in the food chain, and known or predicted safe exposure levels shall be considered.

61.2(5) Implementation strategy. Numerical criteria specified in these water quality standards shall be met when the flow of the receiving stream equals or exceeds the design low flows noted below.

<table>
<thead>
<tr>
<th>Type of Numerical Criteria</th>
<th>Design Low Flow Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Life Protection (TOXICS)</td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>1Q_{10}</td>
</tr>
<tr>
<td>Chronic</td>
<td>7Q_{10}</td>
</tr>
<tr>
<td>Aquatic Life Protection (AMMONIA - N)</td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>1Q_{10}</td>
</tr>
<tr>
<td>Chronic</td>
<td>30Q_{10}</td>
</tr>
<tr>
<td>Human Health Protection &amp; MCL</td>
<td></td>
</tr>
<tr>
<td>Noncarcinogenic</td>
<td>30Q_5</td>
</tr>
<tr>
<td>Carcinogenic</td>
<td>Harmonic mean</td>
</tr>
</tbody>
</table>

a. The allowable 3°C temperature increase criterion for warm water interior streams, 61.3(3)”b”(5)“1,” is based in part on the need to protect fish from cold shock due to rapid cessation of heat source and resultant return of the receiving stream temperature to natural background temperature. On low flow streams, in winter, during certain conditions of relatively cold background stream temperature and relatively warm ambient air and groundwater temperature, certain wastewater treatment plants with relatively constant flow and constant temperature discharges will cause temperature increases in the receiving stream greater than allowed in 61.3(3)”b”(5)“1.”

b. During the period November 1 to March 31, for the purpose of applying the 3°C temperature increase criterion, the minimum protected receiving stream flow rate below such discharges may be increased to not more than three times the rate of flow of the discharge, where there is reasonable assurance that the discharge is of such constant temperature and flow rate and continuous duration as to not constitute a threat of heat cessation and not cause the receiving stream temperature to vary more than 3°C per day.
c. Site-specific water quality criteria may be allowed in lieu of the specific numerical criteria listed in Tables 1 and 3 of this chapter if adequate documentation is provided to show that the proposed criteria will protect all existing or potential uses of the surface water. Site-specific water quality criteria may be appropriate where:

(1) The types of organisms differ significantly from those used in setting the statewide criteria; or
(2) The chemical characteristics of the surface water such as pH, temperature, and hardness differ significantly from the characteristics used in setting the statewide criteria.

Development of site-specific criteria shall include an evaluation of the chemical and biological characteristics of the water resource and an evaluation of the impact of the discharge. All evaluations for site-specific criteria modification must be coordinated through the department, and be conducted using scientifically accepted procedures approved by the department. Any site-specific criterion developed under the provisions of this subrule is subject to the review and approval of the U.S. Environmental Protection Agency. All criteria approved under the provisions of this subrule will be published periodically by the department. Guidelines for establishing site-specific water quality criteria can be found in “Water Quality Standards Handbook,” published by the U.S. Environmental Protection Agency, December 1983.

d. A wastewater treatment facility may submit to the department technically valid instream data which provides additional information to be used in the calculations of their wasteload allocations and effluent limitations. This information would be in association with the low flow characteristics, width, length and time of travel associated with the mixing zone or decay rates of various effluent parameters. The wasteload allocation will be calculated considering the applicable data and consistent with the provisions and restrictions in the rules.

e. The department may perform use assessment and related use attainability analyses on water bodies where uses may not be known or adequately documented. The preparation of use attainability analysis documents will consider available U.S. Environmental Protection Agency guidance or other applicable guidance. Credible data and documentation will be used to assist in the preparation of use assessments and use attainability analysis reports.

61.2(6) State water quality certification. This subrule describes the procedures the department will follow when processing certification requests for state water quality certification (certification) of federally issued licenses and permits pursuant to Section 401 of the Act, including but not limited to permits issued by the United States Corps of Engineers (Corps) pursuant to Section 404 of the Act.

a. General. The department shall receive, consider, and process certification requests in accordance with Section 401 of the Act.

b. Certification requests. Certification requests shall be made on the department’s Section 401 Water Quality Certification Request form. This form is available on the department’s website. Individual permits or licenses issued by federal agencies require submission of a prefiling meeting request and certification request to obtain certification. The prefiling meeting request must be submitted to the department at least 30 days prior to submitting the certification request.

c. Public notice. The department shall issue a public notice of a certification request. The public notice may be a joint public notice issued by a federal agency on behalf of the department. When there is no joint public notice issued by the federal agency, a public notice issued by the department will be provided on its website. The public notice shall solicit comments from the public regarding whether the proposed project complies with state water quality requirements in accordance with Section 401 of the Act. The public notice shall specify the procedure and time frame for submitting comments on the proposed project.

d. Public notice for new or renewed nationwide or regional permits. The department shall provide additional notice to the public of certification of new or renewed nationwide or regional permits issued by the Corps pursuant to Section 404 of the Act. The department shall provide such notice on its website. The public notice shall solicit comments from the public regarding whether the proposed permit complies with state water quality requirements in accordance with Section 401 of the Act. The public notice shall specify the procedure and time frame for submitting comments on the proposed certification.
e. Department action on certification request. After the close of the public comment period and consideration of comments received, the department may issue a certification letter which may include conditions necessary to ensure compliance with state water quality requirements, waive issuance of the certification, or deny certification in accordance with Section 401 of the Act.

f. Certification of federal permits or licenses may require conditions, which may include one or more of the following, to ensure water quality requirements are met:

(1) During construction and upon completion of the project, actions must be taken to prevent pollution affecting public health, fish, shellfish, wildlife, and recreation due to turbidity, pH, nutrients, suspended solids, floating debris, visible oil and grease, or other pollutants entering waters of the state;

(2) Equipment used in waters of the state shall be cleaned of all hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, or other construction-related, potentially hazardous substances before arriving on site. Wash water shall not be discharged into a water of the state;

(3) All cleared vegetative material shall be properly managed in such a manner that it cannot enter a water of the state and cause a violation of water quality requirements;

(4) All construction debris shall be properly managed in such a manner that it cannot enter a water of the state;

(5) Erosion shall be managed so that sediment is not discharged to a water of the state in a manner that causes a violation of water quality requirements;

(6) Riprap, treated lumber products, and temporary structures shall consist of clean material free of coatings of potentially hazardous substances. No asphalt or petroleum-based material shall be used as or included in material placed in any water of the state or within the high-water table;

(7) Stockpiled dredged materials on the shore shall be managed so that sediment is not discharged in a manner that causes a violation of water quality requirements;

(8) Water quality monitoring will be required for Federal Energy Regulatory Commission hydropower projects at the baseline, construction and operational phases of the project;

(9) Hydraulically dredged material shall be managed to ensure the return water meets water quality requirements.

g. Duration of certification. The department’s certification shall remain in effect until the expiration date of the applicable permit or license.

[ARC 8214B, IAB 10/7/09, effective 2/11/09; ARC 8466B, IAB 1/13/10, effective 2/17/10; ARC 9330B, IAB 1/12/11, effective 2/16/11 (See Delay note at the end of chapter); ARC 0121C, IAB 5/16/12, effective 6/20/12; ARC 1495C, IAB 6/11/14, effective 7/16/14; ARC 2695C, IAB 8/31/16, effective 8/12/16; ARC 3583C, IAB 1/17/18, effective 2/21/18; ARC 5226C, IAB 10/7/20, effective 11/1/20; ARC 5679C, IAB 6/16/21, effective 7/21/21]

567—61.3(455B) Surface water quality criteria.

61.3(1) Surface water classification. All waters of the state are classified for protection of beneficial uses. These classified waters include general use segments and designated use segments.

a. General use segments. These are intermittent watercourses and those watercourses which typically flow only for short periods of time following precipitation and whose channels are normally above the water table. These waters do not support a viable aquatic community during low flow and do not maintain pooled conditions during periods of no flow.

The general use segments are to be protected for livestock and wildlife watering, aquatic life, noncontact recreation, crop irrigation, and industrial, agricultural, domestic and other incidental water withdrawal uses.

b. Designated use segments. These are water bodies which maintain flow throughout the year or contain sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community.

All perennial rivers and streams as identified by the U.S. Geological Survey 1:100,000 DLG Hydrography Data Map (published July 1993) or intermittent streams with perennial pools in Iowa not specifically listed in the surface water classification of 61.3(5) are designated as Class B (WW-1) waters.

All perennial rivers and streams as identified by the U.S. Geological Survey 1:100,000 DLG Hydrography Data Map (published July 1993) or intermittent streams with perennial pools in Iowa are designated as Class A1 waters.
Designated uses of segments may change based on a use attainability analysis consistent with 61.2(5) "e." Designated use changes will be specifically listed in the surface water classification of 61.3(5).

Designated use waters are to be protected for all uses of general use segments in addition to the specific uses assigned. Designated use segments include:

(1) Primary contact recreational use (Class “A1”). Waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

(2) Secondary contact recreational use (Class “A2”). Waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use, the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity.

(3) Children’s recreational use (Class “A3”). Waters in which recreational uses by children are common. Class A3 waters are water bodies having definite banks and bed with visible evidence of the flow or occurrence of water. This type of use would primarily occur in urban or residential areas.

(4) Cold water aquatic life—Type 1 (Class “B(CW1)”). Waters in which the temperature and flow are suitable for the maintenance of a variety of cold water species, including reproducing and nonreproducing populations of trout (Salmonidae family) and associated aquatic communities.

(5) Cold water aquatic life—Type 2 (Class “B(CW2)”). Waters that include small, channeled streams, headwaters, and spring runs that possess natural cold water attributes of temperature and flow. These waters usually do not support consistent populations of trout (Salmonidae family), but may support associated vertebrate and invertebrate organisms.

(6) Warm water—Type 1 (Class “B(WW-1)”). Waters in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrate species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

(7) Warm water—Type 2 (Class “B(WW-2)”). Waters in which flow or other physical characteristics are capable of supporting a resident aquatic community that includes a variety of native nongame fish and invertebrate species. The flow and other physical characteristics limit the maintenance of warm water game fish populations. These waters generally consist of small perennially flowing streams.

(8) Warm water—Type 3 (Class “B(WW-3)”). Waters in which flow persists during periods when antecedent soil moisture and groundwater discharge levels are adequate; however, aquatic habitat typically consists of nonflowing pools during dry periods of the year. These waters generally include small streams of marginally perennial aquatic habitat status. Such waters support a limited variety of native fish and invertebrate species that are adapted to survive in relatively harsh aquatic conditions.

(9) Lakes and wetlands (Class “B(LW)”). These are artificial and natural impoundments with hydraulic retention times and other physical and chemical characteristics suitable to maintain a balanced community normally associated with lake-like conditions.

(10) Human health (Class “HH”). Waters in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

(11) Drinking water supply (Class “C”). Waters which are used as a raw water source of potable water supply.

61.3(2) General water quality criteria. The following criteria are applicable to all surface waters including general use and designated use waters, at all places and at all times for the uses described in 61.3(1) "a."

a. Such waters shall be free from substances attributable to point source wastewater discharges that will settle to form sludge deposits.
b. Such waters shall be free from floating debris, oil, grease, scum and other floating materials attributable to wastewater discharges or agricultural practices in amounts sufficient to create a nuisance.

c. Such waters shall be free from materials attributable to wastewater discharges or agricultural practices producing objectionable color, odor or other aesthetically objectionable conditions.

d. Such waters shall be free from substances attributable to wastewater discharges or agricultural practices in concentrations or combinations which are acutely toxic to human, animal, or plant life.

e. Such waters shall be free from substances, attributable to wastewater discharges or agricultural practices, in quantities which would produce undesirable or nuisance aquatic life.

f. The turbidity of the receiving water shall not be increased by more than 25 Nephelometric turbidity units by any point source discharge.

g. Cations and anions guideline values to protect livestock watering may be found in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020.

h. The Escherichia coli (E. coli) content of water which enters a sinkhole or losing stream segment, regardless of the water body’s designated use, shall not exceed a Geometric Mean value of 126 organisms/100 ml or a sample maximum value of 235 organisms/100 ml. No new wastewater discharges will be allowed on watercourses which directly or indirectly enter sinkholes or losing stream segments.

61.3(3) Specific water quality criteria.

a. Class “A” waters. Waters which are designated as Class “A1,” “A2,” or “A3” in subrule 61.3(5) are to be protected for primary contact, secondary contact, and children’s recreational uses. The general criteria of subrule 61.3(2) and the following specific criteria apply to all Class “A” waters.

(1) The Escherichia coli (E. coli) content shall not exceed the levels noted in the Bacteria Criteria Table when the Class “A1,” “A2,” or “A3” uses can reasonably be expected to occur.

<table>
<thead>
<tr>
<th>Bacteria Criteria Table (organisms/100 ml of water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use or Category</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Class A1</td>
</tr>
<tr>
<td>3/15 – 11/15</td>
</tr>
<tr>
<td>11/16 – 3/14</td>
</tr>
<tr>
<td>Class A2 (Only)</td>
</tr>
<tr>
<td>3/15 – 11/15</td>
</tr>
<tr>
<td>11/16 – 3/14</td>
</tr>
<tr>
<td>[Class A2 and B(CW)] or OIW or ONRW</td>
</tr>
<tr>
<td>Year-Round</td>
</tr>
<tr>
<td>Class A3</td>
</tr>
<tr>
<td>3/15 – 11/15</td>
</tr>
<tr>
<td>11/16 – 3/14</td>
</tr>
</tbody>
</table>

When a water body is designated for more than one of the recreational uses, the most stringent criteria for the appropriate season shall apply.

(2) The pH shall not be less than 6.5 nor greater than 9.0. The maximum change permitted as a result of a waste discharge shall not exceed 0.5 pH units.

b. Class “B” waters. All waters which are designated as Class B(CW1), B(CW2), B(WW-1), B(WW-2), B(WW-3) or B(LW) are to be protected for wildlife, fish, aquatic, and semiaquatic life. The following criteria shall apply to all Class “B” waters designated in subrule 61.3(5).
(1) Dissolved oxygen. Dissolved oxygen shall not be less than the values shown in Table 2 of this subrule.

(2) pH. The pH shall not be less than 6.5 nor greater than 9.0. The maximum change permitted as a result of a waste discharge shall not exceed 0.5 pH units.

(3) General chemical constituents. The specific numerical criteria shown in Tables 1, 2, and 3 of this subrule apply to all waters designated in subrule 61.3(5). The sole determinant of compliance with these criteria will be established by the department on a case-by-case basis. Effluent monitoring or instream monitoring, or both, will be the required approach to determine compliance.

1. The acute criteria represent the level of protection necessary to prevent acute toxicity to aquatic life. Instream concentrations above the acute criteria will be allowed only within the boundaries of the zone of initial dilution.

2. The chronic criteria represent the level of protection necessary to prevent chronic toxicity to aquatic life. Excursions above the chronic criteria will be allowed only inside of mixing zones or only for short-term periods outside of mixing zones; however, these excursions cannot exceed the acute criteria shown in Tables 1 and 3. The chronic criteria will be met as short-term average conditions at all times the flow equals or exceeds either the design flows noted in subrule 61.2(5) or any site-specific low flow established under the provisions of subrule 61.2(5).

3. Rescinded IAB 2/15/06, effective 3/22/06.

4. Rescinded IAB 2/15/06, effective 3/22/06.

5. Temperature.

1. No heat shall be added to interior streams or the Big Sioux River that would cause an increase of more than 3°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added in excess of that amount that would raise the stream temperature above 32°C.

2. No heat shall be added to streams designated as cold water fisheries that would cause an increase of more than 2°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added in excess of that amount that would raise the stream temperature above 20°C.

3. No heat shall be added to lakes and reservoirs that would cause an increase of more than 2°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added in excess of that amount that would raise the temperature of the lake or reservoirs above 32°C.

4. No heat shall be added to the Missouri River that would cause an increase of more than 3°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added that would raise the stream temperature above 32°C.

5. No heat shall be added to the Mississippi River that would cause an increase of more than 3°C. The rate of temperature change shall not exceed 1°C per hour. In addition, the water temperature at representative locations in the Mississippi River shall not exceed the maximum limits in the table below during more than 1 percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the table below by more than 2°C.

Zone II—Iowa-Minnesota state line to the northern Illinois border (Mile Point 1534.6).

Zone III—Northern Illinois border (Mile Point 1534.6) to Iowa-Missouri state line.

<table>
<thead>
<tr>
<th>Month</th>
<th>Zone II</th>
<th>Zone III</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>4°C</td>
<td>7°C</td>
</tr>
<tr>
<td>February</td>
<td>4°C</td>
<td>7°C</td>
</tr>
<tr>
<td>March</td>
<td>12°C</td>
<td>14°C</td>
</tr>
<tr>
<td>April</td>
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(6) Early life stage for each use designation. The following seasons will be used in applying the early life stage present chronic criteria noted in Table 3b, “Chronic Criterion for Ammonia in Iowa Streams - Early Life Stages Present.”

1. For all Class B(CW1) waters, the early life stage will be year-round.
2. For all Class B(CW2) waters, the early life stage will begin on April 1 and last through September 30.
3. For all Class B(WW-1) waters, the early life stage will begin in March and last through September, except as follows:
   - For the following, the early life stage will begin in February and last through September:
     - The entire length of the Mississippi and Missouri Rivers,
     - The lower reach of the Des Moines River south of the Ottumwa dam, and
     - The lower reach of the Iowa River below the Cedar River.
   - For the following, the early life stage will begin in April and last through September:
     - All Class B(WW-1) waters in the southern Iowa River Basin,
     - All of the Class B(WW-1) reach of the Skunk River, the North Skunk River and the South Skunk River south of Indian Creek (Jasper County), and the Class B(WW-1) tributaries to these reaches, and the entire Class B(WW-1) reach of the English River.
4. For all Class B(WW-2) and Class B(WW-3) waters, the early life stage will begin in April and last through September.
5. For all Class B(LW) lake and wetland waters, the early life stage will begin in March and last through September except for the Class B(LW) waters in the southern two tiers of Iowa counties which will have the early life stage of April through September.

   c. Class “C” waters. Waters which are designated as Class “C” are to be protected as a raw water source of potable water supply. The following criteria shall apply to all Class “C” waters designated in subrule 61.3(5).

   (1) Radioactive substances.
    1. The combined radium-226 and radium-228 shall not exceed 5 picocuries per liter at the point of withdrawal.
    2. Gross alpha particle activity (including radium-226 but excluding radon and uranium) shall not exceed 15 picocuries per liter at the point of withdrawal.
    3. The average annual concentration at the point of withdrawal of beta particle and photon radioactivity from man-made radionuclides other than tritium and strontium-90 shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year.
    4. The average annual concentration of tritium shall not exceed 20,000 picocuries per liter at the point of withdrawal; the average annual concentration of strontium-90 shall not exceed 8 picocuries per liter at the point of withdrawal.

   (2) All substances toxic or detrimental to humans or detrimental to treatment process shall be limited to nontoxic or nondetrimental concentrations in the surface water.

   (3) The pH shall not be less than 6.5 nor greater than 9.0.

   d. Class “HH” waters. Waters which are designated as Class HH shall contain no substances in concentrations which will make fish or shellfish inedible due to undesirable tastes or cause a hazard to humans after consumption.
(1) The human health criteria represent the level of protection necessary, in the case of noncarcinogens, to prevent adverse health effects in humans and, in the case of carcinogens, to prevent a level of incremental cancer risk not exceeding 1 in 100,000. Instream concentrations in excess of the human health criteria will be allowed only within the boundaries of the mixing zone.

(2) Reserved.

**TABLE 1. Criteria for Chemical Constituents**

*(all values as micrograms per liter as total recoverable unless noted otherwise)*

Human health criteria for carcinogenic parameters noted below were based on the prevention of an incremental cancer risk of 1 in 100,000. For parameters not having a noted human health criterion, the U.S. Environmental Protection Agency has not developed final national human health guideline values. For noncarcinogenic parameters, the recommended EPA criterion was selected. For Class C waters, the EPA criteria for fish and water consumption were selected using the same considerations for carcinogenic and noncarcinogenic parameters as noted above. For Class C waters for which no EPA human health criteria were available, the EPA MCL value was selected.

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<td></td>
</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>30(ε)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human Health — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2.7(ε)</td>
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<td></td>
</tr>
<tr>
<td>Phenols</td>
<td>Chronic</td>
<td>50</td>
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<td>50</td>
<td>50</td>
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<td>2500</td>
<td>2500</td>
<td>2500</td>
<td>1000</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human Health + — Fish</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1700(ε)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
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<td>—</td>
<td>—</td>
<td>21(ε)</td>
<td></td>
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</tr>
<tr>
<td>Picloram</td>
<td>MCL</td>
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<td></td>
</tr>
<tr>
<td>Polychlorinated Biphrenys (PCBs)</td>
<td>Chronic</td>
<td>.014</td>
<td>.014</td>
<td>.014</td>
<td>.014</td>
<td>.014</td>
<td>—</td>
<td></td>
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<td></td>
<td>Acute</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.00064(ε)</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>Human Health — F &amp; W</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.00064(ε)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polynuclear Aromatic Hydrocarbons (PAHs)*</td>
<td>Chronic</td>
<td>.03</td>
<td>.03</td>
<td>3</td>
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<td>—</td>
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<tr>
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<td>Acute</td>
<td>30</td>
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<td>30</td>
<td>30</td>
<td>—</td>
<td></td>
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</tr>
<tr>
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<td>—</td>
<td>.18(ε)</td>
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<td>—</td>
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<td>.038(ε)</td>
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<tr>
<td>Selenium</td>
<td>Chronic</td>
<td>10</td>
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<td>5</td>
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<td>70</td>
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<tr>
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<td>Acute</td>
<td>15</td>
<td>—</td>
<td>19.3</td>
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</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>170(ε)</td>
<td></td>
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</tr>
<tr>
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<td>Human Health + — Fish</td>
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<td>—</td>
<td>—</td>
<td>4200(ε)</td>
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<tr>
<td>Silver</td>
<td>Chronic(ε)</td>
<td>N/A</td>
<td>—</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>—</td>
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<td></td>
</tr>
<tr>
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<td>Acute(ε)</td>
<td>11</td>
<td>—</td>
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<td>11</td>
<td>11</td>
<td>—</td>
<td></td>
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<tr>
<td></td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>50</td>
<td>—</td>
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</tr>
<tr>
<td>Parameter</td>
<td>Use Designations</td>
<td>B(CW1)</td>
<td>B(CW2)</td>
<td>B(WW-1)</td>
<td>B(WW-2)</td>
<td>B(WW-3)</td>
<td>B(LW)</td>
<td>C</td>
<td>HH</td>
</tr>
<tr>
<td>----------------------------</td>
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</tr>
<tr>
<td>2,4,5-TP (Silvex)</td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Simazine</td>
<td>MCL</td>
<td>—</td>
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<td>—</td>
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<tr>
<td>Styrene</td>
<td>MCL</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>100</td>
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</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>Human Health — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>6.9</td>
<td>—</td>
</tr>
<tr>
<td></td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>33</td>
<td>—</td>
</tr>
<tr>
<td>Thallium</td>
<td>Human Health + — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.2</td>
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</tr>
<tr>
<td></td>
<td>Human Health + — Fish</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.4</td>
<td>—</td>
</tr>
<tr>
<td>Toluene</td>
<td>Chronic</td>
<td>50</td>
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<td>150</td>
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<td>50</td>
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<td>7500</td>
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</tr>
<tr>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>15</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1300</td>
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</tr>
<tr>
<td>Total Residual Chlorine (TRC)</td>
<td>Chronic</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>35</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>20</td>
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<tr>
<td>Toxaphene</td>
<td>Chronic</td>
<td>.037</td>
<td>.002</td>
<td>.002</td>
<td>.002</td>
<td>.037</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>.73</td>
<td>.73</td>
<td>.73</td>
<td>.73</td>
<td>.73</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.0028</td>
<td>—</td>
</tr>
<tr>
<td>1,2,4-Trichlorobenzene</td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>70</td>
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</tr>
<tr>
<td>1,1,1-Trichloroethane</td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>200</td>
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</tr>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>173</td>
<td>—</td>
</tr>
<tr>
<td>1,1,2-Trichloroethane</td>
<td>Human Health — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>69</td>
<td>—</td>
</tr>
<tr>
<td>Trichloroethylene (TCE)</td>
<td>Chronic</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>—</td>
<td>—</td>
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<td>4000</td>
<td>4000</td>
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<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>300</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>25</td>
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<tr>
<td>Trihalomethanes (total)</td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>80</td>
<td>—</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>Human Health — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
<td>—</td>
<td>—</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Xylenes (Total)</td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>10*</td>
<td>—</td>
</tr>
<tr>
<td>Zinc</td>
<td>Chronic</td>
<td>210</td>
<td>210</td>
<td>210</td>
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<td>210</td>
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<td>—</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health + — Fish</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>26</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>7.4</td>
<td>—</td>
</tr>
</tbody>
</table>
Chronic
Acute

(d) Class B numerical criteria for pentachlorophenol are a function of pH using the equation: Criterion (µg/l) = \( e^{(1.005pH) - 3} \), where \( e = 2.71828 \) and \( x \) varies according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(CW1)</th>
<th>B(CW2)</th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
<th>B(LW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>4.134</td>
<td>—</td>
<td>5.134</td>
<td>5.134</td>
<td>5.134</td>
<td>5.134</td>
</tr>
</tbody>
</table>

(c) This Class HII criterion would be applicable to any Class B(LW), B(CW1), B(WW-1), B(WW-2), or B(WW-3)

(f) This Class HII criterion would be applicable to any Class C water body that is also designated Class HII.

(i) Class B(WW-1), B(WW-2), and B(WW-3) criteria listed in main table are based on a hardness of 200 mg/l (as CaCO\(_3\) (mg/l)). Numerical criteria (µg/l) for copper are a function of hardness (CaCO\(_3\) (mg/l)) using the equation for each use according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>( e^{[0.9422 ln(Hardness) - 1.700]} )</td>
<td>( e^{[0.9422 ln(Hardness) - 1.700]} )</td>
<td>( e^{[0.9422 ln(Hardness) - 1.700]} )</td>
</tr>
<tr>
<td>Chronic</td>
<td>( e^{[0.8545 ln(Hardness) - 1.702]} )</td>
<td>( e^{[0.8545 ln(Hardness) - 1.702]} )</td>
<td>( e^{[0.8545 ln(Hardness) - 1.702]} )</td>
</tr>
</tbody>
</table>

(j) The acute and chronic criteria listed in main table are based on a hardness of 200 mg/l (as CaCO\(_3\) (mg/l)). Numerical criteria (µg/l) for lead are a function of hardness (CaCO\(_3\) (mg/l)) using the following equations:

<table>
<thead>
<tr>
<th></th>
<th>Acute</th>
<th>Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( e^{(1.46203 - \ln(0.145712))} \times e^{[1.2731 ln(Hardness) - 1.46]} )</td>
<td>( e^{(1.46203 - \ln(0.145712))} \times e^{[1.2731 ln(Hardness) - 4.705]} )</td>
</tr>
</tbody>
</table>

(k) The acute and chronic criteria listed in main table are based on a hardness of 200 mg/l (as CaCO\(_3\) (mg/l)). Numerical criteria (µg/l) for nickel are a function of hardness (CaCO\(_3\) (mg/l)) using the following equations:

<table>
<thead>
<tr>
<th></th>
<th>Acute</th>
<th>Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( 0.998 \times e^{[0.8546 ln(Hardness) + 2.255]} )</td>
<td>( 0.997 \times e^{[0.8466 ln(Hardness) + 0.0584]} )</td>
</tr>
</tbody>
</table>

(l) The acute and chronic criteria listed in main table are based on a hardness of 200 mg/l (as CaCO\(_3\) (mg/l)). Numerical criteria (µg/l) for zinc are a function of hardness (CaCO\(_3\) (mg/l)) using the following equations:

<table>
<thead>
<tr>
<th></th>
<th>Acute</th>
<th>Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( 0.978 \times e^{[0.8473 ln(Hardness) + 0.884]} )</td>
<td>( 0.986 \times e^{[0.8473 ln(Hardness) + 0.884]} )</td>
</tr>
</tbody>
</table>
(m) Acute and chronic criteria listed in main table are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)) and a sulfate concentration of 63 mg/l. Numerical criteria (µg/l) for chloride are a function of hardness (CaCO₃ (mg/l)) and sulfate (mg/l) using the equation for each use according to the following table:

\[ B(CW1), B(CW2), B(WW-1), B(WW-2), B(WW-3), B(LW) \]

<table>
<thead>
<tr>
<th>Acute</th>
<th>Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>287.8[H]₂[H₂O][Sulfate] ^{0.07452}</td>
<td>177.8[H]₂[H₂O][Sulfate] ^{0.07452}</td>
</tr>
</tbody>
</table>

(n) The copper criteria in Table 1 can be adjusted by a Water-Effect Ratio (WER). The WER factor is equal to 1.0 unless an approved WER study has been conducted by a permittee for a specific point source. The WER study shall be conducted in accordance with the “Interim Guidance on Determination and Use of Water-Effect Ratios for Metals (EPA-823-B-94-001), February 22, 1994,” or upon approval by the department, the “Streamlined Water-Effect Ratio Procedure for Discharges of Copper (EPA-822-R-01-005), March 2001,” which are hereby adopted by reference.

The copper Biotic Ligand Model (BLM) may be used as an alternative to the copper criteria in Table 1. The copper BLM is found in the document “Aquatic Life Ambient Freshwater Quality Criteria for Copper 2007 Revision (EPA-822-R-07-001), February 2007,” which is hereby adopted by reference.

(o) The acute and chronic criteria listed in Table 1 are calculated using Aluminum Criteria Calculator V2.0 (Excel) as described in “Final Aquatic Life Ambient Water Quality Criteria for Aluminum 2018 (EPA-822-R-18-001), December 2018.” The criteria were calculated using the lowest tenth percentile of individual model outputs using spatially and temporally representative model inputs from across the state. Site-specific criteria shall also be developed using this approach and the most recent version of the calculator.

(p) The criteria are expressed as dissolved concentration.

(q) The silver criteria listed in Table 1 are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)). Numerical criteria (µg/l) for silver are a function of hardness (CaCO₃ (mg/l)) using the following equation:

\[ \text{Acute} = 0.85 \times (1.72 \times \text{Hardness}^{0.59}) \]

(r) The criteria are expressed as the bioavailable portion of aluminum.

### TABLE 2. Criteria for Dissolved Oxygen

*all values expressed in milligrams per liter*

<table>
<thead>
<tr>
<th></th>
<th>B(CW1)</th>
<th>B(CW2)</th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
<th>B(LW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum value for at least 16 hours of every 24-hour period</td>
<td>7.0</td>
<td>7.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0*</td>
</tr>
<tr>
<td>Minimum value at any time during every 24-hour period</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>4.0</td>
<td>4.0</td>
<td>5.0*</td>
</tr>
</tbody>
</table>

*applies only to the upper layer of stratification in lakes*

### TABLE 3a. Acute Criterion for Ammonia in Iowa Streams

<table>
<thead>
<tr>
<th>pH</th>
<th>Class B(WW-1), B(WW-2), B(WW-3) &amp; B(LW)</th>
<th>Class B(CW1) &amp; B(CW2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5</td>
<td>48.8</td>
<td>32.6</td>
</tr>
<tr>
<td>6.6</td>
<td>46.8</td>
<td>31.3</td>
</tr>
<tr>
<td>6.7</td>
<td>44.6</td>
<td>29.8</td>
</tr>
<tr>
<td>6.8</td>
<td>42.0</td>
<td>28.0</td>
</tr>
<tr>
<td>6.9</td>
<td>39.1</td>
<td>26.1</td>
</tr>
<tr>
<td>7.0</td>
<td>36.1</td>
<td>24.1</td>
</tr>
<tr>
<td>7.1</td>
<td>32.8</td>
<td>21.9</td>
</tr>
</tbody>
</table>
### Acute Criterion, mg/l as N (or Criterion Maximum Concentration, CMC)

<table>
<thead>
<tr>
<th>pH</th>
<th>Class B(WW-1), B(WW-2), B(WW-3) &amp; B(LW)</th>
<th>Class B(CW1) &amp; B(CW2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.2</td>
<td>29.5</td>
<td>19.7</td>
</tr>
<tr>
<td>7.3</td>
<td>26.2</td>
<td>17.5</td>
</tr>
<tr>
<td>7.4</td>
<td>23.0</td>
<td>15.3</td>
</tr>
<tr>
<td>7.5</td>
<td>19.9</td>
<td>13.3</td>
</tr>
<tr>
<td>7.6</td>
<td>17.0</td>
<td>11.4</td>
</tr>
<tr>
<td>7.7</td>
<td>14.4</td>
<td>9.64</td>
</tr>
<tr>
<td>7.8</td>
<td>12.1</td>
<td>8.11</td>
</tr>
<tr>
<td>7.9</td>
<td>10.1</td>
<td>6.77</td>
</tr>
<tr>
<td>8.0</td>
<td>8.40</td>
<td>5.62</td>
</tr>
<tr>
<td>8.1</td>
<td>6.95</td>
<td>4.64</td>
</tr>
<tr>
<td>8.2</td>
<td>5.72</td>
<td>3.83</td>
</tr>
<tr>
<td>8.3</td>
<td>4.71</td>
<td>3.15</td>
</tr>
<tr>
<td>8.4</td>
<td>3.88</td>
<td>2.59</td>
</tr>
<tr>
<td>8.5</td>
<td>3.20</td>
<td>2.14</td>
</tr>
<tr>
<td>8.6</td>
<td>2.65</td>
<td>1.77</td>
</tr>
<tr>
<td>8.7</td>
<td>2.20</td>
<td>1.47</td>
</tr>
<tr>
<td>8.8</td>
<td>1.84</td>
<td>1.23</td>
</tr>
<tr>
<td>8.9</td>
<td>1.56</td>
<td>1.04</td>
</tr>
<tr>
<td>9.0</td>
<td>1.32</td>
<td>0.885</td>
</tr>
</tbody>
</table>

**TABLE 3b. Chronic Criterion for Ammonia in Iowa Streams - Early Life Stages Present**

<table>
<thead>
<tr>
<th>pH</th>
<th>Chronic Criterion - Early Life Stages Present, mg/l as N (or Criterion Continuous Concentration, CCC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Temperature, °C</td>
</tr>
<tr>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>7.8</td>
<td></td>
</tr>
<tr>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>8.4</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3. Chronic Criterion - Early Life Stages Present, mg/l as N
(or Criterion Continuous Concentration, CCC)

<table>
<thead>
<tr>
<th>pH</th>
<th>Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>8.5</td>
<td>1.09</td>
</tr>
<tr>
<td>8.6</td>
<td>0.920</td>
</tr>
<tr>
<td>8.7</td>
<td>0.778</td>
</tr>
<tr>
<td>8.8</td>
<td>0.661</td>
</tr>
<tr>
<td>8.9</td>
<td>0.565</td>
</tr>
<tr>
<td>9.0</td>
<td>0.486</td>
</tr>
</tbody>
</table>

**TABLE 3c. Chronic Criterion for Ammonia in Iowa Streams - Early Life Stages Absent**

<table>
<thead>
<tr>
<th>pH</th>
<th>Temperature, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-7</td>
</tr>
<tr>
<td>6.5</td>
<td>10.8</td>
</tr>
<tr>
<td>6.7</td>
<td>10.5</td>
</tr>
<tr>
<td>6.8</td>
<td>10.2</td>
</tr>
<tr>
<td>6.9</td>
<td>9.93</td>
</tr>
<tr>
<td>7.0</td>
<td>9.60</td>
</tr>
<tr>
<td>7.1</td>
<td>9.20</td>
</tr>
<tr>
<td>7.2</td>
<td>8.75</td>
</tr>
<tr>
<td>7.3</td>
<td>8.24</td>
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<tr>
<td>7.4</td>
<td>7.69</td>
</tr>
<tr>
<td>7.5</td>
<td>7.09</td>
</tr>
<tr>
<td>7.6</td>
<td>6.46</td>
</tr>
<tr>
<td>7.7</td>
<td>5.81</td>
</tr>
<tr>
<td>7.8</td>
<td>5.17</td>
</tr>
<tr>
<td>7.9</td>
<td>4.54</td>
</tr>
<tr>
<td>8.0</td>
<td>3.95</td>
</tr>
<tr>
<td>8.1</td>
<td>3.41</td>
</tr>
<tr>
<td>8.2</td>
<td>2.91</td>
</tr>
<tr>
<td>8.3</td>
<td>2.47</td>
</tr>
<tr>
<td>8.4</td>
<td>2.09</td>
</tr>
<tr>
<td>8.5</td>
<td>1.77</td>
</tr>
<tr>
<td>8.6</td>
<td>1.49</td>
</tr>
<tr>
<td>8.7</td>
<td>1.26</td>
</tr>
<tr>
<td>8.8</td>
<td>1.07</td>
</tr>
<tr>
<td>8.9</td>
<td>0.917</td>
</tr>
<tr>
<td>9.0</td>
<td>0.790</td>
</tr>
</tbody>
</table>

*At 15°C and above, the criterion for fish early life stage (ELS) absent is the same as the criterion for fish ELS present."
TABLE 4. Aquatic Life Criteria for Sulfate for Class B Waters  
(all values expressed in milligrams per liter)

<table>
<thead>
<tr>
<th>Hardness mg/l as CaCO₃</th>
<th>Cl⁻ &lt; 5 mg/l</th>
<th>5 &lt; = Cl⁻ &lt; 25</th>
<th>25 &lt; = Cl⁻ &lt; = 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>H &lt; 100 mg/l</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>100 &lt; = H &lt; = 500</td>
<td>500</td>
<td>[-57.478 + 5.79 (hardness) + 54.163 (chloride)] × 0.65</td>
<td>[1276.7 + 5.008 (hardness) – 1.457 (chloride)] × 0.65</td>
</tr>
<tr>
<td>H &gt; 500</td>
<td>500</td>
<td>2,000</td>
<td>2,000</td>
</tr>
</tbody>
</table>

61.3(4) Class “C” waters. Rescinded IAB 4/18/90, effective 5/23/90.

61.3(5) Surface water classification. The department hereby incorporates by reference “Surface Water Classification,” effective July 24, 2019. This document may be obtained on the department’s website at www.iowadnr.gov.


61.3(8) Recreational use assessment and attainability analysis protocol. The department hereby incorporates by reference “Recreational Use Assessment and Attainability Analysis Protocol,” effective March 19, 2008. This document may be obtained on the department’s website.

61.3(9) Iowa wasteload allocation (WLA) procedure. The department hereby incorporates by reference “Iowa Wasteload Allocation (WLA) Procedure,” as revised on November 11, 2020. This document may be obtained on the department’s website at www.iowadnr.gov.

61.3(10) Implementation procedure for biotic ligand model-based copper criteria. The department hereby incorporates by reference “Implementation Procedure for Biotic Ligand Model-Based Copper Criteria,” February 22, 2017. This document may be obtained on the department’s website.

This rule is intended to implement Iowa Code chapter 455B, division I, and division III, part 1. [ARC 8039B, IAB 8/12/09, effective 9/16/09; ARC 8214B, IAB 10/7/09, effective 11/11/09; ARC 8226B, IAB 10/7/09, effective 11/11/09; ARC 8466B, IAB 1/13/10, effective 2/17/10; ARC 9223B, IAB 11/17/10, effective 12/22/10; ARC 1988C, IAB 5/13/15, effective 6/17/15; ARC 2911C, IAB 1/18/17, effective 2/22/17; ARC 3583C, IAB 1/17/18, effective 2/21/18; ARC 4514C, IAB 6/19/19, effective 7/24/19; ARC 5226C, IAB 10/7/20, effective 11/11/20; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—61.4 to 61.9 Reserved.

VOLUNTEER MONITORING DATA REQUIREMENTS

567—61.10(455B) Purpose. The department uses water quality monitoring data for a number of purposes, including determining compliance with effluent limits for operation permits issued under 567—Chapter 64. The department also uses water quality monitoring data to determine the relative health of a water body by comparing monitoring data to the appropriate water quality standards established in 567—Chapter 61, a process known as water body assessments. Water body assessments are performed to prepare the biennial water quality report required under Section 305(b) of the Act and the list of impaired waters under Section 303(d) of the Act.

Iowa Code sections 455B.193 to 455B.195 require that credible data, as defined in Iowa Code section 455B.171, be used for the purpose of preparing Section 303(d) lists and other water quality program functions. Data provided by a volunteer are not considered credible data unless provided by a qualified volunteer. The purpose of this chapter is to establish minimum requirements for data produced by volunteers to meet the credible data and qualified volunteer requirements.
567—61.11(455B) Monitoring plan required. Volunteer water quality monitoring data submitted to the department must have been produced in accordance with a department-approved volunteer water quality monitoring plan before the data may be used for any of the purposes listed in Iowa Code section 455B.194. Approval of a plan will establish qualified volunteer status for the personnel identified in the plan for those monitoring activities covered under the plan.

61.11(1) Submittal of the plan. Prior to initiation of volunteer water quality monitoring activities intended to produce credible data, a water quality monitoring plan must be submitted to the department for review and approval. The plan must be submitted to the Volunteer Monitoring Coordinator, Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319, a minimum of 90 days before planned initiation of volunteer monitoring activities. A letter transmitting the plan must specifically request formal review and approval of the plan and identify a contact person. Volunteer monitors are encouraged to communicate with the department and to attend volunteer monitoring training sessions prior to formal submittal of a plan.

61.11(2) Content of the plan. A volunteer monitoring plan must contain, at a minimum, the following to be considered an acceptable volunteer monitoring plan:

a. A statement of the intent of the monitoring effort.

b. The name(s) of the person or persons that will be involved in data collection or analysis, the specific responsibilities of each person or group of people, and the general qualifications of the volunteers to carry out those responsibilities. For groups, such as educational institutions, it will be acceptable to identify the persons involved by general description (e.g., tenth grade biology class) with the exception of persons in responsible charge.

c. The name(s) of the person or persons that will oversee the monitoring plan, ensure that quality assurance and control objectives are being met, and certify the data. The person or persons in responsible charge must have training commensurate with the level of expertise to ensure that credible data is being generated.

d. The duration of the volunteer monitoring effort. In general, the department will not approve plans of greater than three years’ duration unless a longer duration is justified.

e. Location and frequency of sample collection.

f. Methods of data collection and analysis.

g. Record keeping and data reporting procedures.

61.11(3) Department review of the plan. The department will review monitoring plans and normally approve or disapprove the plan within 90 days of receipt. The department will work with the contact person identified in the plan to make any necessary changes prior to taking formal action. The department will use guidelines contained in the publications EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5, 2001) and Volunteer Monitor’s Guide to Quality Assurance Project Plans (1966, EPA 841-B-96-003) or equivalent updates to determine if the plans provide adequate quality assurance and quality control measures. Approval or disapproval of the plan will be in the form of a letter and approval may include conditions or limitations.

61.11(4) Changes in monitoring plans. The department must approve any changes to an approved monitoring plan. Data collected under a modified plan will not be considered credible data until such time as the department has approved the modifications. Modifications to an approved plan should be submitted at the earliest possible time to avoid interruptions in data collection and to ensure continuity of data.

61.11(5) Appeal of disapproval. If a monitoring plan submitted for approval is disapproved, the decision may be appealed by filing an appeal with the director within 30 days of disapproval. The form of the notice of appeal and appeal procedures are governed by 567—Chapter 7.

567—61.12(455B) Use of volunteer monitoring data. Data produced under an approved water quality monitoring plan will be considered credible data for the purposes listed in Iowa Code section 455B.194 if the following conditions are met.

61.12(1) Data submittal. A qualified volunteer monitor or qualified volunteer monitoring group must specifically request that data produced under an approved volunteer monitoring plan be considered
61.12(2) Department review of submitted data. The department must review and approve the submitted data. The person submitting the data will be informed of the department’s decision either to accept or reject the data. The department will attempt to resolve any apparent inconsistencies or questionable values in the submitted data prior to making a final decision.

567—61.13(455B) Department audits of volunteer monitoring activities. The department shall conduct field audits of a statistically valid and representative sample of volunteer data collection and analysis procedures to ensure compliance with an approved plan and may conduct confirmatory monitoring tests. Volunteers shall be informed of any audit results and be provided with an opportunity to address any concerns to the extent possible. The department reserves the right to rescind approval of an approved plan if it finds substantial problems that cannot be addressed in a timely manner to ensure the quality of the data being produced.

These rules are intended to implement Iowa Code chapter 455B, division III, part 1.

[Filed 6/28/76, Notice 5/3/76—published 7/12/76, effective 8/16/76]
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[Filed 8/25/95, Notice 6/7/95—published 9/13/95, effective 10/18/95]
[Filed 2/23/96, Notice 12/20/95—published 3/13/96, effective 4/17/96]
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[Filed ARC 8039B (Notice ARC 7624B, IAB 3/11/09, IAB 8/12/09, effective 9/16/09]
[Filed ARC 8226B (Notice ARC 7624B, IAB 3/11/09, IAB 10/7/09, effective 11/11/09]
[Filed ARC 8214B (Notice ARC 7853B, IAB 6/17/09, IAB 10/7/09, effective 11/11/09]
[Filed ARC 8466B (Notice ARC 7368B, IAB 11/19/08; Amended Notice ARC 7571B, IAB 2/11/09; Amended Notice ARC 8038B, IAB 8/12/09, IAB 1/13/10, effective 2/17/10]
[Filed ARC 9223B (Amended Notice ARC 8978B, IAB 7/28/10; Notice ARC 8599B, IAB 3/10/10, IAB 11/17/10, effective 12/22/10]
[Filed ARC 9330B (Notice ARC 9153B, IAB 10/20/10, IAB 1/12/11, effective 2/16/11)]  
[Editorial change: IAC Supplement 2/23/11]
[Filed ARC 0121C (Notice ARC 9998B, IAB 2/8/12, IAB 5/16/12, effective 6/20/12]
[Filed ARC 1495C (Notice ARC 1370C, IAB 3/19/14), IAB 6/11/14, effective 7/16/14]
[Filed ARC 1988C (Notice ARC 1877C, IAB 2/18/15), IAB 5/13/15, effective 6/17/15]
[Filed Emergency After Notice ARC 2695C (Notice ARC 2579C, IAB 6/8/16), IAB 8/31/16, effective 8/12/16]
[Filed ARC 2911C (Notice ARC 2757C, IAB 10/12/16), IAB 1/18/17, effective 2/22/17]
[Filed ARC 3583C (Notice ARC 3202C, IAB 7/19/17), IAB 1/17/18, effective 2/21/18]
[Filed ARC 4514C (Notice ARC 4227C, IAB 1/16/19), IAB 6/19/19, effective 7/24/19]
[Filed ARC 5226C (Notice ARC 5044C, IAB 6/3/20), IAB 10/7/20, effective 11/11/20]
[Filed ARC 5679C (Amended Notice ARC 5508C, IAB 3/10/21; Notice ARC 5134C, IAB 8/12/20), IAB 6/16/21, effective 7/21/21]
[Filed ARC 6191C (Notice ARC 6041C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]

1 Two ARCs
2 February 16, 2011, effective date of 61.2(2) “g” (8) delayed 70 days by the Administrative Rules Review Committee at its meeting held February 11, 2011.
CHAPTER 62
EFFLUENT AND PRETREATMENT STANDARDS:
OTHER EFFLUENT LIMITATIONS OR PROHIBITIONS
[Prior to 7/1/83, DEQ Ch 17]
[Prior to 12/3/86, Water, Air and Waste Management[90]]

567—62.1(455B) Prohibited discharges.

62.1(1) The discharge of any pollutant from a point source into a navigable water is prohibited unless authorized by an NPDES permit. For purposes of this subrule, an NPDES permit includes an NPDES permit issued by the administrator prior to approval of the Iowa NPDES program.

62.1(2) The discharge of any radiological, chemical or biological warfare agent or high-level radioactive waste into navigable waters is prohibited.

62.1(3) Any discharge which the secretary of the army acting through the chief of engineers finds would substantially impair anchorage and navigation is prohibited.

62.1(4) Any discharge to which the regional administrator has objected in writing pursuant to any right to object provided the administrator in Section 402(d) of the Act is prohibited.

62.1(5) Any discharge from a point source which is in conflict with a plan or amendment thereto approved pursuant to Section 208(b) of the Act is prohibited.

62.1(6) The discharge of wastewater into a publicly owned treatment works or a semipublic sewage disposal system in volumes or quantities in excess of those to which a significant industrial user is committed in the treatment agreement described in 567—subrule 64.3(5) or a local control mechanism in the case of a POTW with a pretreatment program approved by the department is prohibited.

62.1(7) Wastes in such volumes or quantities as to exceed the design capacity of the treatment works, cause interference or pass through, or reduce the effluent quality below that specified in the operation permit of the treatment works are considered to be a waste which interferes with the operation or performance of a publicly owned treatment works or a semipublic sewage disposal system and are prohibited.

62.1(8) Discharge of the following pollutants to a publicly owned treatment works, a semipublic sewage disposal system, or a private sewage disposal system is prohibited:

a. Pollutants which create a fire or explosion hazard including but not limited to waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

b. Solid or viscous substances in amounts that will cause obstruction to the flow in the treatment works resulting in interference;

c. Heat in amounts which will inhibit biological activity in the treatment works resulting in interference but, in no case, heat in such quantities that the temperature of the waste stream at the treatment plant exceeds 40 degrees Celsius (104 degrees Fahrenheit) unless specifically approved by the department;

d. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

e. Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that could cause acute worker health and safety problems; and

f. Pollutants which will cause corrosive structural damage to the treatment works but, in no case, discharges with a pH lower than 5.0 standard units, unless the treatment works is specifically designed to accommodate such discharges, or wastes which would intermittently change the pH of the raw waste entering the treatment plant by more than 0.5 standard pH units or which would cause the pH of the raw waste entering the treatment plant to be less than 6.0 or greater than 9.0 standard units.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—62.2(455B) Exemption of adoption of certain federal rules from public participation. Iowa Code section 17A.4(2) allows an agency to exempt a “very narrowly tailored category of rules” from the notice and public participation requirements of Iowa Code section 17A.4(1) if the agency for good cause finds that notice and public participation is “unnecessary.” The commission finds good cause
for exempting from the notice and public participation requirements of Iowa Code section 17A.4(1) the adoption by reference of the following federal standards and guidelines and amendments thereto:

An effluent limitation promulgated pursuant to Sections 301 and 304 of the Act; a standard of performance for a new source promulgated pursuant to Section 306 of the Act; a toxic effluent standard promulgated pursuant to Section 307(a) of the Act; a pretreatment standard for an existing source promulgated pursuant to Section 307(b) of the Act; a pretreatment standard for a new source promulgated pursuant to Section 307(c) of the Act; and information on the level of effluent quality attainable through the application of secondary treatment promulgated pursuant to Section 304(d) of the Act.

Public participation would be unnecessary since the commission must adopt effluent and pretreatment standards at least as stringent as the enumerated promulgated federal standards in order to have the department’s NPDES program approved by the administrator (Section 402(c) of the Act), and yet must not adopt an effluent or pretreatment standard that is more stringent than the enumerated promulgated federal standards (Iowa Code section 455B.173(3)). Any such rule adopted by reference would be effective 35 days after filing, indexing, and publication in the Iowa Administrative Code.

567—62.3(455B) Secondary treatment information: effluent standards for publicly owned treatment works and semipublic sewage disposal systems.

62.3(1) General. The following paragraphs describe the minimum level of effluent quality attainable by secondary treatment in terms of the pollutant measurements carbonaceous biochemical oxygen demand (CBOD₅), the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand; suspended solids (SS), the pollutant parameter total suspended solids; and pH, the measure of the relative acidity or alkalinity. The pollutant measurement carbonaceous biochemical oxygen demand is used in lieu of the pollutant measurement five-day biochemical oxygen demand (BOD₅), as noted in 40 CFR 133.102. All requirements for each pollutant measurement shall be achieved by publicly owned treatment works and semipublic sewage disposal systems except as provided for in subrules 62.3(2) and 62.3(3).

Effluent limitations on pollutants other than carbonaceous biochemical oxygen demand (five day), suspended solids and pH may be imposed in the NPDES permit. Such limitations will reflect pretreatment requirements that may be imposed on users of the treatment works.

a. Carbonaceous biochemical oxygen demand (5 day) — CBOD₅.
   (1) The 30-day average shall not exceed 25 mg/l.
   (2) The 7-day average shall not exceed 40 mg/l.
   (3) The 30-day average percent removal shall not be less than 85 percent, and the percent removal shall be calculated by adding 5 units to the effluent CBOD₅ monitoring data and comparing that value to the influent BOD₅ monitoring data. Site-specific information on the relationship between BOD₅ and CBOD₅ shall be used in lieu of the 5-unit relationship if such information is available.

b. Suspended solids — SS.
   (1) The 30-day average shall not exceed 30 mg/l.
   (2) The 7-day average shall not exceed 45 mg/l.
   (3) The 30-day average percent removal shall not be less than 85 percent.

c. pH: The effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the publicly owned treatment works demonstrates that:
   (1) Inorganic chemicals are not added to the waste stream as part of the treatment process, and
   (2) Contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0.

62.3(2) Special considerations.

a. Combined sewers. Treatment works subject to this part may not be capable of meeting the percentage removal requirements established under 62.3(1)”a”(3) and 62.3(1)”b”(3), or 62.3(3)”f”(3) and 62.3(3)”g”(3) during wet weather where the treatment works receive flows from combined sewers (i.e., sewers which are designed to transport both storm water and sanitary sewage). For such treatment
works, the decision must be made on a case-by-case basis as to whether any attainable percentage removal level can be defined, and if so, what the level should be.

b. Industrial wastes. For certain industrial categories, the discharge of \( \text{CBOD}_5 \) and SS permitted (under Section 301(b)(1)(A)(i), 301(b)(2)(E) or 306 of the Act) may be less stringent than the values given in 62.3(1)“a”(1), 62.3(1)“b”(1), 62.3(3)“f”(1), and 62.3(3)“g”(1). In cases when wastes would be introduced from such an industrial category into a publicly owned treatment works, the values for \( \text{CBOD}_5 \) and SS in 62.3(1)“a”(1), 62.3(1)“b”(1), 62.3(3)“f”(1), and 62.3(3)“g”(1) may be adjusted upwards provided that:

(1) The permitted discharge of such pollutants, attributable to the industrial category, would not be greater than that which would be permitted (under Sections 301(b)(1)(A)(i), 301(b)(2)(E) or 306 of the Act) if such industrial category were to discharge directly into waters of the state, and

(2) The flow or loading of such pollutants introduced by the industrial category exceeds 10 percent of the design flow or loading of the publicly owned treatment works.

When such an adjustment is made, the values for \( \text{CBOD}_5 \) or SS in 62.3(1)“a”(2), 62.3(1)“b”(2), 62.3(3)“f”(2), and 62.3(3)“g”(2) should be adjusted proportionately.

c. Waste stabilization ponds. Departmental secondary treatment standards for waste stabilization ponds are the same as those found in subrule 62.3(1) concerning secondary treatment with the exception of the standards for suspended solids which are as follows:

(1) SS, the 30-day average shall not exceed 80 mg/l.

(2) SS, the 7-day average shall not exceed 120 mg/l.

d. Less concentrated influent wastewater for separate sewers. The department may substitute either a lower percent removal requirement or a mass loading limit for the percent removal requirements in 62.3(1) and 62.3(3) provided that the permittee demonstrates that:

(1) The treatment works is consistently meeting or will consistently meet, its permit effluent concentration limits but its percent removal requirements cannot be met due to less concentrated influent wastewater.

(2) To meet the percent removal requirements, the treatment works would have to achieve significantly more stringent limitations than would otherwise be required by the concentration-based standards, and

(3) The less concentrated influent wastewater is not the result of excessive infiltration/inflow (I/I). A system is considered to have nonexcessive I/I when an average wet weather influent flow (as defined in the department’s design standards 567—paragraph 64.2(9)“b,” Chapter 14.4.5.1.b) comprised of domestic wastewater plus infiltration plus inflow equals less than 275 gallons per day per capita.

e. Upgraded facilities designed to operate in a split flow mode. The department may substitute either a lower percent removal requirement or a mass loading limit for the percent removal requirements in 62.3(1) only (not 62.3(3)), provided that the treatment works is designed to split part of the primary treated wastewater flow around the secondary treatment unit(s). The design to accommodate split flow must be approved by the department and consistent with applicable design standards for wastewater treatment facilities. The requirements of 62.3(2)“d” would apply to facilities considered under this subrule. This subrule shall not be considered for facilities eligible for treatment equivalent to secondary treatment under 62.3(3).

Any applicant requesting a permit limit adjustment must include as part of the request an analysis of the I/I sources in the system and a plan for the elimination of all inflow sources such as roof drains, manholes and storm sewer interconnections. Infiltration sources that can be economically eliminated or minimized shall be corrected.

f. Dilution. Nothing in this subrule or any other rule of the department shall be construed to encourage dilution of sewage as a means of complying with secondary treatment effluent standards. Reasonable efforts to prevent and abate infiltration of groundwater into sewers, and prevention or removal of any significant source of inflow, are required of all persons responsible for facilities subject to these standards.

62.3(3) Treatment equivalent to secondary treatment. This subrule describes the minimum level of effluent quality attainable by facilities eligible for treatment equivalent to secondary treatment in terms
of the pollutant measurements CBOD₅, SS and pH. The pollutant measurement CBOD₅ is used in lieu of the pollutant measurement BOD₅ as noted in 40 CFR 133.105. Treatment works shall be eligible at any time for consideration of effluent limitations described for treatment equivalent to secondary treatment if:

a. The CBOD₅ and SS effluent concentrations consistently achievable through proper operation and maintenance of the treatment works exceed the minimum level of the effluent quality set forth in 62.3(1)“a” and 62.3(1)“b”; and

b. A trickling filter or waste stabilization pond is used as the principal process; and

c. The treatment works provide significant biological treatment of municipal wastewater; and

d. The facility was not constructed since January 1, 1972, in order to achieve design effluent limits set forth in 62.3(1)“a,” “b,” and “c” or predecessor rules on secondary treatment. An eligible trickling filter or waste stabilization pond may have undergone an upgrade to achieve the effluent requirements specified in this subrule. Nothing in this subrule shall be construed to allow a facility to circumvent the design standards of 567—Chapter 64 in the replacement or construction of the individual treatment units; and

e. The treatment works is one that does not receive organic or hydraulic loadings which prevent the facilities from consistently complying with 62.3(3)“f,” “g,” and “h.”

All requirements for the specified pollutant measurements in paragraphs “f,” “g,” and “h” following in this subrule shall be achieved except as provided for above in 62.3(2) or paragraph “i” of this subrule below.

f. CBOD₅ limitations:

(1) The 30-day average shall not exceed 40 mg/l.

(2) The 7-day average shall not exceed 60 mg/l.

(3) The 30-day average percent removal shall not be less than 65 percent, and the percent removal shall be calculated by adding 5 units to the effluent CBOD₅ monitoring data and comparing that value to the influent BOD₅ monitoring data. Site-specific information on the relationship between BOD₅ and CBOD₅ shall be used in lieu of the 5-unit relationship if such information is available.

g. SS limitations. Except where SS values have been adjusted in accordance with subrule 62.3(2), paragraph “c,” above:

(1) The 30-day average shall not exceed 45 mg/l.

(2) The 7-day average shall not exceed 65 mg/l.

(3) The 30-day average percent removal shall not be less than 65 percent.

h. pH. The requirements of above subrule 62.3(1), paragraph “c,” shall be met.

i. Permit adjustments. More stringent limitations are required if the 30-day average and 7-day average CBOD₅ and SS effluent values that could be achievable through proper operation and maintenance of the upgraded or existing treatment works, based on an analysis of the past performance of the treatment works, would enable the treatment works to achieve more stringent limitations. These more stringent limitations shall be maintained and not relaxed unless as specified in subrule 62.3(2)“b.” Effluent concentrations consistently achievable through proper operation and maintenance are:

(1) The ninety-fifth percentile value of the 30-day average effluent quality achieved by the upgraded or existing treatment works in a period of at least two years, excluding values attributable to upsets, bypasses, operational errors, or other unusual conditions, and

(2) A 7-day average value equal to 1.5 times the value derived for the 30-day average above.

This subrule shall only be applied when the existing or upgraded facility has achieved its design organic loading as specified in the most recent construction permit or its accompanying documentation. The determination of the effluent concentration consistently achievable through proper operation and maintenance shall only be based on the effluent quality data following the period when the design organic loading has been achieved.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—62.4(455B) Federal effluent and pretreatment standards. The federal standards, 40 CFR, revised as of January 1, 2021, are applicable to the following categories:
62.4(2) Cooling water intake structures. The following is adopted by reference: 40 CFR Part 125, Subparts I and J.
62.4(4) Thermal discharges. The following is adopted by reference: 40 CFR Part 125, Subpart H.
62.4(8) Canned and preserved seafood processing point source category. The following is adopted by reference: 40 CFR Part 408.
62.4(12) Concentrated animal feeding operations (CAFO) point source category. The following is adopted by reference: 40 CFR Part 412.
62.4(13) Electroplating point source category. The following is adopted by reference: 40 CFR Part 413.
62.4(16) Reserved.
62.4(22) Phosphate manufacturing point source category. The following is adopted by reference: 40 CFR Part 422.
62.4(23) Steam electric power generating point source category. The following is adopted by reference: 40 CFR Part 423.
62.4(31) Builders paper and roofing felt segment of the builders paper and board mills point source category. Reserved.
62.4(33) Metal finishing point source category. The following is adopted by reference: 40 CFR Part 433.
62.4(35) Oil and gas extraction point source category. The following is adopted by reference: 40 CFR Part 435.
62.4(38) Metal products and machinery point source category. The following is adopted by reference: 40 CFR Part 438.
62.4(40) Ore mining and dressing point source category. The following is adopted by reference: 40 CFR Part 440.
62.4(41) Dental office point source category. The following is adopted by reference: 40 CFR Part 441.
62.4(42) Transportation equipment cleaning point source category. The following is adopted by reference: 40 CFR Part 442.
62.4(43) Paving and roofing materials (tars and asphalt) point source category. The following is adopted by reference: 40 CFR Part 443.
62.4(48) Printing and publishing point source category. Reserved.
62.4(49) Airport de-icing point source category. The following is adopted by reference: 40 CFR Part 449.
62.4(52) Concrete products point source category. Reserved.
62.4(53) Shore receptor and bulk terminals point source category. Reserved.
62.4(54) Gum and wood chemicals manufacturing point source category. The following is adopted by reference: 40 CFR Part 454.
62.4(56) Adhesives and sealants industry point source category. Reserved.


62.4(60) Hospital point source category. The following is adopted by reference: 40 CFR Part 460.


62.4(62) Reserved.


62.4(64) Metal molding and castings point source category. The following is adopted by reference: 40 CFR Part 464.


62.4(68) Copper forming point source category. The following is adopted by reference: 40 CFR Part 468.

62.4(69) Electrical and electronic components point source category. The following is adopted by reference: 40 CFR Part 469.

62.4(70) Reserved.


[ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 6191C, IAB 2/9/22, effective 3/16/22]


[ARC 2482C, IAB 4/13/16, effective 5/18/16]

567—62.6(455B) Effluent limitations and pretreatment requirements for sources for which there are no federal effluent or pretreatment standards.

62.6(1) Definitions. As used in this rule:

a. “Average” means the sum of the total daily discharges by weight, volume or concentration during the reporting period (as specified in the operation permit) divided by the total number of days during the reporting period when the facility was in operation. With respect to the monitoring requirements, the “daily average” discharge shall be determined by the summation of all the measured daily discharges by weight, volume or concentration divided by the number of days during the reporting period when the measurements were made.

b. “Maximum” means the total discharge by weight, volume or concentration which cannot be exceeded during a 24-hour period.

c. “Best engineering judgment” means a judgment that considers any or all of the following:

(1) Known state-of-the-art (i.e., demonstrated treatment that is being done or can be done);
(2) Published technical articles and research results;
(3) Engineering reference books;
(4) Consultation with acknowledged experts in the field;
(5) Availability of equipment;
(6) Known or suspected toxicity of the pollutants;
(7) Safety, welfare and aesthetic effects on persons who may come in contact with the discharge; and

(8) Standards and rules of other regulatory agencies and states.
62.6(2) Time of compliance. Effluent limitations and pretreatment limitations established pursuant to this rule shall be achieved within a reasonable time after receipt of notice from the department of the applicability of these limitations.

62.6(3) Effluent limitations. This subrule establishes effluent limitations on the discharge of pollutants from sources other than publicly owned treatment works and semipublic sewage disposal systems that are not subject to the federal effluent standards adopted by reference in 62.4(1) and 62.4(3) to 62.4(71).

a. There shall be established an effluent limitation that represents the best engineering judgment of the department of the degree of effluent reduction consistent with the Act and Iowa Code chapter 455B.

b. The following wastes shall not be introduced into privately owned treatment works subject to this subrule:

(1) Wastes that create a fire or explosion hazard in the treatment works.

(2) Wastes at a flow rate or pollutant discharge rate, or both, which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency such that the effluent limitations in the permit of the treatment works are violated.

62.6(4) Pretreatment requirements for incompatible wastes. This subrule establishes pretreatment requirements for incompatible pollutants that apply to sources other than significant industrial users as defined in 567—60.2(455B), and to sources that are new or existing significant industrial users for which there is no federal pretreatment standard (i.e., sources which do not fall within a point source category or, if they do fall within a point source category, sources for which the administrator has not yet promulgated a pretreatment standard).

a. For sources that are within a point source category adopted by reference in 567—62.4(455B) for which there are promulgated effluent limitation guidelines, but no promulgated pretreatment standards, the pretreatment standard for incompatible pollutants shall be the promulgated effluent limitation guideline.

b. For sources that are not subject to paragraph “a,” the department shall establish an effluent limitation that represents the best professional judgment for effluent reduction that is consistent with the Act and Iowa Code chapter 455B.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—62.7(455B) Effluent limitations less stringent than the effluent limitation guidelines. An effluent limitation less stringent than the effluent limitation guideline (adopted by reference in 567—62.4(455B)) representing the degree of effluent reduction achievable by application of the best practicable control technology currently available may be allowed in an NPDES permit if the factors relating to the equipment or facilities involved, the process applied, or other such factors related to the discharger are fundamentally different from the factors considered by the administrator in the establishment of the guidelines. An individual discharger or other interested person may submit evidence concerning such factors to the director. On the basis of such evidence or other available information and in accordance with 40 CFR 125.31, the director will make a written finding that such factors are or are not fundamentally different from the facility compared to those specified in the development document. Any such less stringent effluent limitations must, as a condition precedent, be approved by the administrator.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—62.8(455B) Effluent limitations or pretreatment requirements more stringent than the effluent or pretreatment standards.

62.8(1) Effluent limitations more stringent than the effluent limitation guidelines. An effluent limitation more stringent than the effluent limitation guidelines representing the degree of effluent reduction achievable by application of the best practicable control technology currently available may be required in an NPDES permit if the factors relating to the equipment or facilities involved, the process applied, or other such factors related to the discharger are fundamentally different from the factors considered by the administrator in the establishment of the guidelines. An individual discharger or other interested person may submit evidence concerning such factors to the director. On the basis of
such evidence or other information available to the director, the director will make a written finding that such factors are or are not fundamentally different for the facility compared to those specified in the development document. Any such more stringent effluent limitation must, as a condition precedent, be approved by the administrator.

**62.8(2) Effluent limitations necessary to meet water quality standards.** No effluent, alone or in combination with the effluent of other sources, shall cause a violation of any applicable water quality standard. When it is found that a discharge that would comply with applicable effluent standards in 567—62.3(455B), 567—62.4(455B) or 567—62.5(455B) or effluent limitations in 567—62.6(455B) would cause a violation of water quality standards, the discharge will be required to meet the water quality-based effluent limits (WQBELs) necessary to achieve the applicable water quality standards as established in 567—Chapter 61. Any such effluent limit shall be derived from the calculated waste load allocation, as described in “Iowa Wasteload Allocation (WLA) Procedure,” as revised on February 21, 2018, or the waste load allocation as required by a total maximum daily load, whichever is more stringent. The translation of waste load allocations to WQBELs shall use Iowa permit derivation methods, as described in the “Iowa Wasteload Allocation (WLA) Procedure,” as revised on February 21, 2018, except that the daily sample maximum criteria for *E. coli* set forth in 567—Chapter 61 shall not be used as an end-of-pipe limitation.

**62.8(3) Pretreatment requirements more stringent than pretreatment standards or requirements.** The department or the publicly owned treatment works may impose pretreatment requirements more stringent than the applicable pretreatment standard of 567—62.4(455B) or pretreatment requirements of 567—62.6(455B) if such more stringent requirements are necessary to prevent violations of water quality standards, interference, or pass through.

**62.8(4) Effluent limitations or pretreatment requirements in approved areawide waste treatment management plans.** Effluent limitations or pretreatment requirements more stringent than applicable effluent or pretreatment standards in 567—62.3(455B) to 567—62.5(455B) or effluent limitations or pretreatment requirements in 567—62.6(455B) may be imposed by the department if the more stringent effluent limitations or pretreatment requirements are required by an approved areawide waste treatment management (208(b)) plan.

**62.8(5) Effluent limitations for pollutants not covered by effluent or pretreatment standards.** An effluent limitation on a pollutant not otherwise regulated under 567—62.3(455B) to 567—62.6(455B) (e.g., polychlorinated biphenyls, PBBs) may be imposed on a case-by-case basis. Such limitation shall be based on effect of the pollutant in water and the feasibility and reasonableness of treating such pollutant. 

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 8123B, IAB 9/9/09, effective 10/14/09; ARC 8214B, IAB 10/7/09, effective 11/11/09; ARC 3583C, IAB 1/17/18, effective 2/21/18]

**567—62.9(455B) Disposal of pollutants into wells.** Commencing September 1, 1977, there shall be no disposal of a pollutant other than into wells within Iowa. Any disposal of heat shall be sufficiently controlled to protect the public health and welfare and to prevent pollution of ground and surface water resources. In reviewing any permits proposed to be issued for the disposal into wells, the director shall consider, among other things, any policies, technical information, or requirements specified by the administrator in regulations issued pursuant to the Act or in directives issued to EPA regional offices.

**567—62.10(455B) Effluent reuse.** Treated final effluent may be reused in a manner noted in 62.10(1) or as specified in the NPDES permit.

**62.10(1) Reuse for golf course irrigation.** Treated final effluent may be reused for golf course irrigation if the conditions described in “a” and “b” are met.

a. The treated final effluent must meet one of the following conditions:

1. A minimum total residual chlorine level of 0.5 mg/l must be maintained at a minimum of 15 minutes contact time of chlorine to wastewater prior to the irrigation of the golf course with treatment plant effluent; or

2. Disinfected effluent shall be held in a retention pond with a detention time of at least 20 days prior to reuse as irrigation on a golf course. For this purpose, effluent may be disinfected using any
common treatment technology, and either an existing pond or a pond constructed specifically for effluent retention may be used.

b. A golf course utilizing treated final effluent shall take all of the following actions:

(1) Clearly state on all scorecards that treated final effluent is used for irrigation of the golf course and oral contact with golf balls and tees should be avoided;

(2) Post signs that warn against consumption of water at all water hazards;

(3) Color code, label, or tag all piping and sprinklers associated with the distribution or transmission of the treated final effluent to clearly warn against the consumptive use of the contents; and

(4) Restrict the access of the public to any area of the golf course where spraying is being conducted. All four of the above conditions must be met.

62.10(2) Reserved.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

These rules are intended to implement Iowa Code chapter 455B, division III, part 1.

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[Filed ARC 3583C (Notice ARC 3202C, IAB 7/19/17), IAB 1/17/18, effective 2/21/18]
[Filed ARC 6191C (Notice ARC 6041C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
567—63.1(455B) **Guidelines establishing test procedures for the analysis of pollutants.** Only the procedures prescribed in this chapter shall be used to perform the measurements indicated in an application for an operation permit submitted to the department, a report required to be submitted by the terms of an operation permit, and a certification issued by the department pursuant to Section 401 of the Act.

63.1(1) Identification of test procedures, application for alternative test procedures, and method modifications.


b. All parameters for which testing is required by a wastewater discharge permit, permit application, or administrative order, except operational performance testing, must be analyzed using one of the following:

(1) An approved method specified in 40 CFR Section 136.3;

(2) An alternative method that has been previously approved pursuant to 40 CFR Section 136.4 or 136.5; or

(3) A method identified by the department, when no approved method is specified for the parameter in 40 CFR Part 136.

Samples collected for operational testing pursuant to 63.3(4) need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.

c. Applications for alternative test procedures shall follow the requirements of 40 CFR Section 136.4 or 136.5.

d. Method modifications shall follow the requirements of 40 CFR Section 136.6.

63.1(2) Required containers, preservation techniques and holding times. All samples collected in accordance with self-monitoring requirements as defined in an operation permit shall comply with the container, preservation techniques, and holding time requirements as specified in 40 CFR Section 136.3, Table II (Required Containers, Preservation Techniques, and Holding Times). Sample preservation should be performed immediately upon collection, if feasible.

63.1(3) All laboratories conducting analyses required by this chapter must be certified in accordance with 567—Chapter 83. Routine on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine, other pollutants that must be analyzed immediately upon sample collection, settleable solids, physical measurements such as flow and cell depth, and operational monitoring tests specified in 63.3(4) are excluded from this requirement. All instrumentation used for conducting any analyses required by this chapter must be properly calibrated according to the manufacturer’s instructions.

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—63.2(455B) **Records of monitoring activities and results.**

63.2(1) The permittee shall maintain records of all information resulting from any monitoring activities required in its operation permit and from any operational performance monitoring.

63.2(2) Any records of monitoring activities and results shall include for all samples:

a. The date, exact place and time of sampling.

b. The dates analyses were performed.

c. Who performed the analyses.

d. The analytical techniques or methods used, and

e. The results of such analyses.

63.2(3) The permittee shall retain for a minimum of three years all paper and electronic records of monitoring activities and results including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records. This retention includes but is not limited to
monitoring and calibration records from pH meters, dissolved oxygen meters, total residual chlorine meters, flow meters, and temperature readings from any composite samplers. The period of retention shall be considered to be extended during the course of any unresolved litigation or when requested by the director or the regional administrator.

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 2482C, IAB 4/13/16, effective 5/18/16]

567—63.3(455B) Minimum self-monitoring requirements in permits.

63.3(1) Monitoring by organic waste dischargers. The minimum self-monitoring requirements to be incorporated in operation permits for facilities discharging organic wastes shall be the appropriate requirements in Tables I and II. Additional monitoring may be specified in the operation permit based on a case-by-case evaluation of the impact of the discharge on the receiving stream, toxic or deleterious effects of wastewaters, industrial contribution to the system, complexity of the treatment process, history of noncompliance or any other factor which requires strict operational control to meet the effluent limitations of the permit, as described in the Supporting Document for Permit Monitoring Frequency Determination, March 2022, located on the department’s website.

63.3(2) Monitoring by inorganic waste dischargers. The self-monitoring requirements to be incorporated in the operation permit for facilities discharging inorganic wastes shall be determined on a case-by-case evaluation of the impact of the discharge on the receiving stream, toxic or deleterious effects of wastewaters, complexity of the treatment process, history of noncompliance or any other factor which requires strict control to meet the effluent limitations of the permit, as described in the Supporting Document for Permit Monitoring Frequency Determination, March 2022, located on the department’s website.

63.3(3) Monitoring of significant industrial users of publicly owned treatment works. Monitoring for significant industrial users as defined in 567—60.2(455B) shall be determined as described in the Supporting Document for Permit Monitoring Frequency Determination, March 2022, located on the department’s website. Results of such monitoring shall be submitted to the department in accordance with the reporting requirements in the operation permit. The monitoring program of a publicly owned treatment works with a pretreatment program approved by the department may be used in lieu of the supporting document.

63.3(4) Operational performance monitoring. Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567—63.2(455B). Additional operational performance monitoring may be specified in the operation permit based on a case-by-case evaluation of the impact of the discharge on the receiving stream, toxic or deleterious effects of wastewaters, complexity of the treatment process, history of noncompliance or any other factor that requires strict control to meet the effluent limitations of the permit. The results of operational performance monitoring specified in the operation permit shall be submitted to the department in accordance with the reporting requirements in the operation permit.

63.3(5) Modification of minimum monitoring requirements. Monitoring requirements may be modified or reduced at the discretion of the director when requested by the permittee. Adequate justification must be presented by the permittee that the reduced or modified requirements will accurately reflect actual wastewater characteristics and will not adversely impact the operation of the facility. Requests for modification or reduction of monitoring requirements in an existing permit are considered waiver requests and must follow the procedures in 567—paragraph 60.4(2)“b.” All reductions or modifications of monitoring incorporated into an operation or NPDES permit by amendment or upon reissuance of the permit are only effective until the expiration date of that permit.

63.3(6) Impairment monitoring. If a wastewater treatment facility is located in the watershed of an impaired water body that is listed on Iowa’s most recent Section 303(d) list (as described in 40 CFR Section 130.7), additional monitoring for parameters that are contributing to the impairment may be included in the operation or NPDES permit on a case-by-case basis.

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 6191C, IAB 2/9/22, effective 3/16/22]
567—63.4(455B) Effluent toxicity testing requirements in permits.

63.4(1) Effluent toxicity testing. All major municipal and industrial dischargers shall be required to carry out effluent toxicity testing. Minor dischargers may be required to conduct effluent toxicity tests based on a case-by-case evaluation of the impact of the discharge on the receiving stream or industrial contribution to the system. All dischargers required to conduct effluent toxicity tests shall conduct, at a minimum, one valid effluent toxicity test annually. The testing requirements will be placed in the operation permit for each discharger required to conduct this testing. Additional monitoring may be specified in the operation permit based on a case-by-case evaluation of the impact of the discharge on the receiving stream, toxic or deleterious effects of wastewaters, industrial contribution to the system, complexities of the treatment process, history of noncompliance or any other factor which requires strict operational control to meet the effluent limitations of the permit. Any effluent toxicity test completed by the department or other agency and conducted according to procedures stated or referenced in this rule may be used to determine compliance with an operational permit.

63.4(2) Testing procedures. Dischargers shall be required to conduct effluent toxicity tests in accordance with the following general requirements:

a. Effluent toxicity tests shall be performed using a 24-hour composite sample of the effluent collected at the location stated in the operation permit. All composite samples shall be delivered to the testing laboratory within a reasonable time (approximately 24 hours) after collection, and all tests must commence within 36 hours following sample collection. The results of all effluent toxicity tests, including any tests performed at a greater frequency than required in the operation permit, shall be submitted to the department within 30 days of completing the test.

b. All effluent toxicity tests shall be conducted using the test methods referenced in 40 CFR Part 136 and protocols described in the EPA document EPA-821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th edition, October 2002. All effluent toxicity tests shall be conducted by a laboratory certified in Iowa.

c. All effluent toxicity tests shall be performed using the water flea (Ceriodaphnia dubia), and the fathead minnow (Pimephales promelas).

d. Effluent toxicity tests shall include, at a minimum, two different concentrations of effluent. One test shall consist of 100 percent effluent, and a second test shall be a diluted effluent sample as defined. A control test, consisting of 100 percent culture water for each respective organism shall also be used. The test shall last for 48 hours at which time the mortality will be determined for all tests.

e. All effluent toxicity tests shall be of the pass/fail type.

63.4(3) If there is a positive toxicity test result in the diluted effluent sample from a valid effluent toxicity test, the following requirements apply unless the exception in paragraph “c” of this subrule is applicable.

a. At a minimum, the discharger shall be required to conduct quarterly effluent toxicity tests until three successive tests are determined not to be positive, after which the normal annual testing shall be resumed.

b. If the discharger has two successive positive valid diluted effluent toxicity test results or three positive test results out of five valid diluted effluent toxicity tests, the discharger shall be required to conduct a toxicity reduction evaluation (TRE). The discharger may be required to carry out instream monitoring or other analysis in conjunction with the TRE. At any time during the course of conducting a TRE there are three consecutive follow-up toxicity test results for the diluted sample which are not positive, the facility will be considered in compliance and work on the TRE may cease. Annual testing for effluent toxicity shall then resume. Nothing in these rules shall preclude the department from taking enforcement action beyond that described in these rules.

c. When the pretest chemical analysis for un-ionized ammonia nitrogen (NH3-N) or total residual chlorine (TRC) on the diluted effluent sample exceeds the concentrations given below, a positive test result is likely to have been caused by high concentrations of NH3 or TRC, and the test result will not be used to determine if follow-up testing is needed.

(1) Un-ionized Ammonia Nitrogen—0.9 mg/l
(2) TRC—0.1 mg/l

[ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—63.5(455B) Self-monitoring and reporting for animal feeding operations.

63.5(1) The following self-monitoring requirements may be imposed on an animal-feeding operation in any operation permit issued for such an operation.

a. Measurement of liquid level in a waste storage facility on a periodic basis.

b. Measurement of daily precipitation, as appropriate.

c. Sampling and analysis of groundwater as necessary to determine effects of wastewater application.

d. Other measurements necessary to evaluate the adequacy of a waste disposal system.

63.5(2) Reports of the self-monitoring results shall be submitted to the appropriate regional field office of the department quarterly. The quarterly reports shall cover the periods January through March, April through June, July through September, and October through December. The quarterly report for each period shall be submitted by the tenth day of the month following the quarter being reported.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—63.6(455B) Bypasses and upsets.

63.6(1) Prohibition. Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited. The department may not assess a civil penalty against a permittee for a bypass if the permittee has complied with all of the following:

a. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted the information required in 63.6(2), 63.6(3), and 63.6(5).

63.6(2) Request for anticipated bypass. Except for bypasses that occur as a result of mechanical failure or acts beyond the control of the owner or operator of a waste disposal system (unanticipated bypasses), the owner or operator shall obtain written permission from the department prior to any discharge of sewage or wastes from a waste disposal system not authorized by a discharge permit. The director may approve an anticipated bypass after considering its adverse effects if the director determines that it will meet the conditions in 63.6(1).

a. The request for a bypass shall be submitted to the appropriate regional field office of the department at least ten days prior to the expected date of the event.

b. The request shall be submitted in writing and shall include all of the following:

(1) The reason for the bypass;

(2) The date and time the bypass will begin;

(3) The expected duration of the bypass;

(4) An estimate of the amount of untreated or partially treated sewage or wastewater that will be discharged;

(5) The location of the bypass;

(6) The name of any body of surface water that will be affected by the bypass; and

(7) Any actions the owner or operator proposes to take to mitigate the effects of the bypass upon the receiving stream or other surface water.

63.6(3) Notification of unanticipated bypass or upset and public notices. In the event that a bypass or upset occurs without prior notice having been provided pursuant to 63.6(2) or as a result of mechanical failure or acts beyond the control of the owner or operator, the owner or operator of the treatment facility or collection system shall notify the department by telephone as soon as possible but not later than 24 hours after the onset or discovery.

a. Notification shall be made by contacting the appropriate field office.
b. Notification shall include information on as many items listed in subparagraphs 63.6(3)“d”(1) through (6) as available information will allow.

c. When the department has been notified of an unanticipated bypass, the department shall determine if a public notice is necessary. If the department determines that public notification is necessary, the owner or operator of the treatment facility or the collection system shall prepare a public notice.

d. A written submission describing the bypass shall also be provided within five days of the time the permittee becomes aware of the bypass. The written submission shall contain the following:

(1) The reason for the bypass, including the amount and duration of any rainfall event that may have contributed to the bypass;

(2) The date and time of onset or discovery of the bypass;

(3) The duration of the bypass;

(4) An estimate of the amount of untreated or partially treated sewage or wastewater that was discharged;

(5) The location of the bypass; and

(6) The name of any body of surface water that was affected by the bypass.

63.6(4) Monitoring, disinfection, and cleanup. The owner or operator of the treatment facility or collection system shall perform any additional monitoring, sampling, or analysis of the bypass or upset requested by the regional field office of the department and shall comply with the instructions of the department intended to minimize the effect of a bypass or upset on the receiving water of the state. The following requirements for disinfection and cleanup apply to all bypasses:

a. The department may require temporary disinfection depending on the volume and duration of the bypass, the classification of the stream affected by the bypass, and the time of year during which the bypass occurs; and

b. The department may require cleanup of any debris and waste materials deposited in the area affected by the bypass. In conjunction with the cleanup, the department may require lime application to the ground surface or disinfection of the area with chlorine solution.

63.6(5) Reporting of subsequent findings and additional information requested by the department. All subsequent findings and laboratory results concerning a bypass shall be submitted in writing to the appropriate regional field office of the department as soon as they become available. Any additional information requested by the department concerning the steps taken to minimize the effects of a bypass shall be submitted within 30 days of the request.

63.6(6) Upset. An upset is an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

a. An upset constitutes an affirmative defense to the assessment of a civil penalty for noncompliance with technology-based effluent limitations if the requirements of paragraph “b” of this subrule are met.

b. A permittee that wishes to establish an affirmative defense of upset shall demonstrate, through properly signed operation logs or other relevant evidence, that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time of upset being properly operated;

(3) The permittee submitted notice of upset in accordance with 63.6(3); and

(4) The permittee completed any remedial measures required by the department, including monitoring, sampling, or analysis of the upset requested by the department and any instructions from the department calculated to minimize the effect of the upset on the receiving water of the state.

c. In any enforcement action proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

[ARC 7625B, IAB 3/11/09, effective 4/15/09 (See Delay note at end of chapter); ARC 2482C, IAB 4/13/16, effective 5/18/16]
63.7(2) Temporary or permanent paper submittal of records of operation. Upon satisfaction of the following criteria and written approval from the department, temporary or permanent paper submittal of records of operation may be allowed in lieu of electronic reporting.
   a. Written request for paper submittal.
      (1) To obtain an approval for temporary or permanent paper submittal of records of operation, a permittee must submit a paper copy of a written request to the NPDES Section, Iowa Department of Natural Resources, 502 East Ninth Street, Des Moines, Iowa 50319. The written request for paper submittal must include the following:
         1. Facility name;
         2. Individual NPDES permit number or general permit authorization number;
         3. Facility address;
         4. Owner name and contact information;
         5. Name and contact information of the person submitting records of operation (if different than the owner); and
         6. Reason for the request, including a justification of why electronic submission is not feasible at this time.
      (2) Requests for paper submittal that do not contain all of the above information will not be considered. Electronic (email) requests for paper submittal will not be considered.
   b. Temporary paper submittal.
      (1) The department will approve or deny a request for temporary paper submittal of records of operation within 60 days of receipt of the request. Paper submittal requests shall be approved or denied at the discretion of the director.
      (2) All approvals for temporary paper submittal will expire five years from department approval. After an approval for temporary paper submittal expires, the permittee must submit all records of operation electronically, unless another approval is obtained.
      (3) Approved temporary paper submittals are nontransferable.
   c. Permanent paper submittal.
      (1) The department will approve or deny a request for permanent paper submittal of records of operation within 60 days of receipt of the request. Permanent paper submittal approvals shall only be granted to facilities and entities owned or operated by members of religious communities that choose not to use certain modern technologies (e.g., computers, electricity). Permanent approvals for paper submittal shall not be granted to any other facilities or entities.
      (2) Approved permanent paper submittals are nontransferable.
   d. Paper copies of records of operation. All permittees who have received temporary or permanent paper submittal approvals must submit paper copies of all records of operation to the department within 15 days following the close of the reporting period specified in 63.8(455B) and in accordance with monitoring requirements derived from this chapter and incorporated in the NPDES permit.
63.7(3) Electronic reporting pursuant to NPDES general permits.
   a. General Permits 1, 2, 3, 4, and 5. Both electronic and paper reporting options are available to permittees covered under General Permits 1, 2, 3, 4, and 5. Electronic reporting using the options available on the department’s website is strongly encouraged, but paper records of operation will be accepted. Paper submittal approval can be obtained by permittees covered under General Permits 1, 2, 3, 4, and 5 according to the procedures in 63.7(2).
b. **Electronic reporting requirements for General Permits 8 and 9.** Permittees covered under General Permits 8 and 9 are required to report electronically using the department’s online database, unless a paper submittal approval is obtained according to the procedures in 63.7(2).

63.7(4) **Episodic paper submittal of records of operation.** In accordance with the following requirements, episodic paper submittal of records of operation may be allowed in lieu of electronic reporting. The department shall provide notice, individually or through means of mass communication, regarding when episodic paper submittal is allowed, the facilities and entities that qualify for episodic paper submittal, and the likely duration of episodic paper submittal. The department shall determine if and when episodic paper submittal is warranted.

a. Episodic paper submittal is only allowed under the following circumstances:

1. Large scale emergencies involving catastrophic circumstances beyond the control of a permittee, such as forces of nature (e.g., hurricanes, floods, fires, earthquakes) or other national disasters.
2. Prolonged electronic reporting system outages (i.e., outages longer than 96 hours).

b. Permittees are not required to request episodic paper submittal. If the department determines that episodic paper submittal is warranted, a permittee shall submit paper copies of all records of operation to the department within 15 days following the close of the reporting period specified in 567—63.8(455B) and in accordance with monitoring requirements derived from this chapter and incorporated in the NPDES permit.

c. Episodic paper submittal is not transferable and cannot last more than 60 days.

63.7(5) **Instances of noncompliance.** The permittee shall report all instances of noncompliance not reported under 567—63.12(455B) at the time monitoring reports are submitted.

63.7(6) **Relevant facts.** If a permittee becomes aware that it failed to submit any relevant facts in any report to the director, the permittee shall promptly submit such facts or information.

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—63.8(455B) **Frequency of submitting records of operation.** Except as provided in subrules 63.3(4) and 63.5(2), or as specified in an NPDES general permit issued in accordance with 567—64.4(455B), records of operation required by these rules shall be submitted at monthly intervals. The department may vary the interval at which records of operation shall be submitted in certain cases. Variation from the monthly interval shall be made only under such conditions as the department may prescribe in writing to the person concerned.

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—63.9(455B) **Content of records of operation.** Records of operation shall include the results of all monitoring specified in or authorized by this chapter and incorporated in the operation permit. The results of any monitoring not specified in the operation permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this chapter and the operation permit.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—63.10(455B) **Records of operation forms.** Records of operation forms shall be those provided by the department unless a permittee has obtained approval from the department to use an alternative reporting form.

[ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—63.11(455B) **Certification and signatory requirements in the submission of records of operation.** All records of operation as required by these rules shall include certification which attests that all information contained therein is representative and accurate. Each record of operation shall contain the signature of a duly authorized representative of the corporation, partnership or sole proprietorship, municipality, or public facility which has proprietorship of the wastewater treatment or disposal system as specified in 567—subrule 64.3(8). For electronic submissions of records of operation, a signed paper copy of the record that was submitted electronically must be maintained at the facility for a minimum of three years.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]
567—63.12(455B) Twenty-four-hour reporting. All permittees shall report any permit noncompliance that may endanger human health or the environment including, but not limited to, violations of maximum daily limits for any toxic pollutant (listed as toxic under 307(a)(1) of the Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Act). Information shall be provided orally to the appropriate regional field office of the department within 24 hours from the time the permittee becomes aware of the circumstances. In addition, a written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times; whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided to the regional field office within 5 days of the occurrence.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—63.13(455B) Planned changes. The permittee shall give notice to the appropriate regional field office of the department 30 days prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:
1. Notice has not been given to any other section of the department;
2. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in 567—60.2(455B);
3. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices; or
4. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—63.14(455B) Anticipated noncompliance. The permittee shall give notice to the appropriate regional field office of the department of any activity which may result in noncompliance with permit requirements. Notice is required only when previous notice has not been given to any other section of the department.

[ARC 7625B, IAB 3/11/09, effective 4/15/09]

567—63.15(455B) Other noncompliance. The permittee shall provide a written description of all instances of noncompliance not reported under rule 567—63.12(455B) or 567—paragraph 64.7(4)”e” at the time discharge monitoring reports (DMRs) are submitted. The written description shall contain the information listed in rule 567—63.12(455B).

[ARC 2482C, IAB 4/13/16, effective 5/18/16]

567—63.16(455B) Sampling procedures for monitoring wells. The following steps shall be taken prior to monitoring well sampling.

63.16(1) Measure depth from top of well head casing to water table.
63.16(2) Calculate quantity of water to be flushed from well using the formula:
Gallons to be pumped = 0.221 d(squared)h, where:
d = well diameter in inches
h = depth in feet of standing water in well prior to pumping
63.16(3) Pump well.
63.16(4) Measure depth from well head casing to water table after pumping.
63.16(5) Wait for well to recharge to or near static water level prior to sampling.

[ARC 6191C, IAB 2/9/22, effective 3/16/22]
Table I Minimum Self-Monitoring in Permits for Organic Waste Dischargers

Controlled Discharge Wastewater Treatment Plants

<table>
<thead>
<tr>
<th>Wastewater Parameter</th>
<th>Sampling Location</th>
<th>Sample Type</th>
<th>Frequency by P.E.</th>
<th>Flow (^2)</th>
<th>BOD(_5)</th>
<th>CBOD(_5) (^3)</th>
<th>Total Suspended Solids (TSS) (^4)</th>
<th>Ammonia Nitrogen</th>
<th>E. coli</th>
<th>pH (^8)</th>
<th>Cell Depth (^9)</th>
<th>Total Residual Chlorine (TRC) (^10)</th>
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<td>24-Hr Total</td>
<td>1/Week</td>
<td>Daily</td>
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<td>Daily</td>
<td>Daily During Drawdown</td>
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<tr>
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<td>Instantaneous</td>
<td>2/Week Drawdown</td>
<td>Daily During Drawdown</td>
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<td>Raw</td>
<td>24-Hr Composite</td>
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<td>1/3 Months</td>
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<tr>
<td>Final</td>
<td>Grab</td>
<td>1/Drawdown</td>
<td>Twice during drawdown</td>
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<td>24-Hr Composite</td>
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<td>Twice During Drawdown</td>
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<td>1/Drawdown</td>
<td>Twice during drawdown</td>
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<td>Final</td>
<td>Grab</td>
<td>1/Drawdown</td>
<td>Twice during drawdown</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>Grab</td>
<td>1/Drawdown</td>
<td>Twice during drawdown</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each Cell</td>
<td>Measurement</td>
<td>1/Week</td>
<td>1/Week</td>
<td>1/Week</td>
<td>2/Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Explanation of Superscripts

1 - The P.E. shall be computed on the basis of the original engineering design criteria for the facility and any modifications thereof. Where such design criteria are not available, the P.E. shall be computed using 0.167 pounds of BOD\(_5\) per capita per day.

2 - Facilities serving a population equivalent less than 100 are not required to provide continuous flow measurement but are required to provide manual flow measurement at the specified frequency. Facilities serving a population equivalent greater than 100 are required to provide continuous flow measurement of the raw waste but need only provide manual flow measurement on the final effluent. Acceptable flow measurement and recording techniques shall be those described in “Iowa Wastewater Facilities Design Standards,” Chapter 14 (14.7.2).

3 - In addition to the sampling required above, a grab sample of the lagoon cell contents collected at a point near the outlet structure shall be analyzed at least two weeks prior to an anticipated discharge to demonstrate that the wastewater is of such quality to meet the effluent limitations in the permit. The permittee must have the sample analyzed for 5-day carbonaceous biochemical oxygen demand (CBOD\(_5\)) and total suspended solids (TSS). The results must be compared with the 30-day average effluent limits. If the results are less than the 30-day average limits, the permittee may isolate the final cell and draw down the lagoon cell. If the pre-discharge sample results exceed the 30-day average effluent limits for either CBOD\(_5\) or TSS, the permittee must contact the local DNR Field Office for guidance before beginning to discharge.

4 - Sample types are defined as:

“Grab Sample” means a representative, discrete portion of sewage, industrial waste, other waste, surface water or groundwater taken without regard to flow rate.

“24-Hour Composite” means:

a. For facilities where no significant industrial waste is present, a sample made by collecting a minimum of six grab samples taken four hours apart and combined in proportion to the flow rate at the time each grab sample was collected. (Generally, grab samples should be collected at 8 a.m., 12 p.m. (noon), 4 p.m., 8 p.m., 12 a.m. (midnight), and 4 a.m. on weekdays (Monday through Friday) unless local conditions indicate another more appropriate time for sample collection.)
b. For facilities where significant industrial waste is present, a sample made by collecting a minimum of 12 grab samples taken two hours apart and combined in proportion to the flow rate at the time each grab sample was collected. (Generally, grab samples should be collected at 8 a.m., 10 a.m., 12 p.m. (noon), 2 p.m., 4 p.m., 6 p.m., 8 p.m., 10 p.m., 12 a.m. (midnight), 2 a.m., 4 a.m., and 6 a.m. on weekdays (Monday through Friday) unless local conditions indicate another more appropriate time for sample collection.)

c. An automatic composite sampling device may also be used for collection of flow-proportioned or time-proportioned composite samples.

5 - Raw wastewater samples shall be taken continuously (year-round) at the specified frequency. Final effluent wastewater samples shall be taken only during the drawdown period. The first final effluent sample shall be taken the third day after the drawdown begins, and subsequent samples shall be taken at the specified frequencies. For final effluent samples that are required to be taken twice during drawdown, the first sample shall be taken the third day after the drawdown begins, and the second sample shall be taken between three (3) and five (5) days before the drawdown ends.

6 - If a facility has a P.E. greater than 3000 or a significant industrial contributor, additional monitoring may be required.

7 - One-cell controlled discharge lagoons with a P.E. less than 100 will be required to perform final effluent sampling for 5-day carbonaceous biochemical oxygen demand (CBOD₅) and total suspended solids (TSS) twice during drawdown in accordance with superscript #5.

8 - pH can be monitored using a colorimetric comparator or a meter.

9 - Cell Depth monitoring is required to be conducted year-round (not exclusively during drawdown periods). It may be applied to lagoon cells at continuous discharge wastewater treatment facilities on a case-by-case basis.

10 - TRC can be monitored using a colorimetric comparator or a meter. TRC monitoring is only required for facilities with TRC effluent limitations.

[ARC 7625B, IAB 3/11/09, effective 4/15/09 (See Delay note at end of chapter); ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 6191C, IAB 2/9/22, effective 3/16/22]

### Table II Minimum Self-Monitoring in Permits for Organic Waste Dischargers

<table>
<thead>
<tr>
<th>Wastewater Parameter</th>
<th>Sampling Location</th>
<th>Sample Type¹¹</th>
<th>≤ 100</th>
<th>101-500</th>
<th>501-1,000</th>
<th>1,001-3,000</th>
<th>3,001-15,000</th>
<th>15,001-105,000</th>
<th>&gt; 105,000</th>
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<tr>
<td>Flow²</td>
<td>Raw or Final</td>
<td>24-Hr Total</td>
<td>1/week</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td></td>
</tr>
<tr>
<td>BOD₅</td>
<td>Raw</td>
<td>24-Hr Comp.</td>
<td>1/6 Months</td>
<td>1/3 Months</td>
<td>1/Week</td>
<td>1/Week</td>
<td>2/Week</td>
<td>2-5/Week³</td>
<td>Daily</td>
</tr>
<tr>
<td>CBOD₅</td>
<td>Final</td>
<td>24-Hr Comp.</td>
<td>1/3 Months</td>
<td>1/3 Months</td>
<td>1/Week</td>
<td>1/Week</td>
<td>2/Week</td>
<td>2-5/Week³</td>
<td>Daily</td>
</tr>
<tr>
<td>Total Suspended Solids (TSS)</td>
<td>Raw</td>
<td>24-Hr Comp.</td>
<td>1/6 Months</td>
<td>1/3 Months</td>
<td>1/Week</td>
<td>1/2 Weeks</td>
<td>1/Week</td>
<td>2-5/Week³</td>
<td>Daily</td>
</tr>
<tr>
<td>Ammonia Nitrogen¹²</td>
<td>Final</td>
<td>24-Hr Comp.</td>
<td>1/3 Months</td>
<td>1/3 Months</td>
<td>1/Week</td>
<td>1/2 Weeks</td>
<td>1/Week</td>
<td>2-5/Week³</td>
<td>Daily</td>
</tr>
<tr>
<td>TKN⁸</td>
<td>Raw</td>
<td>24-Hr Comp.</td>
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<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Total Nitrogen⁹</td>
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<td>24-Hr Comp.</td>
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<tr>
<td>Total Phosphorus⁸</td>
<td>Final</td>
<td>24-Hr Comp.</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Wastewater Parameter</td>
<td>Sampling Type</td>
<td>Number of Samples</td>
<td>Frequency by P.E.</td>
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<td>pH</td>
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<tr>
<td></td>
<td>Final</td>
<td>Grab</td>
<td>1/3 Months</td>
<td>1/Week</td>
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<td>1/Week</td>
<td>2/Week</td>
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<td></td>
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<td>2/Week</td>
<td>5/Week^1</td>
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<tr>
<td>E. coli</td>
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<td>Grab</td>
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<td>5/Week^2</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>5 samples, 1/3 Months</td>
<td>5/Week^2</td>
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<td></td>
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<tr>
<td>Temperature</td>
<td>Raw</td>
<td>Grab</td>
<td>—</td>
<td>1/Week</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total Residual Chlorine (TRC)</td>
<td>Final</td>
<td>Grab</td>
<td>1/3 Months</td>
<td>1/Week</td>
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<td>1/Week</td>
<td>1/Week</td>
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<td>1/Week</td>
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<td>2/Week</td>
<td>5/Week^1</td>
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</tr>
</tbody>
</table>

Explanation of Superscripts

1 - See Superscript #1, Table I.
2 - See Superscript #2, Table I. Both raw and final flow monitoring may be required if the raw and final wastewater flows may be different for any reason.
3 - See Superscript #4, Table I.
4 - Analysis is required only when the facility discharges directly to a stream designated as Class A1, A2, or A3 or there is a reasonable potential for the discharge to affect a stream designated as Class A1, A2, or A3.
5 - The frequency of sample collection and analysis shall be increased by 1/week according to the following: 15,001 to 30,000 – 2/week; 30,001 to 45,000 – 3/week; 45,001 to 75,000 – 4/week; 75,001 – 105,000 – 5/week.
6 - The requirements for significant industrial users shall be those specified in the permit for final effluent monitoring.
7 - Bacteria Monitoring. All facilities must collect and analyze a minimum of five E. coli samples in one calendar month during each three-month period (quarter) during the appropriate recreation season associated with the receiving stream designation as specified in 567—subrule 61.3(3). For sampling required during the recreational season, March 15 to November 15, the three-month periods are March – May, June – August, and September – November. For year-round sampling, the three-month periods are January – March, April – June, July – September, and October – December. For each three-month period, the operator must take five samples during one calendar month, resulting in 15 samples in one year for sampling required during the recreation season and 20 samples per year for sampling required year-round. The following requirements apply to the individual samples collected in one calendar month:
   a. Samples must be spaced over one calendar month.
   b. No more than one sample can be collected on any one day.
   c. There must be a minimum of two days between each sample.
   d. No more than two samples may be collected in a period of seven consecutive days.

The geometric mean must be calculated using all valid sample results collected during a month. The geometric mean formula is as follows: Geometric Mean = (Sample one x Sample two x Sample three x Sample four x Sample five...Sample N)^((1/N)), which is the Nth root of the result of the multiplication of all of the sample results where N = the number of samples. If a sample result is a less than value, the value reported by the lab without the less than sign shall be used in the geometric mean calculation.
8 - Additional Total Kjeldahl Nitrogen (TKN) monitoring may be required if the facility has one or more significant industrial users or has effluent ammonia violations.

9 - Total nitrogen (as N) is defined as Total Kjeldahl Nitrogen (as N) plus nitrate (as N) plus nitrite (as N). Nitrate + nitrite can be analyzed together or separately. Total phosphorus shall be reported as P. Analyses must be performed by a laboratory certified in Iowa.

10 - Ammonia nitrogen monitoring is only required for facilities with ammonia nitrogen effluent limitations.

11 - For aerated lagoons, 24-hour composite samples are not required on the final effluent; grab samples are acceptable.

12 - See Superscript #8, Table I.

13 - See Superscript #10, Table I.

[ARC 7625B, IAB 3/11/09, effective 4/15/09 (See Delay note at end of chapter); ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 6191C, IAB 2/9/22, effective 3/16/22]

These rules are intended to implement Iowa Code section 455B.173.

[Filed 12/21/72]
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[Filed without Notice 11/14/07—published 12/5/07, effective 1/9/08]
[Filed ARC 7625B (Notice ARC 7152B, IAB 9/10/08), IAB 3/11/09, effective 4/15/09][1]
[Editorial change: IAC Supplement 4/22/09]
[Editorial change: IAC Supplement 5/20/09]
[Filed ARC 8123B (Notice ARC 7813B, IAB 6/3/09), IAB 9/9/09, effective 10/14/09]
[Filed ARC 2482C (Notice ARC 2353C, IAB 1/6/16), IAB 4/13/16, effective 5/18/16]
[Filed ARC 6191C (Notice ARC 6041C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]

[1] April 15, 2009, effective date of Items 27 and 33 to 38 of ARC 7625B delayed 70 days by the Administrative Rules Review Committee at its meeting held April 8, 2009; at its meeting held April 28, 2009, the Committee voted to lift the delay, effective April 29, 2009.
CHAPTER 64
WASTEWATER CONSTRUCTION AND OPERATIONAL PERMITS


567—64.2(455B) Permit to construct.

64.2(1) No person shall construct, install or modify any wastewater disposal system or part thereof or extension or addition thereto without, or contrary to any condition of, a construction permit issued by the director or by a local public works department authorized to issue such permits under 567—Chapter 9, nor shall any connection to a sewer extension in violation of any special limitation specified in a construction permit pursuant to 64.2(10) be allowed by any person subject to the conditions of the permit.

64.2(2) The site for each new wastewater treatment plant or expansion or upgrading of existing facilities must be inspected and approved by the department prior to submission of plans and specifications. Applications must be submitted in accordance with 567—60.4(455B).

64.2(3) Site approval under 64.2(2) shall be based on the criteria contained in the Ten State Standards, design manuals published by the department, applicable federal guidelines and standards, standard textbooks, current technical literature and applicable safety standards. To the extent that separation distances of this subrule conflict with the separation distances of Iowa Code section 455B.134(3) “f,” the greater distance shall prevail. The following separation distances from a treatment works shall apply unless a separation distance exception is provided in the “Iowa Wastewater Facilities Design Standards.” The separation distance from lagoons shall be measured from the water surface.

   a. 1000 feet from the nearest inhabitable residence, commercial building, or other inhabitable structure. If the inhabitable or commercial building is the property of the owner of the proposed treatment facility, or there is written agreement with the owner of the building, the separation criteria shall not apply. Any such written agreement shall be filed with the county recorder and recorded for abstract of title purposes, and a copy submitted to the department.

   b. 1000 feet from public shallow wells.

   c. 400 feet from public deep wells.

   d. 400 feet from private wells.

   e. 400 feet from lakes and public impoundments.

   f. 25 feet from property lines and rights-of-way.

When the above separation distances cannot be maintained for the expansion, upgrading or replacement of existing facilities, the separation distances shall be maintained at no less than 90 percent of the existing separation distance on the site, providing no data is available indicating that a problem has existed or will be created.

64.2(4) Applications for a construction permit must be submitted to the director in accordance with 567—60.4(455B) at least 120 days in advance of the date of start of construction.

64.2(5) The director shall act upon the application within 60 days of receipt of a complete application by either issuing a construction permit or denying the construction permit in writing unless a longer review period is required and the applicant is so notified in writing. Notwithstanding the 120-day requirement in 64.2(4), construction of the approved system may commence immediately after the issuance of a construction permit.

64.2(6) The construction permit shall expire if construction thereunder is not commenced within one year of the date of issuance thereof. The director may grant an extension of time to commence construction if it is necessary or justified, upon showing of such necessity or justification to the director.

64.2(7) The director may modify or revoke a construction permit for cause which shall include but not be limited to the following:

   a. Failure to construct said wastewater disposal system or part thereof in accordance with the approved plans and specifications.

   b. Violation of any term or condition of the permit.

   c. Obtaining a permit by misrepresentation of facts or failure to disclose fully all material facts.
d. Any change during construction that requires material changes in the approved plans and specifications.

64.2(8) A construction permit shall not be required for the following:

a. Storm sewers or storm water disposal systems that transport only storm water.

b. Any new disposal system or extension or addition to any existing disposal system that receives only domestic or sanitary sewage from a building, housing or occupied by 15 persons or less.

c. A privately owned pretreatment facility, except an anaerobic lagoon, where a treatment unit or units provide partial reduction of the strength or toxicity of the waste stream prior to additional treatment and disposal by another person, corporation, or municipality. However, the department may require that the design basis and construction drawings be filed for information purposes.

64.2(9) Review of applications.

a. Review of applications for construction permits shall be based on the criteria contained in the “Iowa Wastewater Facilities Design Standards,” the Ten States Standards, the “Iowa Antidegradation Implementation Procedure” effective August 12, 2016, applicable federal guidelines and standards, standard textbooks, current technical literature and applicable safety standards. To the extent of any conflict between the above criteria, the “Iowa Wastewater Facilities Design Standards” standards shall prevail.

b. The chapters of the “Iowa Wastewater Facilities Design Standards”* that apply to wastewater facilities projects, and the date of adoption of those chapters are:

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Date of Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Project submittals</td>
<td>April 25, 1979</td>
</tr>
<tr>
<td>13. Wastewater pumping stations and force mains</td>
<td>March 19, 1985</td>
</tr>
<tr>
<td>15. Screening and grit removal</td>
<td>February 18, 1986</td>
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<tr>
<td>17. Sludge handling &amp; disposal</td>
<td>March 26, 1980</td>
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<tr>
<td>18. Biological treatment</td>
<td></td>
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<tr>
<td>A. Fixed film media treatment</td>
<td>October 21, 1985</td>
</tr>
<tr>
<td>B. Activated sludge</td>
<td>March 22, 1984</td>
</tr>
<tr>
<td>19. Supplemental treatment processes</td>
<td>November 13, 1986</td>
</tr>
<tr>
<td>20. Disinfection</td>
<td>February 18, 1986</td>
</tr>
<tr>
<td>21. Land application of wastewater</td>
<td>April 25, 1979</td>
</tr>
</tbody>
</table>

*The design manual as adopted and amended is available upon request to department, also filed with administrative rules coordinator.

c. Waivers from the design standards and siting criteria which provide in the judgment of the department for substantially equivalent or improved effectiveness may be requested when there are unique circumstances not found in most projects. The director may issue waivers when circumstances are appropriate. The denial of a waiver may be appealed to the commission.

d. When reviewing the waiver request the director may consider the unique circumstances of the project, direct or indirect environmental impacts, the durability and reliability of the alternative, and the purpose and intent of the rule or standard in question.

e. Circumstances that would warrant consideration of a waiver (which provides for substantially equivalent or improved effectiveness) may include the following:
(1) The utilization of new equipment or new process technology that is not explicitly covered by the current design standards.

(2) The application of established and acceptable technologies in an innovative manner not covered by current standards.

(3) It is reasonably clear that the conditions and circumstances which were considered in the adoption of the rule or standard are not applicable for the project in question and therefore the effective purpose of the rule will not be compromised if a waiver is granted.

64.2(10) Applications for sanitary sewer extension construction permits shall conform to the Iowa Standards for Sewer Systems, and approval shall be subject to the following:

a. A sanitary sewer extension construction permit may be denied if, at the time of application, the treatment facility treating wastewater from the proposed sewer is not in substantial compliance with its operating permit or if the treatment facility receives wastes in volumes or quantities that exceed its design capacity and interfere with its operation or performance.

If the applicant is operating under a compliance schedule which is being adhered to that leads to resolution of the substantial compliance issues or if the applicant can demonstrate that the problem has been identified, the planning completed, and corrective measures initiated, then the construction permit may be granted.

b. A sanitary sewer extension construction permit may be denied if bypassing has occurred at the treatment facility, except when any of the following conditions are being met:

(1) The bypassing is due to a combined sewer system, and the facility is in compliance with a long-term CSO control plan approved by the department.

(2) The bypassing occurs as a result of a storm with an intensity or duration greater than that of a storm with a return period of five years. (See App. A)

(3) The department determines that timely actions are being taken to eliminate the bypassing.

c. A sanitary sewer extension construction permit may be denied if an existing downstream sewer is or will be overloaded or surcharged, resulting in bypassing, flooded basements, or overflowing manholes, unless:

(1) The bypassing or flooding is the result of a precipitation event with an intensity or duration greater than that of a storm with a return period of two years. (See App. A); or

(2) The system is under full-scale facility planning (I/I and SSES) and the applicant provides a schedule that is approved by the department for rehabilitating the system to the extent necessary to handle the additional loadings.

d. Potential loads. Construction permits may be granted for sanitary sewer extensions that are sized to serve future loads that would exceed the capacity of the existing treatment works. However, initial connections shall be limited to the load that can be handled by the existing treatment works. The department will determine this load and advise the applicant of the limit. This limitation will be in effect until additional treatment capacity has been constructed.

64.2(11) Certification of completion. Within 30 days after completion of construction, installation or modification of any wastewater disposal system or part thereof or extension or addition thereto, the permit holder shall submit a certification by a registered professional engineer that the project was completed in accordance with the approved plans and specifications.

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 2695C, IAB 8/31/16, effective 8/12/16; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.3(455B) Permit to operate.

64.3(1) Except as otherwise provided in this subrule, in 567—Chapter 65, and in 567—Chapter 69, no person shall operate any wastewater disposal system or part thereof without, or contrary to any condition of, an operation permit issued by the director. An operation permit is not required for the following:

a. A private sewage disposal system which does not discharge into, or have the potential to reach, a designated water of the state or subsurface drainage tile (NOTE: private sewage disposal systems under this exemption are regulated under 567—Chapter 69).
b. A semipublic sewage disposal system, the construction of which has been approved by the department and which does not discharge into a water of the state.

c. A pretreatment system, the effluent of which is to be discharged directly to another disposal system for final treatment and disposal.

d. A discharge from a geothermal heat pump which does not reach a navigable water.

e. Water well construction and well services related discharge that does not reach a water of the United States as defined in 40 CFR Section 122.2.

f. Discharges from the application of biological pesticides and chemical pesticides where the discharge does not reach a water of the United States as defined in 40 CFR Section 122.2.

g. Agricultural storm water discharges. This exclusion applies only to the operation permit requirement set forth in this rule and does not alter other requirements of law, including but not limited to any applicable requirements of Iowa Code chapters 459 and 459A.

h. Dewatering discharge from the installation, repair, or maintenance of agricultural drainage systems that does not reach a water of the state. This activity is not considered operation of a wastewater disposal system.

64.3(2) Rescinded, effective 2/20/85.

64.3(3) The owner of any disposal system or part thereof in existence before August 21, 1973, for which a permit has been previously granted by the Iowa department of health or the Iowa department of environmental quality shall submit such information as the director may require to determine the conformity of such system and its operation with the rules of the department by no later than 60 days after the receipt of a request for such information from the director. If the director determines that the disposal system does not conform to the rules of the department, the director may require the owner to make such modifications as are necessary to achieve compliance. A construction permit shall be required, pursuant to 64.2(1), prior to any such modification of the disposal system.

64.3(4) Applications.

a. Individual permit. Except as provided in 64.3(4)“b,” applications for operation permits required under 64.3(1) shall be made on forms provided by the department, as noted in 567—60.3(455B,17A). The application for an operation permit under 64.3(1) shall be filed pursuant to 567—subrule 60.4(2). Permit applications for a new discharge of storm water associated with construction activity as defined in 567—Chapter 60 under “storm water discharge associated with industrial activity” must be submitted at least 60 days before the date on which construction is to commence. Upon completion of a tentative determination with regard to the permit application as described in 64.5(1)“a,” the director shall issue operation permits for applications filed pursuant to 64.3(1) within 90 days of the receipt of a complete application unless the application is for an NPDES permit or unless a longer period of time is required and the applicant is so notified.

b. General permit. A Notice of Intent (NOI) for coverage under a general permit shall be made on forms provided by the department as noted in 567—60.3(455B,17A) and in accordance with 567—64.6(455B). An NOI must be submitted to the department according to the following:

(1) For existing storm water discharge associated with industrial activity, with the exception of discharges identified in subparagraphs (2) and (3) of this paragraph, on or before October 1, 1992.

(2) For any existing storm water discharge associated with industrial activity from a facility or construction site that is owned or operated by a municipality with a population of less than 100,000 other than an airport, power plant or uncontrolled sanitary landfill, on or before March 10, 2003.

For purposes of this subparagraph, municipality means city, town, borough, county, parish, district, association, or other public body created by or under state law. The entire population served by the public body shall be used in the determination of the population.

(3) For any existing storm water discharge associated with small construction activity on or before March 10, 2003.

(4) For storm water discharge associated with industrial activity which initiates operation after October 1, 1992, with the exception of discharges identified in subparagraphs (2) and (3) of this paragraph, where storm water discharge associated with industrial activity could occur as defined in rule 567—60.2(455B).
(5) For any private sewage disposal system installed after July 1, 1998, where subsoil discharge is not possible.

(6) For any discharge, except a storm water only discharge, from a mining or processing facility after July 18, 2001.

(7) For any discharge from hydrostatic testing, tank ballasting and water lines, if required to be submitted by General Permit No. 8, on or after July 1, 2018.

(8) For any discharge from dewatering or residential geothermal systems, if required to be submitted by General Permit No. 9, on or after July 1, 2018.

64.3(5) Requirements for industries that discharge to another disposal system except storm water point sources.

a. The director may require any person discharging wastes to a publicly or privately owned disposal system to submit information similar to that required in an application for an operation permit, but no operation permit is required for such discharge.

Significant industrial users as defined in 567—Chapter 60 must submit a treatment agreement which meets the following criteria:

1. The agreement must be on the treatment agreement form, number 542-3221, as provided by the department; and

2. Must identify and limit the monthly average and the daily maximum quantity of compatible and incompatible pollutants discharged to the disposal system and the variations in daily flow; and

3. Be signed and dated by the significant industrial user and the owner of the disposal system accepting the wastewater; and

4. Provide that the quantities to be discharged to the disposal system must be in accordance with the applicable standards and requirements in 567—Chapter 62.

b. A significant industrial user must submit a new treatment agreement form 60 days in advance of a proposed expansion, production increase or process modification that may result in discharges of sewage, industrial waste, or other waste in excess of the discharge stated in the existing treatment agreement. An industry that would become a significant industrial user as a result of a proposed expansion, production increase or process modification shall submit a treatment agreement form 60 days in advance of the proposed expansion, production increase or process modification.

c. A treatment agreement form must be submitted at least 180 days before a new significant industrial user proposes to discharge into a wastewater disposal system. The owner of a wastewater disposal system shall notify the director by submitting a complete treatment agreement to be received at least 10 days prior to making any commitment to accept waste from a proposed new significant industrial user. However, the department may notify the owner that verification of the data in the treatment agreement may take longer than 10 days and advise that the owner should not enter into a commitment until the data is verified.

d. A treatment agreement form for each significant industrial user must be submitted with the facility plan or preliminary engineering report for the construction or modification of a wastewater disposal system. These agreements will be used in determining the design basis of the new or upgraded system.

e. Treatment agreement forms from significant industrial users shall be required as a part of the application for a permit to operate the wastewater disposal system receiving the wastes from the significant industrial user.

64.3(6) Rescinded, effective 7/23/86.

64.3(7) NPDES permits may be granted for any period of time not to exceed five years. All other operation permits may be granted for an appropriate period of time as determined by the director, based on the type of wastewater disposal system being permitted. An application for renewal of an NPDES or operation permit must be submitted to the department 180 days in advance of the date the permit expires. General permits will be issued for a period not to exceed five years. Each permit to be renewed shall be subject to the provisions of all rules of the department in effect at the time of the renewal.

64.3(8) Identity of signatories of permit applications. The person who signs the application for a permit shall be:
a. **Corporations.** In the case of corporations, a responsible corporate officer. A responsible corporate officer means:

1. A president, secretary, treasurer, or vice president in charge of a principal business function, or any other person who performs similar policy- or decision-making functions; or
2. The manager of manufacturing, production, or operating facilities, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. **Partnerships.** In the case of a partnership, a general partner.

c. **Sole proprietorships.** In the case of a sole proprietorship, the proprietor.

d. **Municipal, state, federal, or other public agency.** In the case of a municipal, state, or other public facility, either the principal executive officer or the ranking elected official. A principal executive officer of a public agency includes:

1. The chief executive officer of the agency; or
2. A senior executive officer having responsibility for the overall operations of a unit of the agency.

e. **Storm water discharge associated with industrial activity from construction activities.** In the case of a storm water discharge associated with construction activity, either the owner of the site or the general contractor.

f. **Certification.** Any person signing a document under paragraph “a” to “d” of this subrule shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

The person who signs NPDES reports shall be a person described in this subrule, except that in the case of a corporation or a public body, monitoring reports required under the terms of the permit may be submitted by a duly authorized representative of the person described in this subrule. A person is a duly authorized representative if the authorization is made in writing by a person described in this subrule and the authorization specifies an individual or position having responsibility for the overall operation of the regulated facility, such as plant manager, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the corporation.

**64.3(9)** When necessary to comply with present standards which must be met at a future date, an operation permit shall include a schedule for the alteration of the permitted facility to meet said standards in accordance with 64.7(4) and 64.7(5). Such schedules shall not relieve the permittee of the duty to obtain a construction permit pursuant to 567—64.2(455B). When necessary to comply with a pretreatment standard or requirement which must be met at a future date, a significant industrial user will be given a compliance schedule for meeting those requirements.

**64.3(10)** Operation permits shall contain such conditions as are deemed necessary by the director to ensure compliance with all applicable rules of the department, including monitoring and reporting conditions, to protect the public health and beneficial uses of state waters, and to prevent water pollution from waste storage or disposal operations.

**64.3(11)** The director may amend, revoke and reissue, or terminate in whole or in part any individual operation permit or coverage under a general permit for cause. Except for general permits, the director may modify in whole or in part any individual operation permit for cause. A waiver or modification to the terms and conditions of a general permit shall not be granted. If a waiver or modification to a general permit is desired, the applicant must apply for an individual permit following the procedures in 64.3(4) “a.”

a. Permits may be amended, revoked and reissued, or terminated for cause either at the request of any interested person (including the permittee) or upon the director’s initiative. All requests shall be in writing and shall contain facts or reasons supporting the request.

b. Cause under this subrule includes the following:
(1) Violation of any term or condition of the permit.
(2) Obtaining a permit by misrepresentation of fact or failure to disclose fully all material facts.
(3) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
(4) Failure to submit such records and information as the director shall require both generally and as a condition of the permit in order to ensure compliance with the discharge conditions specified in the permit.
(5) Failure or refusal of an NPDES permittee to carry out the requirements of 64.7(7) “c.”
(6) Failure to provide all the required application materials or appropriate fees.
(7) A request for a modification of a schedule of compliance, an interim effluent limitation, or the minimum monitoring requirements pursuant to 567—paragraph 60.4(2) “b.”
(8) Causes listed in 40 CFR Sections 122.62 and 122.64.
   c. The permittee shall furnish to the director, within a reasonable time, any information that the director may request to determine whether cause exists for amending, revoking and reissuing, or terminating a permit, including a new permit application.
   d. The filing of a request by an interested person for an amendment, revocation and reissuance, or termination does not stay any permit condition.
   e. If the director decides the request is not justified, the director shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, hearings, or appeals.
   f. Draft permits.
   (1) If the director tentatively decides to amend, revoke and reissue, or terminate a permit, a draft permit shall be prepared according to 64.5(1).
   (2) When a permit is amended under this paragraph, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the permit.
   (3) When a permit is revoked and reissued under this paragraph, the entire permit is reopened just as if the permit had expired and was being reissued.
(4) If the permit amendment falls under the definition of “minor amendment” in 567—60.2(455B), the permit may be amended without a draft permit or public notice.
(5) During any amendment, revocation and reissuance, or termination proceeding, the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.
64.3(12) No permit may be issued:
   a. When the application is required to obtain certification under Section 401 of the Clean Water Act and that certification has not been obtained or waived;
   b. When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected states; or
   c. To a new source or new discharger if the discharge from its construction or operation will cause or contribute to a violation of water quality standards. The owner or operator of a new source or new discharger proposing to discharge to a water segment which does not meet applicable water quality standards must demonstrate, before the close of the public comment period for a draft NPDES permit, that:
   (1) There is sufficient remaining load in the water segment to allow for the discharge; and
   (2) The existing dischargers to the segment are subject to compliance schedules designed to bring the segment into compliance with water quality standards.
   The director may waive the demonstration if the director already has adequate information to demonstrate (1) and (2).

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 8520B, IAB 2/10/10, effective 3/17/10; ARC 9365B, IAB 2/9/11, effective 3/30/11; ARC 0529C, IAB 12/12/12, effective 1/16/13; ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 2572C, IAB 6/8/16, effective 5/18/16; ARC 3786C, IAB 5/9/18, effective 7/1/18; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.4(455B) Issuance of NPDES permits.
64.4(1) Individual permit. An individual NPDES permit is required when there is a discharge of a pollutant from any point source into navigable waters. An NPDES permit is not required for the following:

a. Reserved.

b. Discharges of dredged or fill material into navigable waters which are regulated under Section 404 of the Act;

c. The introduction of sewage, industrial wastes or other pollutants into a POTW by indirect dischargers. (This exclusion from requiring an NPDES permit applies only to the actual addition of materials into the subsequent treatment works. Plans or agreements to make such additions in the future do not relieve dischargers of the obligation to apply for and receive permits until the discharges of pollutants to navigable waters are actually eliminated. It also should be noted that, in all appropriate cases, indirect discharges shall comply with pretreatment standards promulgated by the administrator pursuant to Section 307(b) of the Act and adopted by reference by the commission);

d. Any discharge in compliance with the instruction of an On-Scene Coordinator pursuant to 40 CFR Part 300 (The National Oil and Hazardous Substances Pollution Contingency Plan) or 33 CFR Section 153.10(e) (Pollution by Oil and Hazardous Substances);

e. Any introduction of pollutants from nonpoint source agricultural and silvicultural activities, including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands, except that this exclusion shall not apply to the following:

(1) Discharges from concentrated animal feeding operations as defined in 40 CFR Section 122.23;

(2) Discharges from concentrated aquatic animal production facilities as defined in 40 CFR Section 122.24;

(3) Discharges to aquaculture projects as defined in 40 CFR Section 122.25;

(4) Discharges from silvicultural point sources as defined in 40 CFR Section 122.27;

f. Return flows from irrigated agriculture; and

g. Water transfers, which are defined as activities that convey or connect navigable waters without subjecting the transferred water to intervening industrial, municipal, or commercial use.

64.4(2) General permit.

a. The director may issue general permits which are consistent with 64.4(2)“b” and the requirements specified in 567—64.6(455B), 567—64.7(455B), subrule 64.8(2), and 567—64.9(455B) to regulate one or more categories or subcategories of discharges where the sources within a covered category of discharges are either storm water point sources, point sources other than storm water point sources, or treatment works treating domestic sewage, if the sources within each category or subcategory meet all of the following criteria:

(1) Involve the same or substantially similar types of operations;

(2) Discharge the same types of wastes;

(3) Require the same effluent limitations or operating conditions;

(4) Require the same or similar monitoring; and

(5) Are more appropriately controlled under a general permit than under individual permits.

b. Each general permit issued by the department must:

(1) Be adopted as an administrative rule in accordance with Iowa Code chapter 17A, the Administrative Procedure Act. Each proposed permit will be accompanied by a fact sheet setting forth the principal facts and methodologies considered during permit development,

(2) Correspond to existing geographic or political boundaries, and

(3) Be identified in 567—64.15(455B).

c. If an NPDES permit is required for an activity covered by a general permit, the applicant may seek either general permit coverage or an individual permit. Procedures and requirements for obtaining an individual NPDES permit are detailed in 64.3(4)“a.” Procedures for filing a Notice of Intent for coverage under a general permit are described in 567—64.6(455B) “Completing a Notice of Intent for Coverage Under a General Permit.”

64.4(3) Effect of a permit.
a. Except for any toxic effluent standards and prohibitions imposed under Section 307 of the Act and standards for sewage sludge use or disposal under Section 405(d) of the Act, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 307, 318, 403 and 405(a)-(b) of the Act, and equivalent limitations and standards set out in 567—Chapters 61 and 62. However, a permit may be terminated during its term for cause as set forth in 64.3(11). Compliance with a permit condition which implements a particular standard for sewage sludge use or disposal shall be an affirmative defense in any enforcement action brought for a violation of that standard for sewage sludge use or disposal.

b. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege. [ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 8520B, IAB 2/10/10, effective 3/17/10; ARC 9365B, IAB 2/9/11, effective 3/30/11; ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 3786C, IAB 5/9/18, effective 7/1/18; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.5(455B) Notice and public participation in the individual NPDES permit process.

64.5(1) Formulation of tentative determination. The department shall make a tentative determination to issue or deny an operation or NPDES permit for the discharge described in a permit application in advance of the public notice as described in 64.5(2).

a. If the tentative determination is to issue an NPDES permit, the department shall prepare a permit rationale for each draft permit pursuant to 64.5(3) and a draft permit. The draft permit shall include the following:

1. Effluent limitations identified pursuant to 64.7(2) and 64.7(3), for those pollutants proposed to be limited.
2. If necessary, a proposed schedule of compliance, including interim dates and requirements, identified pursuant to 64.7(4) and 64.7(5), for meeting the effluent limitations and other permit requirements.
3. Any other special conditions (other than those required in 64.7(7)) which will have a significant impact upon the discharge described in the permit application.

b. If the tentative determination is to deny an NPDES permit, the department shall prepare a notice of intent to deny the permit application. The notice of intent to deny an application will be placed on public notice as described in 64.5(2).

c. If the tentative determination is to issue an operation permit (non-NPDES permit), the department shall prepare a final permit and transmit the final permit to the applicant. The applicant will have 30 days to appeal the final operation permit.

d. If the tentative determination is to deny an operation permit (non-NPDES permit), no public notice is required. The department shall send written notice of the denial to the applicant. The applicant will have 30 days to appeal the denial.

64.5(2) Public notice for individual NPDES permits.

a. Prior to the issuance of an NPDES permit, a major NPDES permit amendment, or the denial of a permit application for an NPDES permit, public notice shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed discharge and of the tentative determination to issue or deny an NPDES permit for the proposed discharge.

1. The public notice shall be transmitted by the department to the following persons:
   1. The applicant;
   2. Any other federal or state agency which has issued or is required to issue an NPDES permit for the same facility or activity, including EPA;
   3. Federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources, state historic preservation officers, and affected states (the term “state” includes Indian tribes treated as states);
   4. Any state agency responsible for the development of an areawide waste treatment management plan or a water quality standards and implementation plan under CWA Section 208(b)(2), 208(b)(4) or 303(e);
   5. The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service;
6. Any user identified in the permit application of a privately owned treatment works;
7. Any unit of local government having jurisdiction over the area where the facility is located; and
8. Each state agency having any authority under state law with respect to the construction or operation of such facility.

   (2) The public notice shall be transmitted by the department to any person upon request.
   (3) Any person or group may request to receive copies of all public notices concerning the tentative determinations with respect to the permit applications within the state or within a certain geographical area. The department shall transmit a copy of all public notices to such persons or groups.
   (4) The department shall periodically notify the public of the opportunity to receive notices. The director may update the notice distribution list from time to time by requesting written indication of continued interest from those listed. The director may delete from the list the name of any person or group who fails to respond to such a request.

b. The director may publish all notices of activities described in paragraph “a” of this subrule to the department’s website. If this option is selected for a draft permit, the director must post the draft permit and permit rationale on the website for the duration of the public comment period.

c. The department shall provide a period of not less than 30 days following the date of the public notice during which time interested persons may submit their written views on the tentative determinations with respect to the permit application and request a public hearing pursuant to 64.5(6). Written comments may be submitted by paper or electronic means. All pertinent comments submitted during the 30-day comment period shall be retained by the department and considered by the director in the formulation of the director’s final determinations with respect to the permit application. The period for comment may be extended at the discretion of the department. Pertinent and significant comments received during either the original comment period or an extended comment period shall be responded to in a responsiveness summary pursuant to 64.5(8).

d. The contents of the public notice of a draft NPDES permit, a major permit amendment, or the denial of a permit application for an NPDES permit shall include at least the following:
   (1) The name, address, and telephone number of the department.
   (2) The name and address of each applicant.
   (3) A brief description of each applicant’s activities or operations which result in the discharge described in the permit application (e.g., municipal waste treatment plant, corn wet milling plant, or meat packing plant).
   (4) The name of the waterway to which each discharge of the applicant is made and a short description of the location of each discharge of the applicant on the waterway.
   (5) A statement of the department’s tentative determination to issue, amend, or deny an NPDES permit for the discharge or discharges described in the permit application.
   (6) A brief description of the procedures for the formulation of final determinations, including the 30-day comment period required by paragraph “c” of this subrule, procedures for requesting a public hearing and any other means by which interested persons may influence or comment upon those determinations.
   (7) The address, telephone number, email address, and website of places at which interested persons may obtain further information, request a copy of the tentative determination and any associated documents prepared pursuant to 64.5(1), request a copy of the permit rationale described in 64.5(3), and inspect and copy permit forms and related documents.

e. No public notice is required for a minor permit amendment, including but not limited to an amendment to correct typographical errors, include more frequent monitoring requirements, revise interim compliance schedule dates, change an owner or facility name or address, include a local pretreatment program, or remove a point source outfall that does not result in the discharge of pollutants from other outfalls.

f. No public notice is required when a request for a permit amendment or a request for a termination of a permit is denied. The department shall send written notice of the denial to the requester and the permittee only. No public notice is required if an applicant withdraws a permit application.
a. When the department has made a determination to issue an NPDES permit as described in 64.5(1), the department shall prepare and, upon request, shall send to any person a permit rationale with respect to the application described in the public notice. The contents of such permit rationales shall include at least the following information:
   (1) A detailed description of the location of the discharge described in the permit application.
   (2) A quantitative description of the discharge described in the permit application which includes:
      1. The average daily discharge in pounds per day of any pollutants which are subject to limitations or prohibitions under 64.7(2) or Section 301, 302, 306 or 307 of the Act and regulations published thereunder; and
      2. For thermal discharges subject to limitation under the Act, the average and maximum summer and winter discharge temperatures in degrees Fahrenheit.
   (3) The tentative determinations required under 64.5(1).
   (4) A brief citation, including a brief identification of the uses for which the receiving waters have been classified, of the water quality standards applicable to the receiving waters and effluent standards and limitations applicable to the proposed discharge.
   (5) An explanation of the principal facts and the significant factual, legal, methodological, and policy questions considered in the preparation of the draft permit.
   (6) Any calculations or other necessary explanation of the derivation of effluent limitations.

b. When the department has made a determination to deny an application for an NPDES permit as described in 64.5(1), the department shall prepare and, upon request, shall send to any person a notice of intent to deny with respect to the application described in the public notice. The contents of such notice of intent to deny shall include at least the following information:
   (1) A detailed description of the location of the discharge described in the permit application; and
   (2) A description of the reasons supporting the tentative decision to deny the permit application.

c. When the department has made a determination to issue an operation permit as described in 64.5(1), the department shall prepare a short description of the waste disposal system and the reasons supporting the decision to issue an operation permit. The description shall be sent to the operation permit applicant upon request.

d. When the department has made a determination to deny an application for an operation permit as described in 64.5(1), the department shall prepare and send written notice of the denial to the applicant only. The written denial shall include a description of the reasons supporting the decision to deny the permit application.

e. Upon request, the department shall add the name of any person or group to a distribution list to receive copies of permit rationales and notices of intent to deny and shall send a copy of all permit rationales and notices of intent to deny to such persons or groups.

64.5(4) Notice to other government agencies. Prior to the issuance of an NPDES permit, the department shall notify other appropriate government agencies of each complete application for an NPDES permit and shall provide such agencies an opportunity to submit their written views and recommendations. Notifications may be distributed and written views or recommendations may be submitted by paper or electronic means. Procedures for such notification shall include the procedures of paragraphs "a" to "f."
(1) The department and the district engineer for each corps of engineers district within the state may arrange for: notice to the district engineer of minor discharges; waiver by the district engineer of the right to receive public notices with respect to classes, types, and sizes within any category of point sources and with respect to discharges to particular navigable waters or parts thereof; and any procedures for the transmission of forms, period of comment by the district engineer (e.g., 30 days), and for objections of the district engineer.

(2) A copy of any written agreement between the department and a district engineer shall be forwarded to the regional administrator and shall be available to the public for inspection and copying in accordance with 567—Chapter 2.

c. Upon request, the department shall send the public notice to any other federal, state, or local agency, or any affected county, and provide such agencies an opportunity to respond, comment, or request a public hearing pursuant to 64.5(6).

d. The department shall send the public notice for any proposed NPDES permit within the geographical area of a designated and approved management agency under Section 208 of the Act (33 U.S.C. 1288).

e. The department shall send the public notice to the local board of health for the purpose of assisting the applicant in coordinating the applicable requirements of the Act and Iowa Code chapter 455B with any applicable requirements of the local board of health.

f. Upon request, the department shall provide any of the entities listed in 64.5(4)"a" through "e" with a copy of the permit rationale, permit application, or proposed permit prepared pursuant to 64.5(1).

64.5(5) Public access to NPDES information. The records of the department connected with NPDES permits are available for public inspection and copying to the extent provided in 567—Chapter 2.

64.5(6) Public hearings on proposed NPDES permits. The applicant, any affected state, the regional administrator, or any interested agency, person or group of persons may request or petition for a public hearing with respect to an NPDES application. Any such request shall clearly state issues and topics to be addressed at the hearing. Any such request or petition for public hearing must be filed with the director within the 30-day period prescribed in 64.5(2)"c" and shall indicate the interest of the party filing such request and the reasons why a hearing is warranted. The director shall hold an informal and noncontested case hearing if there is a significant public interest (including the filing of requests or petitions for such hearing) in holding such a hearing. Frivolous or insubstantial requests for hearing may be denied by the director. Instances of doubt should be resolved in favor of holding the hearing. Any hearing held pursuant to this subrule shall be held in the geographical area of the proposed discharge when possible, or other appropriate area at the discretion of the director. Web-based hearings may also be held at the discretion of the director. In addition, any hearing held pursuant to this subrule may, as appropriate, consider related groups of permit applications.

64.5(7) Public notice of public hearings on proposed NPDES permits.

a. Public notice of any hearing held pursuant to 64.5(6) shall be circulated at least as widely as was the notice of the tentative determinations with respect to the permit application. Notice pursuant to this paragraph shall be made at least 30 days in advance of the hearing.

(1) Notice shall be transmitted to all persons and government agencies which received a copy of the notice for the permit application; and

(2) Notice shall be transmitted to any person or group upon request.

b. The contents of public notice of any hearing held pursuant to 64.5(6) shall include at least the following:

(1) The name, address, and telephone number of the department;

(2) The name and address of each applicant whose application will be considered at the hearing;

(3) The name of the water body to which each discharge is made and a short description of the location of each discharge to the water body;

(4) A brief reference to the public notice issued for each NPDES application, including the date of issuance;

(5) Information regarding the time and location for the hearing;

(6) The purpose of the hearing;
(7) A concise statement of the issues raised by the person or persons requesting the hearing;
(8) The address, telephone number, email address, and website where interested persons may obtain further information, request a copy of the draft NPDES permit prepared pursuant to 64.5(1), request a copy of the permit rationale prepared pursuant to 64.5(3), and inspect and copy permit forms and related documents;
(9) A brief description of the nature of the hearing, including the rules and procedures to be followed; and
(10) The final date for submission of comments regarding the tentative determinations with respect to the permit application.

64.5(8) Response to comments. At the time a final NPDES permit is issued, the director shall issue a response to significant and pertinent comments in the form of a responsiveness summary. A copy of the responsiveness summary shall be sent to the permit applicant, and the document shall be made available to the public upon request. The responsiveness summary shall:

a. Specify which provisions, if any, of the draft permit have been changed in the final permit decision and the reasons for the changes; and
b. Briefly describe and respond to all significant and pertinent comments on the draft permit raised during the public comment period provided for in the public notice or during any hearing. Comments on a draft permit may be submitted by paper or electronic means or orally at a public hearing.

567—64.6(455B) Completing a Notice of Intent for coverage under a general permit.

64.6(1) Contents of a complete Notice of Intent. An applicant proposing to conduct activities covered by a general permit shall file a complete NOI by submitting to the department materials required in paragraphs “a” to “c” of this subrule, as applicable. An NOI is not required for discharges authorized under General Permit No. 6 or No. 7, for certain discharges under General Permit No. 8, or for certain discharges under General Permit No. 9.

a. Notice of Intent (NOI) Form. Electronic NOI forms provided by the department must be completed in full on the department’s website. Paper NOI forms, when provided, must be completed in full.

b. General permit fee. The applicable general permit fee according to the schedule in 567—64.16(455B) is payable to the Iowa Department of Natural Resources.

c. Public notification. The public notification requirements only apply to General Permits No. 1, No. 2 and No. 3.

(1) Applicants for General Permits No. 1, No. 2 and No. 3 must demonstrate that a public notice was published in at least one newspaper with the largest circulation in the area in which the facility is located or the activity will occur.

(2) The newspaper notice shall, at the minimum, contain the following information:

PUBLIC NOTICE OF STORM WATER DISCHARGE

The (applicant name) plans to submit a Notice of Intent to the Iowa Department of Natural Resources to be covered under NPDES General Permit (select the appropriate general permit—No. 1 “Storm Water Discharge Associated with Industrial Activity”, General Permit No. 2 “Storm Water Discharge Associated with Industrial Activity for Construction Activities” or General Permit No. 3 “Storm Water Discharge Associated with Industrial Activity for Asphalt Plants, Concrete Batch Plants, Rock Crushing Plants, and Construction Sand and Gravel Facilities”). The storm water discharge will be from (description of industrial activity) located in (¼ section, township, range, county). Storm water will be discharged from (number) point source(s) and will be discharged to the following streams: (stream name(s)).

Comments may be submitted to the Storm Water Discharge Coordinator, Iowa Department of Natural Resources, 502 East 9th Street, Des Moines, Iowa 50319-0034. The public may review the Notice of Intent from 8 a.m. to 4:30 p.m., Monday through Friday, at the above address after it has been received by the department.
64.6(2) Authorization to discharge under a general permit. Upon the submittal of a complete NOI in accordance with 64.6(1) and 64.3(4) “b,” the applicant is authorized to discharge after the department has determined that the contents of the NOI satisfy the requirements of 567—Chapter 64, evaluated the NOI, and determined that the proposed discharge meets the requirements of the general permit. The applicant will receive notification from the department of coverage under the general permit. If any of the items required for filing an NOI specified in 64.6(1) are missing, the department will consider the application incomplete and will notify the applicant of the incomplete items. If the discharge described in the NOI does not meet the requirements of the general permit, the NOI may be denied. The department will notify applicants of denial within 30 days.

Authorization to discharge is automatic only for the general permits that do not require an NOI under 64.3(4), provided the discharge is a covered activity and the permittee complies with all applicable permit requirements.

64.6(3) General permit suspension or revocation. In addition to the causes for suspension or revocation which are listed in 64.3(11), the director may suspend or revoke coverage under a general permit issued to a facility or a class of facilities for the following reasons and require the applicant to apply for an individual NPDES permit in accordance with 64.3(4) “a”:

a. The discharge would not comply with Iowa’s water quality standards pursuant to 567—Chapter 61, or
b. The department finds that the activities associated with an NOI filed with the department do not meet the conditions of the applicable general permit, or
c. The department finds that any discharge covered under a general permit is not managed in a manner consistent with the conditions specified in the applicable general permit.

The department will notify the affected discharger and establish a deadline, not longer than one year, for submitting an individual permit application.

64.6(4) Eligibility for individual NPDES permit holders. A person holding an individual NPDES permit for an activity covered by a general permit may apply for coverage under a general permit by filing an NOI according to procedures described in 64.3(4) “b” and 567—455B. In addition to these requirements, the permittee must submit a written request, with the NOI, to close or revoke the individual NPDES permit or to amend the individual NPDES permit to remove the general permit-covered activity.

a. Upon receipt of a complete NOI and request for closure, revocation or amendment of an individual NPDES permit, the applicant shall be authorized to discharge under the general permit in accordance with 64.6(2). The applicant will receive notification by the department of coverage under the general permit and of the closure, revocation or amendment of the individual permit.

b. Authorization to discharge under a general permit that does not require an NOI will be automatic in accordance with 64.6(2) and shall commence upon completion of individual NPDES permit closure, revocation, or amendment.

c. Individual NPDES permit amendments under this subrule shall follow the applicable public notice procedures in 567—455B.

64.6(5) Filing a Notice of Discontinuation. A notice to discontinue discharge associated with an activity covered by a general permit shall be made electronically or in writing to the department in accordance with the conditions established in each general permit.

The notice of discontinuation shall contain the following:

a. The name of the facility to which the permit was issued,
b. The general permit number and permit authorization number,
c. The date the permitted activity was, or will be, discontinued, and
d. A signed certification in accordance with the requirements in the general permit.

64.6(6) Transfer of ownership—construction activity part of a larger common plan of development. For construction activity which is part of a larger common plan of development, such as a housing or commercial development project, in the event a permittee transfers ownership of all or any part of property subject to NPDES General Permit No. 2, both the permittee and transferee shall be responsible for compliance with the provisions of the general permit for that portion of the project which has been transferred, including when the transferred property is less than one acre in area, provided that:
a. The transferee is notified in writing of the existence and location of the general permit and pollution prevention plan, and of the transferee’s duty to comply, and proof of such notice is included with the notice to the department of the transfer.

b. If the transferee agrees, in writing, to become the sole responsible permittee for the property which has been transferred, then the transferee shall be solely responsible for compliance with the provisions of the general permit for the transferred property.

c. If the transferee agrees, in writing, to obtain coverage under NPDES General Permit No. 2 for the property which has been transferred, then the transferee is required to obtain coverage under NPDES General Permit No. 2 for the transferred property. After the transferee has agreed, in writing, to obtain coverage under NPDES General Permit No. 2 for the transferred property, the authorization issued under NPDES General Permit No. 2 to the transferor for the transferred property shall be considered by the department as not providing NPDES permit coverage for the transferred property and the transferor’s authorization issued under NPDES General Permit No. 2 for, and only for, the transferred property shall be deemed by the department as being discontinued without further action of the transferor.

d. All notices as described in this subrule shall contain the name of the development as submitted to the department in the original Notice of Intent and as modified by any subsequent written notices of name changes submitted to the department, the authorization number assigned to the authorization by the department, the legal description of the transferred property including lot number, if any, and any other information necessary to precisely locate the transferred property and to establish the legality of the document.

[ARC 8520B, IAB 2/10/10, effective 3/17/10; ARC 9365B, IAB 2/9/11, effective 3/30/11; ARC 1337C, IAB 2/19/14, effective 3/26/14; ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 3786C, IAB 5/9/18, effective 7/1/18; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.7(455B) Terms and conditions of NPDES permits.

64.7(1) Prohibited discharges. No NPDES permit may authorize any of the discharges prohibited by 567—62.1(455B).

64.7(2) Application of effluent, pretreatment and water quality standards and other requirements. Each NPDES permit shall include any of the following that is applicable:

a. An effluent limitation guideline promulgated by the administrator under Sections 301 and 304 of the Act and adopted by reference by the commission in 567—62.4(455B).

b. A standard of performance for a new source promulgated by the administrator under Section 306 of the Act and adopted by reference by the commission in 567—62.4(455B).

c. An effluent standard, effluent prohibition or pretreatment standard promulgated by the administrator under Section 307 of the Act and adopted by reference by the commission in 567—62.4(455B) or 567—62.5(455B).

d. A water quality related effluent limitation established by the administrator pursuant to Section 302 of the Act.

e. Prior to promulgation by the administrator of applicable effluent and pretreatment standards under Sections 301, 302, 306, and 307 of the Act, such conditions as the director determines are necessary to carry out the provisions of the Act.

f. Any other limitation, including those:

(1) Necessary to meet water quality standards, treatment or pretreatment standards, or schedules of compliance established pursuant to any Iowa law or regulation, or to implement the antidegradation policy in 567—subrule 61.2(2); or

(2) Necessary to meet any other federal law or regulation; or

(3) Required to implement any applicable water quality standards; or

(4) Any legally applicable requirement necessary to implement total maximum daily loads established pursuant to Section 303(d) of the Act and incorporated in the continuing planning process approved under Section 303(e) of the Act and any regulations and guidelines issued pursuant thereto.

(5) Any limitation necessary to comply with the antidegradation policy requirements of 567—subrule 61.2(2) implemented according to procedures hereby incorporated by reference and known as the “Iowa Antidegradation Implementation Procedure,” effective
g. Limitations must control all pollutants or pollutant parameters which the director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including narrative criteria, in 567—Chapter 61. When the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion of the water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant.

h. Any more stringent legally applicable requirements necessary to comply with a plan approved pursuant to Section 208(b) of the Act.

In any case where an NPDES permit applies to effluent standards and limitations described in paragraph “a,” “b,” “c,” “d,” “e,” “f,” “g,” or “h,” the director must state that the discharge authorized by the permit will not violate applicable water quality standards and must have prepared some verification of that statement. In any case where an NPDES permit applies any more stringent effluent limitation, described in 64.7(2)“f”(1) or “g,” based upon applicable water quality standards, a waste load allocation must be prepared to ensure that the discharge authorized by the permit is consistent with applicable water quality standards.

64.7(3) Effluent limitations in issued NPDES permits. In the application of effluent standards, and limitations, water quality standards, and other legally applicable requirements, pursuant to 64.7(2), the director shall, for each issued NPDES permit, specify average and maximum daily quantitative limitations for the level of pollutants in the authorized discharge in terms of weight (except pH, temperature, radiation, and any other pollutants not appropriately expressed by weight). The director may, in addition to the specification of daily quantitative limitations by weight, specify other limitations such as average or maximum concentration limits, for the level of pollutants authorized in the discharge.

[COMMENT: The manner in which effluent limitations are expressed will depend upon the nature of the discharge. Continuous discharges shall be limited by daily loading figures and, where appropriate, may be limited as to concentration or discharge rate (e.g., for toxic or highly variable continuous discharges). Batch discharges should be more particularly described and limited in terms of (i) frequency (e.g., to occur not more than once every three weeks), (ii) total weight (e.g., not to exceed 300 pounds per batch discharge), (iii) maximum rate of discharge of pollutants during the batch discharge (e.g., not to exceed 2 pounds per minute), and (iv) prohibition or limitation by weight, concentration, or other appropriate measure of specified pollutants (e.g., shall not contain at any time more than 0.1 ppm zinc or more than ¼ pound of zinc in any batch discharge). Other intermittent discharges, such as recirculation blowdown, should be particularly limited to comply with any applicable water quality standards and effluent standards and limitations.]

64.7(4) Schedules of compliance in issued NPDES permits. The director shall follow the following procedure in setting schedules in NPDES permit conditions to achieve compliance with applicable effluent standards and limitations, water quality standards, and other legally applicable requirements.

a. With respect to any discharge which is not in compliance with applicable effluent standards and limitations, applicable water quality standards, or other legally applicable requirements listed in 64.7(2)“f” and 64.7(2)“g,” the permittee shall be required to take specific steps to achieve compliance with: applicable effluent standards and limitations; if more stringent, water quality standards; or if more stringent, legally applicable requirements listed in 64.7(2)“f” and 64.7(2)“g.” In the absence of any legally applicable schedule of compliance, such steps shall be achieved in the shortest, reasonable period of time, such period to be consistent with the guidelines and requirements of the Act.

b. In any case where the period of time for compliance specified in paragraph 64.7(4)“a” exceeds one year, a schedule of compliance shall be specified in the permit which shall set forth interim requirements and the dates for their achievement; in no event shall more than one year elapse between interim dates. If the time necessary for completion of the interim requirements (such as the construction of a treatment facility) is more than one year and is not readily divided into stages for completion, interim dates shall be specified for the submission of reports of progress toward completion of the interim requirement.
COMMENT. Certain interim requirements such as the submission of preliminary or final plans often require less than one year, and thus a shorter interval should be specified. Other requirements such as the construction of treatment facilities may require several years for completion and may not readily subdivide into one-year intervals. Long-term interim requirements should nonetheless be subdivided into intervals not longer than one year at which the permittee is required to report progress to the director pursuant to 64.7(4) "c.""

c. Either before or up to 14 days following each interim date and the final date of compliance the permittee shall provide the department with written notice of the permittee’s compliance or noncompliance with the interim or final requirement.

d. On the last day of the months of February, May, August, and November, the director shall transmit to the regional administrator a list of all instances, as of 30 days prior to the date of such report, of failure or refusal of a permittee to comply with an interim or final requirement or to notify the department of compliance or noncompliance with each interim or final requirement (as required pursuant to paragraph "c" of this subrule). Such list shall be available to the public for inspection and copying and shall contain at least the following information with respect to each instance of noncompliance:

1. Name and address of each noncomplying permittee.
2. A short description of each instance of noncompliance (e.g., failure to submit preliminary plans, two-week delay in commencement of construction of treatment facility; failure to notify of compliance with interim requirement to complete construction by June 30).
3. A short description of any actions or proposed actions by the permittee to comply or by the director to enforce compliance with the interim or final requirement.
4. Any details which tend to explain or mitigate an instance of noncompliance with an interim or final requirement (e.g., construction delayed due to materials shortage, plan approval delayed by objections).

e. If a permittee fails or refuses to comply with an interim or final requirement in an NPDES permit such noncompliance shall constitute a violation of the permit for which the director may, pursuant to 567—Chapters 7 and 60, modify, suspend or revoke the permit or take direct enforcement action.

64.7(5) Schedules of compliance in issued NPDES permits for disadvantaged communities. If compliance with federal regulations, applicable requirements in 567—Chapters 60, 61, 62, 63, and 64, or an order of the department will result in substantial and widespread economic and social impact (SWESI) to the ratepayers and the affected community, the director may establish in an NPDES permit a schedule of compliance that will result in an improvement of water quality and reasonable progress toward complying with the applicable requirements but does not result in SWESI. Schedules of compliance established under this subrule are intended to result in compliance with the applicable federal and state regulations and requirements by the regulated entity and the affected community.

a. Disadvantaged community status. The director shall find that a regulated entity and the affected community are a disadvantaged community by evaluating all of the following:

1. The ability of the regulated entity and the affected community to pay for a project based on the ratio of the total annual project costs per household to median household income (MHI),
2. MHI in the community and the unemployment rate of the county in which the community is located, and
3. The outstanding debt of the system and the bond rating of the community.

b. Disadvantaged community analysis (DCA). A regulated entity or affected community must submit a DCA to the director to be considered for disadvantaged status.

1. When new requirements in a proposed or reissued NPDES permit may result in SWESI, a DCA may be submitted by any of the following:
   1. A wastewater disposal system owned by a municipal corporation or other public body created by or under Iowa law and having jurisdiction over disposal of sewage, industrial wastes or other wastes, or a designated and approved management agency under Section 208 of the Act (a POTW);
   2. A wastewater disposal system for the treatment or disposal of domestic sewage which is not a private sewage disposal system and which is not owned by a city, a sanitary sewer district, or a designated
and approved management agency under Section 208 of the Act (33 U.S.C. 1288) (a semipublic system); or

3. Any other owner of a wastewater disposal system that is not a private sewage disposal system and does not discharge industrial wastes. “Private sewage disposal system” and “industrial waste” are defined in rule 567—60.2(455B).

(2) A DCA may be submitted prior to the issuance of an initial NPDES permit if the facility does not discharge industrial wastes and is not a new source or new discharger. “New source” and “new discharger” are defined in rule 567—60.2(455B).

(3) A DCA may be submitted by the entities noted in subparagraph 64.7(5)“b”(1) above for consideration of a disadvantaged community loan interest rate under the clean water state revolving fund, independent of the requirements in a proposed or reissued NPDES permit.

c. Contents of a DCA.

(1) A DCA must contain all of the following:

1. Proposed total annual project costs as defined in paragraph 64.7(5)“d”;
2. The number of households in the affected community or, if the entity is not serving households, the number of ratepayers;
3. A description of the bond rating of the affected community over the last year, if available;
4. The user rates, as follows:
   ● If the DCA is submitted by or for a municipality or other community, the current sewer rate ordinances, including the sewer rates of any industrial users;
   ● If the DCA is submitted by or for a water treatment facility, the water rate schedules or tables;
   or
   ● If the DCA is submitted by or for an entity other than a municipality, community, or water treatment facility, the monthly ratepayer charge for wastewater treatment;
5. An explanation of why the regulated entity or affected community believes that compliance with the proposed requirements will result in SWESI.

(2) If the DCA is submitted by or for an entity other than a municipality, community, or water treatment facility, the DCA must also contain either:

1. For entities with more than ten households or ratepayers, the median household or ratepayer income, as determined by an income survey conducted by the regulated entity (the survey must be included in the DCA); or
2. For entities with ten or fewer households or ratepayers, an estimate of median household or ratepayer income.

d. Definition of total annual project costs. “Total annual project costs” means the current costs of wastewater treatment in the community (if any) plus the future costs of proposed wastewater system improvements that will meet or exceed all applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and 64, or requirements of an order of the department. Total annual project costs shall include any current and proposed facility operation and maintenance costs and any existing (outstanding) and proposed system debt, as expressed in current and proposed sewer rates. The costs of the proposed wastewater treatment shall assume a 30-year loan period at an interest rate equal to the current state revolving fund interest rate. Awarded grant funding must be subtracted from the total annual project costs.

The formula for the calculation of total annual project costs for a regulated entity and affected community is: total annual project costs = [(Estimated costs to design and build proposed project - Awarded grant funding) amortized over 30 years] + Current annual system budget (if any), including operation and maintenance (O&M) and existing debt service + Future annual O&M costs.

e. Disadvantaged community matrix (DCM). The department hereby incorporates by reference “Disadvantaged Community Matrix,” DNR Form 542-1246. This document may be obtained on the department’s website.

Upon receipt of a complete DCA, the director shall use the DCM to evaluate the disadvantaged status of the community. The DCM shall be used to evaluate DCAs submitted in accordance with 64.7(5)“b.” Compliance with the applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and
64, or an order of the department shall be considered to result in SWESI, and the regulated entity and affected community shall be considered a disadvantaged community, if the point total derived from the DCM is equal to or greater than 12. The following data sources shall be used to derive the point total in the DCM:

1. The total annual project costs as stated in the DCA;
2. The number of households or ratepayers in a community as stated in the DCA;
3. The bond rating of the community, if available, as stated in the DCA;
4. The MHI of either:
   1. The community, as found in the most recent American Community Survey or United States Census or as stated in an income survey that is conducted by the regulated entity or community; or
   2. The ratepayer group, as stated in an income survey that is conducted by the regulated entity; and
5. The unemployment rate of the county where the community is located and of the state as found in the most recent Iowa Workforce Information Network unemployment data.

The ratio of the total annual project costs per household or per ratepayer to MHI shall be calculated in the DCM as follows: The total annual project costs shall be divided by the number of households or ratepayers to obtain the costs per household or per ratepayer, and the costs per household or per ratepayer shall be divided by the MHI to obtain the ratio.

f. Ratio. The director shall not consider a regulated entity or affected community a disadvantaged community if the ratio of compliance costs to MHI is less than 1 percent. The director shall consider a regulated entity or affected community a disadvantaged community if the ratio of compliance costs to MHI is greater than or equal to 2 percent. If the ratio of compliance costs to MHI is greater than or equal to 1 percent and less than 2 percent, the director shall use the DCM to determine if the community is disadvantaged. The ratio of compliance costs to MHI shall be the ratio of the total annual project costs per household to MHI as calculated in the DCM.

g. Compliance schedule for a disadvantaged community. A schedule of compliance established in an NPDES permit for a disadvantaged community as a result of SWESI may contain one or two parts as necessary to comply with the applicable federal regulations and requirements in 567—Chapters 60, 61, 62, 63, and 64.

1. Alternatives report. The alternatives report must detail the alternative pollution control measures that will be investigated and contain an examination of all other appropriate measures that may achieve compliance with applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and 64, or an order of the department without creating SWESI. The alternatives report must describe which measures will be evaluated for feasibility and affordability during the next portion of the compliance schedule. Alternative pollution control measures may include, but are not limited to, facility upgrades, construction of a new facility, relocation of the discharge point(s), regionalization, or outfall consolidation. Other appropriate measures may include, but are not limited to, mixing zone studies, consideration of seasonal limitations or site-specific data, alteration of current facility operations, intermittent discharges, source reduction, effluent recycling or reuse, or renegotiation of treatment agreements. The alternatives report must also include a plan for pursuing funding options, including grants and low-interest loans. The alternatives report shall be submitted no later than two years after permit issuance.

2. Alternatives implementation compliance plan (AICP). The AICP shall include the results of the investigation detailed in the alternatives report, a description of any feasible and affordable alternative(s) that will be implemented, a schedule of the time necessary to implement the alternative(s), and an updated DCA. The AICP shall be submitted no later than 4½ years after permit issuance.

(2) If the entity or community continues to qualify as disadvantaged according to the DCM evaluation based on the DCA submitted with the AICP, the entity or community may receive a
second schedule of compliance as specified in this subrule. The second schedule of compliance for a disadvantaged community may contain either the implementation schedule from the AICP or a schedule for submittal of a future compliance plan (FCP).

1. **AICP implementation schedule.** If the AICP proposes a schedule for implementation of one or more feasible alternatives, the proposed schedule shall be included in the reissued NPDES permit for the disadvantaged community.

2. **Future compliance plan (FCP).** The submittal of an FCP will be necessary only if the AICP concludes that the disadvantaged community cannot feasibly implement any alternatives and if the community is still disadvantaged according to the updated information in the DCA submitted with the AICP. The FCP shall detail how the disadvantaged community will meet the applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and 64, or an order of the department and the period necessary to do so. An FCP shall review the types of technology capable of treating the pollutant of concern, as well as the costs of installing and operating each type of technology. All technically feasible alternatives shall be explored. The FCP shall be submitted no later than three years after permit issuance. A schedule of compliance requiring the submittal of an FCP shall also require the submittal of annual reports of progress that contain updated financial information, an updated DCA, and a brief update regarding the completion or implementation of the FCP. If the DCM evaluation determines that an entity or community is no longer disadvantaged based on the most recent DCA, the NPDES permit may be amended to change the schedule of compliance.

3. **Schedule extension.** The second part of a schedule of compliance for a disadvantaged community may be extended at the discretion of the director.

   (3) Schedules of compliance issued in accordance with this subrule shall comply with paragraphs 64.7(4) "b" through "e."

**64.7(6) Disadvantaged unsewered communities.** If compliance with applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and 64, or an order of the department will result in substantial and widespread economic and social impact (SWESI) to the ratepayers of an unsewered community, the director may negotiate a compliance agreement that will result in an improvement of water quality and reasonable progress toward complying with the applicable requirements but does not result in SWESI.

   a. **Disadvantaged unsewered community status.** The director shall find that an unsewered community is a disadvantaged unsewered community by evaluating all of the following:

      (1) The ability of the unsewered community to pay for a project based on the ratio of the total annual project costs per household to MHI,

      (2) The unemployment rate in the county where the unsewered community is located, and

      (3) The MHI of the unsewered community.

   b. **Disadvantaged unsewered community analysis (DUCA).** An unsewered community must submit a DUCA to the director to be considered for disadvantaged unsewered community status. Only unsewered communities may submit a DUCA under this subrule. For the purposes of this subrule, an unsewered community is defined as a grouping of ten or more residential houses with a density of one house or more per acre and with either no wastewater treatment or inadequate wastewater treatment. An entity defined in rule 567—60.2(455B) as a private sewage disposal system may not submit a DUCA or qualify for a disadvantaged unsewered community compliance agreement under paragraph 64.7(6) "g."

      (1) An unsewered community may submit a DUCA to the director prior to the issuance of or amendment to an administrative order with requirements that could result in SWESI and that are based on applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and 64, or an order of the department.

      (2) A DUCA may also be submitted for consideration of a disadvantaged community loan interest rate under the clean water state revolving fund, independent of an administrative order.

   c. **Contents of a DUCA.** A DUCA must contain all of the following:

      (1) Proposed total annual project costs as defined in paragraph 64.7(4) "d;"

      (2) The number of households in the unsewered community and source of household information;

      (3) Total amount of any awarded grant funding; and
(4) An explanation of why the unsewered community believes that compliance with the proposed requirements will result in SWESI.

If no MHI information is available for the unsewered community, the community should conduct a rate survey to determine the MHI. The survey must be attached to the DCA.

d. **Definition of total annual project costs.** “Total annual project costs” means the future costs of proposed wastewater system installation or improvements that will meet or exceed all applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and 64, or requirements of an order of the department. Total annual project costs shall include the proposed facility operation and maintenance (O&M) costs and the proposed debt of the system as expressed in the proposed sewer rates. The costs of the proposed wastewater treatment shall assume a 30-year loan period at an interest rate equal to the current state revolving fund interest rate. Awarded grant funding must be subtracted from the total annual project costs.

The formula for the calculation of total annual project costs for an unsewered community is: total annual project costs = [(Estimated costs to design and build proposed project - Awarded grant funding) amortized over 30 years] + Future annual O&M costs.

e. **Disadvantaged unsewered community matrix (DUCM).** The department hereby incorporates by reference “Disadvantaged Unsewered Community Matrix,” DNR Form 542-1247. This document may be obtained on the department's website.

Upon receipt of a complete DUCA, the director shall use the DUCM to evaluate the disadvantaged status of the unsewered community. The DUCM shall be used to evaluate DUCAs submitted in accordance with 64.7(6)“b.” Compliance with applicable federal regulations, requirements in 567—Chapters 60, 61, 62, 63, and 64, or an order of the department shall be considered to result in SWESI, and the unsewered community shall be considered a disadvantaged unsewered community, if the point total derived from the DUCM is equal to or greater than 10. The following data sources shall be used to derive the point total in the DUCM:

(1) The total annual project costs as stated in the DUCA;
(2) The number of households in the unsewered community as stated in the DUCA;
(3) The MHI of the unsewered community as found in the most recent American Community Survey or United States Census or as stated in an income survey that is conducted by the unsewered community; and
(4) The unemployment rate of the county where the unsewered community is located and of the state as found in the most recent Iowa Workforce Information Network unemployment data.

The ratio of the total annual project costs per household to MHI shall be calculated in the DUCM as follows: the total annual project costs shall be divided by the number of households in the unsewered community to obtain the costs per household, and the costs per household shall be divided by the MHI to obtain the ratio.

f. **Ratio and other considerations.** The director shall not consider an unsewered community a disadvantaged unsewered community if the ratio of compliance costs to MHI is below 1 percent. The director shall consider an unsewered community a disadvantaged unsewered community if the ratio of compliance costs to MHI is greater than or equal to 2 percent. If the ratio of compliance costs to MHI is greater than or equal to 1 percent, and less than 2 percent, the director shall use the DUCM to determine if the unsewered community is disadvantaged. The ratio of compliance costs to MHI shall be the ratio of the total annual project costs per household to MHI as calculated in the DUCM. The director shall not require installation of a wastewater treatment system by an unsewered community if the director determines that such installation would create SWESI.

g. **Compliance agreement for a disadvantaged unsewered community.** A compliance agreement negotiated with a disadvantaged unsewered community as a result of SWESI shall require the unsewered community to submit an alternatives report and an alternatives implementation compliance plan (AICP).

(1) Alternatives report. The alternatives report must detail the alternative pollution control measures that will be investigated and contain an examination of all other appropriate measures that may achieve compliance with the water quality standards without creating SWESI. The alternatives report must describe which measures will be evaluated for feasibility and affordability after the
report submittal. Alternative pollution control measures may include, but are not limited to, upgrades of existing infrastructure, construction of a new facility, relocation of the discharge point(s), regionalization, or outfall consolidation. Other appropriate measures may include, but are not limited to, mixing zone studies, consideration of seasonal limitations or site-specific data, alteration of current facility operations, intermittent discharges, source reduction, effluent recycling or reuse, or renegotiation of treatment agreements. The alternatives report shall also include a plan for pursuing funding options, including grants and low-interest loans. The alternatives report shall be submitted no later than two years after an unsewered community has been determined to be a disadvantaged unsewered community.

(2) Alternatives implementation compliance plan (AICP). The AICP shall include the results of the investigation detailed in the alternatives report, a description of any feasible and affordable alternative(s) that will be implemented, a schedule of the time necessary to implement the alternative(s), and an updated DUCA. The AICP shall be submitted no later than 4½ years after an unsewered community has been determined to be a disadvantaged unsewered community.

(3) AICP implementation schedule. If the AICP proposes a schedule for implementation of one or more feasible alternatives, the proposed schedule shall be included in an administrative order between the department and the unsewered community. If the feasible alternative that will be implemented requires a construction permit, an operation permit, or an NPDES permit, the unsewered community shall comply with the rules regarding those permits in this chapter.

(4) Future compliance plan (FCP). The submittal of an FCP will be necessary only if the AICP concludes that the unsewered community cannot feasibly implement any alternatives and if the community is still disadvantaged according to the updated information in the DUCA submitted with the AICP. The FCP shall detail how the unsewered community will meet the water quality standards and the period necessary to do so. An FCP shall review the types of technology capable of treating the pollutant of concern, as well as the costs of installing and operating each type of technology. All technically feasible alternatives shall be explored. The FCP shall be submitted no later than seven years after an unsewered community has been determined to be a disadvantaged unsewered community. An administrative order requiring the submittal of an FCP shall also require the submittal of biennial progress reports that contain an updated DUCA. If the DUCM evaluation determines that an unsewered community is no longer disadvantaged based on the most recent DUCA, the order may be amended at the discretion of the director.

64.7(7) Other terms and conditions of issued NPDES permits. Each issued NPDES permit shall provide for and ensure the following:

a. That all discharges authorized by the NPDES permit shall be consistent with the terms and conditions of the permit; that facility expansions, production increases, or process modifications which result in new or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such discharge does not violate effluent limitations specified in the NPDES permit, by submission to the director of notice of such new or increased discharges of pollutants; that the discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by the permit shall constitute a violation of the terms and conditions of the permit; that if the terms and conditions of a general permit are no longer applicable to a discharge, the applicant shall apply for an individual NPDES permit;

b. That the permit may be amended, revoked and reissued, or terminated in whole or in part for the causes provided in 64.3(11) "b."

c. That the permittee shall permit the director or the director’s authorized representative upon the presentation of credentials:

(1) To enter upon permittee’s premises in which an effluent source is located or in which any records are required to be kept under terms and conditions of the permit;

(2) To have access to and copy any records required to be kept under terms and conditions of the permit;

(3) To inspect any monitoring equipment or method required in the permit; or

(4) To sample any discharge of pollutants.
That, if the permit is for a discharge from a publicly owned treatment works, the permittee shall provide notice to the director of the following:

1. One hundred eighty days in advance of any new introduction of pollutants into such treatment works from a new source as defined in 567—Chapter 60 if such source were discharging pollutants;

2. Except as specified below, 180 days in advance of any new introduction of pollutants into such treatment works from a source which would be subject to Section 301 of the Act if such source were discharging pollutants. However, the connection of such a source need not be reported if the source contributes less than 25,000 gallons of process wastewater per day at the average discharge, or contributes less than 5 percent of the organic or hydraulic loading of the treatment facility, or is not subject to a federal pretreatment standard adopted by reference in 567—Chapter 62, or does not contribute pollutants that may cause interference or pass through; and

3. Sixty days in advance of any substantial change in volume or character of pollutants being introduced into such treatment works by a source introducing pollutants into such works at the time of issuance of the permit.

Such notice shall include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works.

e. That, if the permit is for a discharge from a publicly owned treatment works, the permittee shall require any industrial user of such treatment works to comply with the requirements of Sections 204(b), 307, and 308 of the Act. As a means of ensuring such compliance, the permittee shall require that each industrial user subject to the requirements of Section 307 of the Act give to the permittee periodic notice (over intervals not to exceed six months) of progress toward full compliance with Section 307 requirements. The permittee shall forward a copy of the notice to the director.

f. That the permittee at all times shall maintain in good working order and operate as efficiently as possible any facilities or systems of treatment and control which have been installed or are used by the permittee to achieve compliance with the terms and conditions of the permit. Proper operation and maintenance also include adequate laboratory control and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which have been installed by the permittee only when such operation is necessary to achieve compliance with the conditions of the permit.

g. That if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the permittee’s discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the NPDES permit, the director shall revise or modify the permit in accordance with the toxic effluent standard or prohibition and so notify the permittee.

h. If an applicant for an NPDES permit proposes to dispose of pollutants into wells as part of a program to meet the proposed terms and conditions of an NPDES permit, the director shall specify additional terms and conditions of the issued NPDES permit which shall prohibit the proposed disposal or control the proposed disposal in order to prevent pollution of ground and surface water resources and to protect the public health and welfare. (See rule 567—62.9(455B) which prohibits the disposal of pollutants, other than heat, into wells within Iowa.)

i. That the permittee shall take all reasonable steps to minimize or prevent any discharge in violation of the permit which has a reasonable likelihood of adversely affecting human health or the environment.

j. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the terms of this permit.

64.7(8) POTW compliance—plan of action required. The owner of a publicly owned treatment works (POTW) must prepare and implement a plan of action to achieve and maintain compliance with final effluent limitations in its NPDES permit, as specified below:

a. The director shall notify the owner of a POTW of the plan of action requirement, and of an opportunity to meet with department staff to discuss the plan of action requirements. The POTW owner
shall submit a plan of action to the appropriate regional field office of the department within six months of such notice, unless a longer time is needed and is authorized in writing by the director.

b. The plan of action will vary in length and complexity depending on the compliance history and physical status of the particular POTW. It must identify the deficiencies and needs of the system, describe the causes of such deficiencies or needs, propose specific measures (including an implementation schedule) that will be taken to correct the deficiencies or meet the needs, and discuss the method of financing the improvements proposed in the plan of action. A plan may include the submittal of a disadvantaged community analysis in accordance with subrule 64.7(5), at the discretion of the POTW.

The plan may provide for a phased construction approach to meet interim and final limitations, where financing is such that a long-term project is necessary to meet final limitations, and shorter term projects may provide incremental benefits to water quality in the interim.

Information on the purpose and preparation of the plan can be found in the departmental document entitled “Guidance on Preparing a Plan of Action,” available from the department’s regional field offices.

c. Upon submission of a complete plan of action to the department, the plan should be reviewed and approved or disapproved within 60 days unless a longer time is required and the POTW owner is so notified.

d. The NPDES permit for the facility shall be amended to include the implementation schedule or other actions developed through the plan to achieve and maintain compliance.

This rule is intended to implement Iowa Code chapter 455B, division III, part 1 (455B.171 to 455B.187).

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 0529C, IAB 12/12/12, effective 1/16/13; ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 2695C, IAB 8/31/16, effective 8/12/16; ARC 6191C, IAB 9/29/22, effective 3/16/22]

567—64.8(455B) Reissuance of operation and NPDES permits.

64.8(1) Individual operation and NPDES permits. Individual operation and NPDES permits will be reissued according to the procedures identified in 64.8(1) “a” to “c.”

a. Any operation or NPDES permittee who wishes to continue to discharge after the expiration date of the permit shall file an application for reissuance of the permit at least 180 days prior to the expiration of the permit pursuant to 567—60.4(455B). For a POTW, permission to submit an application at a later date may be granted by the director. In addition, the applicant must submit up-to-date information on the permittee’s production levels, the permittee’s waste treatment practices, or the nature, contents, and frequency of the permittee’s discharge, as required by the permit application.

b. The director shall follow the notice and public participation procedures specified in 567—64.5(455B) in connection with each request for reissuance of an NPDES permit.

c. Notwithstanding any other provision in these rules, any new point source the construction of which is commenced after the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 (October 18, 1972) and which is so constructed as to meet all applicable standards of performance for new sources shall not be subject to any more stringent standard of performance during a ten-year period beginning on the date of completion of such construction or during the period of depreciation or amortization of such facility for the purposes of Section 167 or 169 (or both) of the Internal Revenue Code, as amended through December 31, 1976, whichever period ends first.

64.8(2) Renewal of coverage under a general permit. Coverage under a general permit will be renewed subject to the terms and conditions in paragraphs “a” and “b.”

a. If a permittee intends to continue an activity covered by a general permit for which an NOI is required beyond the expiration date of the general permit, the permittee must reapply and submit a complete NOI in accordance with the requirements specified in the applicable general permit.

b. A person holding a general permit is subject to the terms of the permit until either the permit expires, the authorization under the permit expires, or a Notice of Discontinuation is submitted in accordance with 64.6(5).

(1) If the person holding a general permit continues the activity beyond the expiration date of the permit and the permit will be reissued, the conditions of the expired general permit will remain in effect provided the permittee submits a complete NOI for coverage as required by the applicable general permit.
(2) If the person holding a general permit continues the activity beyond the expiration date of the permit and the general permit will not be reissued or renewed, the discharge must be permitted with an individual NPDES permit according to the procedures in 64.3(4)“a.”

64.8(3) Continuation of expiring operation and NPDES permits.
   a. The conditions of an expired operation or NPDES permit will continue in force until the effective date of a new permit if:
      (1) The permittee has submitted a timely and complete application under 567—subrule 60.4(2); and
      (2) The department, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit.
   b. Operation and NPDES permits continued under this subrule remain fully effective and enforceable.
   c. If a permittee is not in compliance with the conditions of the expiring or continued permit, the department may choose to do any of the following:
      (1) Initiate enforcement action on a permit which has been continued or reissued;
      (2) Issue a notice of intent to deny a permit under 64.5(1);
      (3) Reissue a permit with appropriate conditions in accordance with this subrule; or
      (4) Take other actions authorized by this rule.

567—64.9(455B) Monitoring, record keeping and reporting by operation permit holders. Operation permit holders are subject to any applicable requirements and provisions specified in the operation permit issued by the department and to the applicable requirements and provisions specified in 567—Chapter 63.

567—64.10(455B) Silvicultural activities. The following is adopted by reference: 40 CFR Section 122.27.

567—64.11 and 64.12 Reserved.

567—64.13(455B) Storm water discharges.
   64.13(1) The following is adopted by reference: 40 CFR Section 122.26.
   64.13(2) Small municipal separate storm sewer systems.
      a. For any discharge from a regulated small municipal separate storm sewer system (MS4), the permit application must be submitted no later than March 10, 2003, if designated under this subrule.
      b. All MS4s located in urbanized areas as defined by the latest decennial census and all MS4s which serve 10,000 people or more located outside urbanized areas and where the average population density is 1,000 people/square mile or more are regulated small MS4s unless waiver criteria established by the department are met and a waiver has been granted by the department.
      c. Permit coverage requirements for MS4s located in urbanized areas and serving 1,000 or more people and fewer than 10,000 people may be waived if the following requirements are met:
         (1) The department has evaluated all waters of the United States that receive a discharge from the MS4, and for all such waters, the department has determined that storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established total maximum daily load (TMDL) that addresses the pollutants of concern or, if a TMDL has not been developed or approved, an equivalent analysis that determines sources and allocations for the pollutants of concern. The pollutants of concern include biochemical oxygen demand, sediment or a parameter that addresses sediment (total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the MS4.
(2) The department has determined that future discharges from the MS4 do not have the potential to result in exceedances of water quality standards, including impairment of designated uses or other significant water quality impacts including habitat and biological impacts.

d. Permit coverage requirements for MS4s located in urbanized areas and serving fewer than 1,000 people may be waived if the following requirements are met:

(1) The system is not contributing substantially to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES storm water program.

(2) The MS4 discharges any pollutants that have been identified as a cause of impairment of any water body to which the MS4 discharges and the department has determined that storm water controls are not needed based upon wasteload allocations that are a part of an EPA approved or established TMDL that addresses the pollutants of concern.

e. Permit coverage requirements for MS4s located outside of urbanized areas and serving 10,000 or more people may be waived if the following criterion is met:

   The MS4 is not discharging pollutants which are the cause of the impairment to a water body designated by the department as impaired.

f. Should conditions under which the initial waiver was granted change, the waiver may be rescinded by the department and permit coverage may be required.

g. MS4 applications shall, at a minimum, demonstrate in what manner the applicant will develop, implement and enforce a storm water management program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act. The manner in which the permittee will address the following items must be addressed in the application: public education and outreach on storm water impacts, public involvement and participation, illicit discharge detection and elimination, construction site storm water runoff control, postconstruction storm water management in new development and redevelopment, and pollution prevention for municipal operations. Measurable goals which the applicant intends to meet and dates by which the goals will be accomplished shall be included with the application.

64.13(3) Waivers for storm water discharge associated with small construction activity. The director may waive the otherwise applicable requirements in a general permit for storm water discharge from small construction activities as defined in 567—Chapter 60 when:

a. The value of the rainfall erosivity factor ("R" in the Revised Universal Soil Loss Equation) is less than 5 during the period of construction activity. The rainfall erosivity factor is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21-64, dated January 1997; or

b. Storm water controls are not needed based on a TMDL approved or established by the EPA that addresses the pollutant(s) of concern or, for nonimpaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern includes sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity.

[ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.14(455B) Transfer of title and owner or operator address change. If title to any disposal system or part thereof for which a permit has been issued under rule 567—64.2(455B), 567—64.3(455B), or 567—64.6(455B) is transferred, the new owner or owners shall be subject to all terms and conditions of the permit. Whenever title to a disposal system or part thereof is changed, the department shall be notified in writing of such change within 30 days of the occurrence. When a discharge is covered by a general permit, the operator of record shall be subject to all terms and conditions of the permit. No transfer of the authorization to discharge from the facility represented by the permit shall take place prior
to notification of the department of the transfer of title. Whenever the address of the owner is changed, the department shall be notified in writing within 30 days of the address change.

[R]esulting from activities at rock quarries.

Rules 567—64.3(455B) to 567—64.14(455B) are intended to implement Iowa Code section 455B.173.

567—64.15(455B) General permits issued by the department. The following is a list of general permits adopted by the department through the Administrative Procedure Act, Iowa Code chapter 17A, and the term of each permit.

64.15(1) Storm Water Discharge Associated with Industrial Activity, NPDES General Permit No. 1, effective March 1, 2018, to February 28, 2023. Facilities assigned Standard Industrial Classification 1442, 2951, or 3273, and those facilities assigned Standard Industrial Classification 1422 or 1423 which are engaged primarily in rock crushing are not eligible for coverage under General Permit No. 1.

64.15(2) Storm Water Discharge Associated with Industrial Activity for Construction Activities, NPDES General Permit No. 2, effective March 1, 2018, to February 28, 2023.

64.15(3) Storm Water Discharge Associated with Industrial Activity from Asphalt Plants, Concrete Batch Plants, Rock Crushing Plants, and Construction Sand and Gravel Facilities, NPDES General Permit No. 3, effective March 1, 2018, to February 28, 2023. General Permit No. 3 authorizes storm water discharges from facilities primarily engaged in manufacturing asphalt paving mixtures and which are classified under Standard Industrial Classification 2951, primarily engaged in manufacturing Portland cement concrete and which are classified under Standard Industrial Classification 3273, those facilities assigned Standard Industrial Classification 1422 or 1423 which are primarily engaged in the crushing, grinding or pulverizing of limestone or granite, and construction sand and gravel facilities which are classified under Standard Industrial Classification 1442. General Permit No. 3 does not authorize the discharge of water resulting from dewatering activities at rock quarries.

64.15(4) “Discharge from Private Sewage Disposal Systems,” NPDES General Permit No. 4, effective March 1, 2018, to February 28, 2023.

64.15(5) “Discharge from Mining and Processing Facilities,” NPDES General Permit No. 5, effective July 20, 2021, to July 19, 2026.

64.15(6) “Discharge Associated with Well Construction Activities,” NPDES General Permit No. 6, effective March 1, 2020, to February 28, 2025.

64.15(7) “Pesticide General Permit (PGP) for Point Source Discharges to Waters of the United States from the Application of Pesticides,” NPDES General Permit No. 7, effective May 18, 2021, to May 17, 2026.

64.15(8) “Discharge from Hydrostatic Testing, Tank Ballasting and Water Lines,” NPDES General Permit No. 8, effective July 1, 2018, to June 30, 2023.

64.15(9) “Discharge from Dewatering and Residential Geothermal Systems,” NPDES General Permit No. 9, effective July 1, 2018, to June 30, 2023.

567—64.16(455B) Fees.

64.16(1) A person who applies for an individual permit to operate a disposal system shall submit along with the application an application fee as specified in 64.16(3) “b.” Certain individual facilities shall also be required to submit annual fees as specified in 64.16(3) “b.” For a wastewater construction permit, an application fee must be submitted with the application as specified in 64.16(3) “c.” For authorization under General Permits Nos. 1, 2, 3 and 5, the applicant has the option of paying an annual permit fee or a multiyear permit fee at the time the NOI for coverage is submitted as specified in 64.16(3) “a.”
For municipal separate storm sewer system (MS4s) permits and individual storm water permits, as defined in 567—60.2(455B), a one-time, multiyear permit fee must be submitted at the time of application. For all other individual non-storm water NPDES and operation permits, as defined in 567—60.2(455B), the applicant must submit an application fee at the time of application and the appropriate annual fee on a yearly basis, except for municipal water treatment facilities. If a facility needs coverage under more than one NPDES or operation permit, fees for each permit must be submitted appropriately.

Fees are nontransferable. Failure to submit the appropriate fee at the time of application renders the application incomplete, and the department shall suspend processing of the application until the fee is received. Failure to submit the appropriate annual fee may result in revocation or suspension of the permit as noted in 64.3(11).

64.16(2) Payment of fees. Fees shall be paid by check, credit card, electronic payment, or money order made payable to the “Iowa Department of Natural Resources.”

For facilities needing coverage under more than one permit (e.g., general, individual storm water, individual non-storm water), separate payments shall be made according to the fee schedule in 64.16(3).

64.16(3) Fee schedule. The following fees have been adopted:

- **General permit fees.** No fees shall be assessed for coverage under general permits not listed in this paragraph. The following fees are applicable to the described general permits:
  1. Storm Water Discharges Associated with Industrial Activity, NPDES General Permit No. 1.
     - Annual Permit Fee: $175 (per year)
     - Five-year Permit Fee: $700
     - Four-year Permit Fee: $525
     - Three-year Permit Fee: $350

   All fees are to be submitted with the NOI for coverage under the general permit.

- **Storm Water Discharge Associated with Industrial Activity for Construction Activities, NPDES General Permit No. 2.** The fees are the same as those specified for General Permit No. 1 in subparagraph (1) of this paragraph.

- **Storm Water Discharge Associated with Industrial Activity from Asphalt Plants, Concrete Batch Plants, and Rock Crushing Plants, NPDES General Permit No. 3.** The fees are the same as those specified for General Permit No. 1 in subparagraph (1) of this paragraph.

- **Discharge from Mining and Processing Facilities, NPDES General Permit No. 5.**
  - Annual Permit Fee: $125 (per year)
  - Five-year Permit Fee: $500
  - Four-year Permit Fee: $400
  - Three-year Permit Fee: $300

New facilities seeking General Permit No. 5 coverage shall submit fees with the NOI for coverage. Maximum coverage is for five years. Coverage may also be obtained for four years, three years, or one year, as shown in the fee schedule above. Existing facilities shall submit annual fees by August 30 of every year, unless a multiyear fee payment was received in an earlier year. In the event a facility is no longer eligible to be covered under General Permit No. 5, the remainder of the fees previously paid by the facility shall be applied toward its individual permit fees.

- **Individual NPDES and operation permit fees.** The following fees are applicable for the described individual permits:
  1. For individual storm water permits, a five-year permit fee of $1,250 must accompany the application.
(2) For permits that authorize the discharge of only storm water from municipal separate storm sewer systems (MS4s) and any allowable non-storm water, a five-year permit fee of $1,250 must accompany the application.

(3) For individual non-storm water NPDES and operation permits, a single application fee of $85 as established in Iowa Code section 455B.197 is due at the time of application. The $1,250 fee in subparagraphs (1) and (2) is not required for individual non-storm water permits that authorize storm water discharges along with other wastewater discharges. The $85 application fee is to be submitted with the application forms (as required by 567—Chapter 60) at the time of a new application, renewal application, or amendment application. Before an approved amendment request submitted by a facility holding a non-storm water NPDES or operation permit can be processed by the department, the $85 fee must be submitted, except when an amendment is initiated by the director, when the requested amendment will correct an error in the permit, when the amendment is for a disadvantaged community compliance schedule or nutrient reduction strategy, or when there is a transfer of title or change in the address of the owner as noted in 567—64.14(455B).

(4) For individual non-storm water NPDES and operation permits, the following annual fees, as established in Iowa Code section 455B.197, are due by August 30 of each year:
   1. Major municipal facility: $1,275.
   2. Minor municipal facility: $210. For a city with a population of 250 or less, the maximum fee shall be $210 regardless of how many individual non-storm water NPDES permits the city holds.
   5. Minor industrial facility: $300.
   6. Facilities that hold an operation permit: $170.

(5) For a municipal water treatment facility with an individual non-storm water NPDES permit, no fees shall be assessed.

(6) For a new facility covered by an individual non-storm water NPDES or operating permit, a prorated annual fee, calculated by taking the annual fee amount multiplied by the number of months remaining before the next annual fee due date divided by 12, is due 30 days after the new permit is issued.
   a. Wastewater construction permit fees. A single construction permit fee as established in Iowa Code section 455B.197 is due at the time of construction permit application submission.

   64.16(4) Fee refunds for storm water general permit coverage—pilot project. Rescinded IAB 10/16/02, effective 11/20/02.
   64.16(5) Fee refunds.
   a. Individual and general permit application, permit, and annual fees may be refunded, completely or in part, at the discretion of the director. Permittees who wish to receive fee refunds should notify the department in writing. Fees may be refunded under various circumstances, including, but not limited to:
      (1) A duplicate fee was submitted (for example, two annual fees for the same permit are paid in the same fiscal year).
      (2) A fee was overpaid.
      (3) A fee was submitted but is not required as part of the permit application or renewal (for example, an individual annual permit fee was submitted for a discontinued permit, a general permit NOI fee was submitted for an individual permit, or an amendment fee was submitted for a permit that cannot be amended).
      (4) An application is returned to the applicant by the department without decision.
   b. Fees shall not be refunded under any of the following conditions:
      (1) If the permit or permit coverage is suspended, revoked, or modified, or if the activity is discontinued or ceased.
      (2) If a permit is amended.
(3) If a permit application is withdrawn by the applicant or denied by the department pursuant to 64.5(1).

[Editorial change: IAC Supplement 2/11/09; ARC 7625B, IAB 3/11/09, effective 4/15/09; ARC 8520B, IAB 2/10/10, effective 3/17/10; ARC 9365B, IAB 2/9/11, effective 3/30/11; ARC 9553B, IAB 6/15/11, effective 7/20/11; ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 3786C, IAB 5/9/18, effective 7/1/18; ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.17(455B) Nutrient reduction exchange. The department shall maintain a registry of nonpoint source nutrient reduction practices installed by permitees. Practices listed in the registry may be eligible for future regulatory incentives.

[ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.18(455B) Validity of rules. If any section, paragraph, sentence, clause, phrase or word of these rules, or any part thereof, be declared unconstitutional or invalid for any reason, the remainder of said rules shall not be affected thereby and shall remain in full force and effect.

[ARC 6191C, IAB 2/9/22, effective 3/16/22]

567—64.19(455B) Applicability. This chapter shall apply to all waste disposal systems treating or intending to treat sewage, industrial waste, or other waste except waste resulting from livestock or poultry operations. All livestock and poultry operations constituting animal feeding operations as defined in 567—Chapter 65 shall be governed by the requirements contained in Chapter 65. However, the provisions of this chapter concerning NPDES permits which relate to notice and public participation, to the terms and conditions of the permit, to the reissuance of the permit and to monitoring, reporting and record-keeping activities shall apply to animal feeding operations which are required to apply for and obtain an NPDES permit to the extent that such requirements are not inconsistent with 567—Chapter 65.

[ARC 1627C, IAB 9/17/14, effective 10/22/14; ARC 6191C, IAB 2/9/22, effective 3/16/22]

These rules are intended to implement Iowa Code chapter 455B, division III, part 1.

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1 Effective date of 64.2(9)"c" delayed 70 days by the Administrative Rules Review Committee. The 70-day delay of effective date of 64.2(9)"c" was lifted by the Administrative Rules Review Committee on 7/31/86.
APPENDIX A
Rainfall Intensity - Duration - Frequency Curve
(5 and 2 year Return Intervals)


[ARC 7625B, IAB 3/11/09, effective 4/15/09]
CHAPTER 67
STANDARDS FOR THE LAND APPLICATION OF SEWAGE SLUDGE

567—67.1(455B) Land application of sewage sludge.

67.1(1) General. This chapter establishes standards for the land application of sewage sludge generated during the treatment of domestic sewage in a treatment works. This chapter applies to any generator, applicator, or both, and to sewage sludge applied to the land. No person shall land apply sewage sludge through any practice for which requirements are established in this chapter except in accordance with such requirements.

a. In areas that are not specifically addressed in this chapter or in 567—Chapter 68, but which are addressed in federal regulations for sewage sludge applied to land at 40 CFR Part 503 as amended through July 1, 2021, the federal regulations shall apply under this rule and are hereby adopted by reference under this chapter.

b. On a case-by-case basis, this department may impose requirements for the land application of sewage sludge in addition to or more stringent than the requirements in this chapter when necessary to protect public health and the environment from any adverse effect of a pollutant in the sewage sludge.

67.1(2) Sewage sludge generators shall ensure that the applicable requirements in this chapter are met when the sewage sludge is applied to the land.

If the sewage sludge generator determines that a person being supplied sewage sludge for land application is not complying with applicable requirements of the land application program, the generator shall work with the applicator to obtain compliance with the requirements. If subsequent compliance cannot be achieved, the generator shall not supply additional sewage sludge to the applicator.

[ARC 2482C, IAB 4/13/16, effective 5/18/16; ARC 6192C, IAB 2/9/22, effective 3/16/22]

567—67.2(455B) Exclusions. This chapter does not establish requirements for the land application of the following solid wastes.

67.2(1) Sludge generated at an industrial facility, not including sludge generated from separately treated domestic sewage at an industrial facility.

67.2(2) Hazardous sewage sludge—sewage sludge determined to be hazardous in accordance with 40 CFR Part 261.

67.2(3) Sewage sludge with a PCB concentration of 50 mg/kg or higher.

67.2(4) Incinerator ash.

67.2(5) Grit and screenings.

67.2(6) Drinking water treatment sludge.

[ARC 6192C, IAB 2/9/22, effective 3/16/22]

567—67.3(455B) Sampling and analysis. Any sewage sludge generator who intends to land apply sewage sludge shall:

67.3(1) Sample and analyze the waste to determine whether it meets the criteria for sewage sludge Class I, II, or III.

67.3(2) Analyze the waste to determine if any sources exist which may contribute significant quantities of potentially hazardous chemicals or other toxic substances. If any are found, the generator shall inform the department of their presence and shall analyze the waste for chemicals or substances in accordance with guidelines provided by the department.

67.3(3) Unless rules for specific programs under USEPA or department authority provide otherwise, or unless other methods are approved by the department for a specific situation, samples taken and analyses made to document contamination under this chapter shall be conducted in accordance with the methods described in 567—67.10(455B).

567—67.4(455B) Land application program. All sewage sludge generators wishing to land apply sewage sludge shall establish and maintain in writing a long-range program for land application of sewage sludge. This program shall be developed for a minimum period of five years and shall be updated annually. A copy of this program shall be available at the facility for inspection by the
67.4(1) An outline of the sewage sludge sampling schedule and procedures that will be followed to ensure that the sewage sludge being applied to land continues to meet the requirements.

67.4(2) A determination of the amount of land required to allow land application to be conducted in accordance with the requirements.

67.4(3) Identification of the land and application methods that will be used for land application of the sewage sludge. Those areas and application methods shall be selected as necessary to ensure that land application can be conducted in accordance with the requirements.

67.4(4) The names of the landowners and the applicators for all areas to be used for land application, and identification of any legal arrangements related to the use of these areas. The programs shall also outline any restrictions or special conditions that exist regarding the use of these areas for land application of sewage sludge.

67.4(5) An overall schedule for the land application of sewage sludge. This schedule shall indicate the areas being used, the time of year that land application will occur on each area, and the estimated application rate for each area.

67.4(6) A determination of the types and capacities of the equipment required for land application of sewage sludge in accordance with the developed application schedule. The program shall also outline how the application equipment will be made available and who will be responsible for conducting land application operations.

67.4(7) A determination of the types and capacities of sludge storage structures used to ensure that the land application of sewage sludge is conducted in accordance with the land application schedule. The program shall also outline whether any additional sludge storage or handling facilities are needed.

67.4(8) A plan to construct or obtain any additional sludge storage, handling or application facilities or equipment that are required by the land application program.

[ARC 6192C, IAB 2/9/22, effective 3/16/22]

567—67.5(455B) Special definitions.

“**Agronomic rate**” is the whole sludge application rate designed to provide the amount of nitrogen needed by the crop grown on the land and to minimize the amount of nitrogen that passes to the groundwater.

“**Annual whole sludge application rate**” is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365-day period.

“Applicator” or “**sewage sludge applicator**” is any person who applies sewage sludge to the land.

“**Bulk sewage sludge**” is sewage sludge that is not sold or given away in a bag or other container for application to the land.

“**Class I sewage sludge**” is sewage sludge that meets the criteria under subrule 67.7(1).

“**Class II sewage sludge**” is sewage sludge that meets the criteria under subrule 67.8(1).

“**Class III sewage sludge**” is any sewage sludge that cannot meet either Class I sewage sludge criteria or Class II sewage sludge criteria.

“**Cumulative pollutant loading rate**” is the maximum amount of an inorganic pollutant that can be applied to an area of land.

“**Dry weight basis**” means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass (i.e., essentially 100 percent solids content).

“**Food crops**” are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

“Generator” or “**sewage sludge generator**” is any person who generates sewage sludge, who derives a material from sewage sludge, or both.

“**Land with a high potential for public exposure**” is land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a city).
“Land with a low potential for public exposure” is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

“Person who prepares sewage sludge” is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

“Sewage sludge” is solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or the grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

[ARC 6192C, IAB 2/9/22, effective 3/16/22]

567—67.6(455B) Permit requirements. Prior to any land application of sewage sludge, a permit must be obtained by the sewage sludge generator in accordance with the following requirements:

67.6(1) The permit for the land application of sewage sludge produced by a wastewater treatment facility that has been issued a construction permit from the department will be issued concurrently and as part of a state operation permit or NPDES permit. The issuance process and permit terms will be the same as that specified for NPDES permits in 567—Chapter 64.

67.6(2) The department will review, on a case-by-case basis, requests for a permit to land apply sewage sludge or any material derived from sewage sludge if the sewage sludge is produced outside of the state of Iowa or produced by a wastewater treatment plant that has not been issued a construction permit from the department.

[ARC 6192C, IAB 2/9/22, effective 3/16/22]

567—67.7(455B) Land application requirements for Class I sewage sludge.

67.7(1) Class I sewage sludge criteria. Class I sewage sludge is sewage sludge that meets the pollutant concentrations in paragraph 67.7(1)“a,” the Class A pathogen reduction requirements in paragraph 67.7(1)“b,” and the vector attraction reduction requirements in paragraph 67.7(1)“c” below.

a. Pollutant concentrations for Class I sewage sludge. The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 1.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Monthly Average Concentration (milligrams per kilogram)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>41</td>
</tr>
<tr>
<td>Cadmium</td>
<td>39</td>
</tr>
<tr>
<td>Copper</td>
<td>1500</td>
</tr>
<tr>
<td>Lead</td>
<td>300</td>
</tr>
<tr>
<td>Mercury</td>
<td>17</td>
</tr>
<tr>
<td>Nickel</td>
<td>420</td>
</tr>
<tr>
<td>Selenium</td>
<td>100</td>
</tr>
<tr>
<td>Zinc</td>
<td>2800</td>
</tr>
</tbody>
</table>

*Dry weight basis

b. Class A pathogen requirements for Class I sewage sludge. The sewage sludge shall comply with subparagraphs 67.7(1)“b” (1) and (2) below.
(1) The sewage sludge shall comply with one of the following monitoring processes. Compliance with pathogen density shall not be based on an average value. Each individual sample result shall meet the numerical pathogen standards.

1. The density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or
2. The density of Salmonella sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis).

(2) The sewage sludge shall comply with one of the following analytical and treatment processes.

1. The temperature of the sewage sludge shall be maintained at a specific value for a period of time using one of the procedures detailed below.
   - When the percent solids of the sewage sludge is 7 percent or higher, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 20 minutes or longer; and the temperature and time period shall be determined using Equation 1, except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid.
   - When the percent solids of the sewage sludge is 7 percent or higher and small particles of sewage sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 15 seconds or longer; and the temperature and time period shall be determined using Equation 1.
   - When the percent solids of the sewage sludge is less than 7 percent and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using Equation 1.

Equation 1:
\[ D = 131,700,000/100^{0.1400t} \]
Where \( D \) = time in days; \( t \) = temperature in degrees Celsius.

2. When the percent solids of the sewage sludge is less than 7 percent; the temperature of the sewage sludge is 50 degrees Celsius or higher; and the time period is 30 minutes or longer, the temperature and time period shall be determined using Equation 2.

Equation 2:
\[ D = 50,070,000/10^{0.1400t} \]
Where \( D \) = time in days; \( t \) = temperature in degrees Celsius.

2. The sewage sludge shall meet all of the following requirements:
   - The pH of the sewage sludge shall be raised to above 12 and shall remain above 12 for 72 hours;
   - The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12; and
   - At the end of the 72-hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

3. Sewage sludge treated in other known processes shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses and viable helminth ova. The density of enteric viruses in the sewage sludge after pathogen treatment shall be less than one plaque-forming unit per four grams of total solids (dry weight basis). The density of viable helminth ova in the sewage sludge after pathogen treatment shall be less than one per four grams of total solids (dry weight basis). Once the process has been demonstrated to achieve the required pathogen reduction, the process must be operated under the same conditions that were used during the demonstration.

4. Sewage sludge treated by unknown processes or by processes operating at conditions less stringent than the operating conditions at which the sewage sludge could qualify as Class I under other alternatives shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses and viable helminth ova. The density of enteric viruses in the sewage sludge shall be less than one plaque-forming unit per four grams of total solids (dry weight basis). The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis).

5. Sewage sludge shall be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 567—67.11(455B).
6. Sewage sludge shall be treated in a process that is equivalent to a Process to Further Reduce Pathogens (PFRP), as determined by the department.
   c. Vector attraction reduction requirements for Class I sewage sludge. The sewage sludge shall meet one of the following vector attraction reduction requirements:
      (1) The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.
      (2) Digest a portion of the previously anaerobically digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. If, at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.
      (3) Digest a portion of the previously aerobically digested sewage sludge that has 2 percent solids or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. If, at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.
      (4) The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.
      (5) Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.
      (6) The pH of sewage sludge shall be raised to 12 or higher, measured at 25 degrees Celsius, by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours.
      (7) The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.
      (8) The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.
      (9) Sewage sludge shall be injected below the surface of the land and no significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
      (10) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

67.7(2) Management practices for Class I sewage sludge. Class I sewage sludge may be land-applied in conformance with the following rules:
   a. Class I sewage sludge may be applied to a lawn or a home garden.
   b. Sewage sludge shall be applied to the land at an annual whole sludge application rate that is equal to or less than the agronomic nitrogen uptake rate, unless otherwise specified by the department.
   c. An information sheet shall be provided to the person who receives sewage sludge sold or given away in a container for application to the land. The label or information sheet shall contain the following information:
      (1) The name and address of the sewage sludge generator.
      (2) A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the information sheet.
      (3) The annual application rate for the sewage sludge.

67.7(3) Frequency of monitoring for Class I sewage sludge.
   a. The frequency of monitoring for the pollutants listed in Table 1, the pathogen density requirements, and the vector attraction reduction requirements shall be the frequency stated in Table 2.
TABLE 2—FREQUENCY OF MONITORING

<table>
<thead>
<tr>
<th>Amount of sewage sludge per 365-day period dry weight basis</th>
<th>Monitoring Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 0 but less than 290 metric tons (or 320 English tons)</td>
<td>once per year</td>
</tr>
<tr>
<td>Equal to or greater than 290 but less than 1,500 metric tons (320 to 1,653 English tons)</td>
<td>once per quarter (4 times per year)</td>
</tr>
<tr>
<td>Equal to or greater than 1,500 but less than 15,000 metric tons (1,653 to 16,535 English tons)</td>
<td>once per 60 days (6 times per year)</td>
</tr>
<tr>
<td>Equal to or greater than 15,000 metric tons (or 16,535 English tons)</td>
<td>once per month (12 times per year)</td>
</tr>
</tbody>
</table>

b. After the sewage sludge has been monitored for two years, the department may reduce the frequency of monitoring, but in no case shall the frequency of monitoring be less than once per year when sewage sludge is applied to the land.

67.7(4) Record keeping for Class I sewage sludge.

a. Both the generator and bulk sludge applicator of Class I sewage sludge shall develop the following information and shall retain the information for five years:

1) The concentration of each pollutant listed in Table 1 in the sewage sludge.

2) The following certification statement: “I certify, under penalty of law, that the Class I sewage sludge requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”

3) A description of how the Processes to Further Reduce Pathogens requirements (PFRP) are met.

4) A description of how one of the vector attraction reduction requirements is met.

5) A description of how the management practices are met for each site.

b. Treatment works with a design flow rate of 1 million gallons per day or greater and treatment works that serve 10,000 people or more shall submit the above information to the EPA, using EPA’s NPDES eReporting Tool (NeT), by February 19 of each year for the previous calendar year.

[ARC 6192C, IAB 2/9/22, effective 3/16/22]

567—67.8(455B) Land application requirements for Class II sewage sludge.

67.8(1) Class II sludge criteria. Class II sewage sludge is sewage sludge that meets the pollutant concentrations in paragraph 67.8(1)“a,” the pathogen reduction standards in paragraph 67.8(1)“b,” and the vector attraction reduction requirements in paragraph 67.8(1)“c” below.

a. Pollutant concentrations for Class II sewage sludge. The concentration of any pollutant in the sewage sludge shall not exceed the ceiling concentration for the pollutant in Table 3.
**TABLE 3—CEILING CONCENTRATIONS**

| Pollutant      | Ceiling Concentration
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>milligrams per kilogram*</td>
</tr>
<tr>
<td>Arsenic</td>
<td>75</td>
</tr>
<tr>
<td>Cadmium</td>
<td>85</td>
</tr>
<tr>
<td>Copper</td>
<td>4300</td>
</tr>
<tr>
<td>Lead</td>
<td>840</td>
</tr>
<tr>
<td>Mercury</td>
<td>57</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>75</td>
</tr>
<tr>
<td>Nickel</td>
<td>420</td>
</tr>
<tr>
<td>Selenium</td>
<td>100</td>
</tr>
<tr>
<td>Zinc</td>
<td>7500</td>
</tr>
</tbody>
</table>

*Dry weight basis

b. **Pathogen reduction requirements for Class II sewage sludge.** The sewage sludge shall meet one of the following three alternatives.

1. Seven samples of the sewage sludge shall be collected at the time the sewage sludge is disposed, and the geometric mean of the density of fecal coliform shall be less than 2,000,000 Most Probable Number per gram of total solids (dry weight basis).

2. Sewage sludge shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 567—67.11(455B).

3. Sewage sludge shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens (PSRP), as determined by the department.

c. **Vector attraction reduction requirements for Class II sewage sludge.** The sewage sludge shall meet one of the following vector attraction reduction requirements.

1. The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

2. Digest a portion of the previously anaerobically digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. If, at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

3. Digest a portion of the previously aerobically digested sewage sludge that has a percent solids of 2 percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. If, at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

4. The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

5. Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

6. The pH of sewage sludge shall be raised to 12 or higher, measured at 25 degrees Celsius, by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours.

7. The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.
(8) The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

(9) Sewage sludge shall be injected below the surface of the land and no significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(10) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

67.8(2) Management practices for Class II sewage sludge. Class II sewage sludge may be land applied in conformance with the following:

a. Class II sewage sludge shall not be applied to a lawn or a home garden.

b. Land application sites accepting Class II sewage sludge not meeting pollutant concentrations listed in Table 1 of subrule 67.7(1) are subject to the cumulative pollutant loading rates listed in Table 4.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Cumulative Pollutant</th>
<th>Loading Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kilograms per hectare</td>
<td>pounds per acre</td>
</tr>
<tr>
<td>Arsenic</td>
<td>41</td>
<td>36</td>
</tr>
<tr>
<td>Cadmium</td>
<td>39</td>
<td>34</td>
</tr>
<tr>
<td>Copper</td>
<td>1500</td>
<td>1335</td>
</tr>
<tr>
<td>Lead</td>
<td>300</td>
<td>267</td>
</tr>
<tr>
<td>Mercury</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Nickel</td>
<td>420</td>
<td>373</td>
</tr>
<tr>
<td>Selenium</td>
<td>100</td>
<td>89</td>
</tr>
<tr>
<td>Zinc</td>
<td>2800</td>
<td>2490</td>
</tr>
</tbody>
</table>

c. Sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

d. Sewage sludge shall be applied to the land at an annual whole sludge application rate that is equal to or less than the agronomic nitrogen uptake rate, unless otherwise specified by the department.

e. The sewage sludge shall be applied only to soils classified as acceptable throughout the top 5 feet of soil profile. The sewage sludge shall not be applied to soils classified as sand, loamy sand and silt. The acceptability of a soil shall be determined using the USDA soil classifications.

f. Land application sites shall have soil pH maintained above 6.0, unless (1) crops prefer soils with lower pH conditions, (2) the sludge meets the pollution concentrations contained in Table 1, or (3) the site does not exceed calcium carbonate equivalent levels according to sound farm management practices. If the soil pH is below 6.0, it is acceptable to use agricultural lime to increase the pH to an acceptable level.

g. If the sewage sludge is applied to land on which the soil loss exceeds the soil loss limits established by the county soil conservation district, the sewage sludge shall be injected on the contour or shall be applied to the surface and mechanically incorporated into soil within 48 hours of application. The sewage sludge shall not be applied to ground having greater than 9 percent slope unless approved by the department.

h. Sewage sludge application on frozen or snow-covered ground should be avoided, unless special precautions are taken such as proven farm management practices to avoid runoff. If application on frozen or snow-covered ground is necessary, it shall be limited to land areas of less than 5 percent slope unless approved by the department.

i. Sewage sludge shall not be applied to the land that is 35 feet or less from an open waterway. If sewage sludge is applied within 200 feet, but no closer than 35 feet, of a stream, lake, sinkhole or tile line surface intake located downgradient of the land application site, it shall be injected or applied to the
surface and mechanically incorporated into the soil within 48 hours of application unless approved by the department.

j. If the sewage sludge is applied to land subject to flooding more frequently than once in ten years, the sludge shall be injected or shall be applied to the surface and mechanically incorporated into the soil within 48 hours. Information on which land is subject to flooding more frequently than once in ten years is available from the department.

k. Sewage sludge shall not be applied within 200 feet of an occupied residence or any well. Distances may be reduced to a minimum of 35 feet with the written agreement of both the owner and occupant and an approved farm management plan which addresses soil erodibility, harvest residuals, buffer strips, and other sound farm management practices. The farm management plan shall be approved by the local soil conservation district commission in accordance with rules implementing Iowa Code sections 161A.42 to 161A.51.

l. Food crops with harvested parts that touch the sewage sludge/soil mixture and that are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

m. Food crops, feed crops and fiber crops shall not be harvested for 30 days after application of sewage sludge.

n. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

o. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the department.

p. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge.

q. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

r. When required by the director, groundwater monitoring wells and surface monitoring points shall be installed and a monitoring program implemented. Samples must be analyzed by a laboratory which is equipped and competent to perform the tests required by the director. The results shall be forwarded to the department on a stipulated schedule.

s. The sewage sludge generator shall provide the notice and necessary information to comply with the requirements to the sewage sludge applicator and landowner.

t. The sewage sludge applicator shall provide written notice, prior to the initial application of sewage sludge, to the department. The notice shall include:

(1) The location, by legal description, of the land application site and the landowner.

(2) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) of the sewage sludge generator and the applicator.

67.8(3) Frequency of monitoring for Class II sewage sludge.

a. The frequency of monitoring for the pollutants listed in Table 3, the pathogen density requirements, and the vector attraction reduction requirements shall be at the frequency stated in Table 5.

<table>
<thead>
<tr>
<th>TABLE 5—FREQUENCY OF MONITORING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of sewage sludge per 365-day period dry weight basis</td>
</tr>
<tr>
<td>Greater than 0 but less than 290 metric tons (or 320 English tons)</td>
</tr>
<tr>
<td>Equal to or greater than 290 but less than 1,500 metric tons</td>
</tr>
</tbody>
</table>
Amount of sewage sludge per 365-day period dry weight basis

<table>
<thead>
<tr>
<th>Description</th>
<th>Monitoring Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(320 to 1,653 English tons)</td>
<td>(4 times per year)</td>
</tr>
<tr>
<td>Equal to or greater than</td>
<td></td>
</tr>
<tr>
<td>1,500 but less than 15,000 metric tons</td>
<td>once per 60 days</td>
</tr>
<tr>
<td>(1,653 to 16,535 English tons)</td>
<td>(6 times per year)</td>
</tr>
<tr>
<td>Equal to or greater than</td>
<td></td>
</tr>
<tr>
<td>15,000 metric tons</td>
<td>once per month</td>
</tr>
<tr>
<td>(or 16,535 English tons)</td>
<td>(12 times per year)</td>
</tr>
</tbody>
</table>

b. After the sewage sludge has been monitored for two years, the department may reduce the frequency of monitoring, but in no case shall the frequency of monitoring be less than once per year when sewage sludge is applied to the land.

67.8(4) Record keeping for Class II sewage sludge.

a. Both the generator and applicator of Class II sewage sludge shall develop the following information and shall retain the information for five years:

1. The concentration of each pollutant listed in Table 3 in the sewage sludge.
2. The following certification statement: “I certify, under penalty of law, that the Class II sewage sludge requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.”
3. A description of how the Processes to Significantly Reduce Pathogens (PSRP) requirements are met.
4. A description of how the vector attraction reduction requirements are met.
5. A description of how the management practices for Class II sewage sludge are met for each site.
6. The location and area of each site.
7. The date and time and amount of sewage sludge applied to each site.
8. If subjected to cumulative loading limits, the amount and cumulative amount of each pollutant listed in Table 4 of paragraph 67.8(2) “b” in the sewage sludge applied to each site.
9. The amount of sewage sludge (i.e., metric tons) applied to each site.

b. Treatment works with a design flow rate of 1 million gallons per day or greater and treatment works that serve 10,000 people or more shall submit the above information to the EPA, using EPA’s NPDES eReporting Tool (NeT), by February 19 of each year for the previous calendar year. In addition, a supplemental sewage sludge report that includes the land application information listed in subparagraphs 67.8(4)“a”(6) to (9) shall be submitted to the department by the same due date.

[Arc 6192C, IAB 2/9/22, effective 3/16/22]

567—67.9(455B) Class III sewage sludge.

67.9(1) Class III sewage sludge is any sewage sludge that cannot meet either Class I sewage sludge criteria or Class II sewage sludge criteria.

67.9(2) Class III sewage sludge shall not be utilized for beneficial use for land application as specified in the chapter.

67.9(3) Class III sewage sludge shall be disposed according to the surface disposal subpart of the 40 CFR Part 503 regulation and 567—103.6(455B) or the incineration subpart of the 40 CFR Part 503 regulation.

567—67.10(455B) Sampling and analytical methods.
67.10(1) General. Representative samples of sewage sludge that are applied to the land shall be collected and analyzed. Methods listed below shall be used to analyze samples of sewage sludge and calculation procedures shall be used to calculate the percent of volatile solids reduction for sewage sludge.


67.10(5) Inorganic pollutants.


[ARC 6192C, IAB 2/9/22, effective 3/16/22]

567—67.11(455B) Pathogen treatment processes.

67.11(1) Processes to significantly reduce pathogens (PSRP).
   a. Aerobic digestion. Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.
   b. Air drying. Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above zero degrees Celsius.
   c. Anaerobic digestion. Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.
   d. Composting. Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55 degrees Celsius.
e. **Lime stabilization.** Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

**67.11(2) Processes to further reduce pathogens (PFRP).**

a. **Composting.** Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55 degrees Celsius or higher for three days.

Using the windrow composting method, the temperature of the sewage sludge is maintained at 55 degrees Celsius or higher for 15 days or longer. During the period when the compost is maintained at 55 degrees Celsius or higher, there shall be a minimum of five turnings of the windrow.

b. **Heat drying.** Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80 degrees Celsius or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80 degrees Celsius.

c. **Heat treatment.** Liquid sewage sludge is heated to a temperature of 180 degrees Celsius or higher for 30 minutes.

d. **Thermophilic aerobic digestion.** Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is ten days at 55 to 60 degrees Celsius.

e. **Beta ray irradiation.** Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (ca. 20 degrees Celsius).

f. **Gamma ray irradiation.** Sewage sludge is irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at room temperature (ca. 20 degrees Celsius).

g. **Pasteurization.** The temperature of the sewage sludge is maintained at 70 degrees Celsius or higher for 30 minutes or longer.

These rules are intended to implement Iowa Code section 455B.174.

[ARC 6192C, IAB 2/9/22, effective 3/16/22]

[Filed 3/8/07, Notice 1/3/07—published 3/28/07, effective 5/2/07]
[Filed ARC 2482C (Notice ARC 2353C, IAB 1/6/16), IAB 4/13/16, effective 5/18/16]
[Filed ARC 6192C (Notice ARC 6038C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 81
OPERATOR CERTIFICATION: PUBLIC WATER SUPPLY SYSTEMS
AND WASTEWATER TREATMENT SYSTEMS
[Prior to 7/1/83, DEQ Ch 21]
Prior to 12/3/86, Water, Air and Waste Management[900]

567—81.1(455B) Definitions. In addition to the definitions in Iowa Code section 455B.211, the following definitions shall apply to this chapter.

“Activated sludge system” means a biological wastewater treatment process in which a mixture of wastewater and sludge floc, produced in a raw or settled wastewater by the growth of microorganisms, is agitated and aerated in the presence of a sufficient concentration of dissolved oxygen, followed by sedimentation. Examples include, but are not limited to, conventional activated sludge systems, extended aeration activated sludge systems, oxidation ditches, and sequencing batch reactors.

“Advanced aerated lagoon system” means an aerated lagoon system that has been augmented by adding other treatment processes. Examples include, but are not limited to, covered lagoon systems with enhanced aeration and mixing, the addition of fixed film processes to the lagoon process, or the utilization of algal-based treatment processes.

“Aerated lagoon system” means a lagoon system which utilizes aeration to enhance oxygen transfer and mixing in the cell.

“Aeration” means the process of initiating contact between air and water. Examples include, but are not limited to, spraying the water in the air, bubbling air through the water, or forcing the air into the water by pressure.

“Average daily pumpage” means the total quantity of water pumped during the most recent one-year period of record divided by 365 days.

“Chlorination” means the addition of a chlorine compound or chlorine gas to water to inactivate pathogenic organisms.

“Classification” means the type of plant or distribution system: wastewater treatment plants, water treatment plants, or water distribution systems.

“Coagulation” means a process using coagulation chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

“Community water system (CWS)” means a public water supply system which has at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

“Continuing education unit (CEU)” means ten contact hours of participation in an organized education experience approved by an accredited college, university, technical institute, or issuing agency, or by the department, and must be directly related to the subject matter of the particular certificate to which the credit is being applied.

“Directly related post-high school education” means post-high school education in chemistry, microbiology, biology, math, engineering, water, wastewater, or other curriculum pertaining to plant and distribution system operation.

“Director” means the director of the department of natural resources or a designee.

“Direct responsible charge (DRC)” means, where shift operation is not required, accountability for and performance of active, daily on-site operation of the plant or distribution system, or of a major segment of the plant or distribution system. Where shift operation is required, “direct responsible charge” means accountability for and performance of active, daily on-site operation of an operating shift, or a major segment of the plant or distribution system. A city manager, superintendent of public works, city clerk, council member, business manager, or other administrative official shall not be deemed to have direct responsible charge of a plant or distribution system unless this person’s duties include the active, daily on-site operation of the plant or distribution system. On-site operation may not necessarily mean full-time attendance at the plant or distribution system.

“Direct surface water filtration” means a water treatment system that applies surface water and groundwater under the influence (influenced groundwater as defined in rule 567—40.2(455B)) directly
to the filters after chemical treatment consisting of coagulation and flocculation or chemical treatment consisting of coagulation. This type of system eliminates the sedimentation unit process.

“Disinfection” means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

“Electrodialysis” means the demineralization of water by the removal of ions through special membranes under the influence of a direct-current electric field.

“Fixed film biological treatment” means a treatment process in which wastewater is passed over a media onto which are attached biological organisms capable of oxidizing the organic matter, normally followed by sedimentation. Examples include, but are not limited to, trickling filters, rotating biological contactors, packed towers and activated filters.

“Fluoridation” means the addition of fluoride to produce the optimum fluoride concentration in water.

“Grade” means one of seven certification levels, designated as A, W, I, IL, II, III, or IV.

“Ion exchange” means the process of using ion exchange materials such as resin or zeolites to remove undesirable ions from water and substituting acceptable ions, for example, ion exchange for nitrate removal or ion exchange for softening.

“Issuing agency” means a professional, technical/educational organization authorized by the department to provide continuing education for certification renewal or upgrade in accordance with the commitments and guidelines detailed in the written issuing agency agreement and procedures.

“Military service” means honorably serving on federal active duty, state active duty, or national guard duty, as defined in Iowa Code section 29A.1; in the military services of other states, as provided in 10 U.S.C. Section 101(c); or in the organized reserves of the United States, as provided in 10 U.S.C. Section 10101.

“Military service applicant” means an individual requesting credit toward certification for military education, training, or service obtained or completed in military service.

“Nontransient noncommunity water system (NTNC)” means a public water system other than a community water system which regularly serves at least 25 of the same persons four hours or more per day for four or more days per week for 26 or more weeks per year.

“Operating shift” means a specified period of time when an operator is present to conduct testing or evaluation to control operations of the plant or distribution system, to make process control changes, and to be responsible for the repair or maintenance of a plant or distribution system. An operating shift may include on-call shifts.

“Operator-in-charge” means a person or persons on site in direct responsible charge for a plant or distribution system. A city manager, superintendent of public works, city clerk, council member, business manager, or other administrative official shall not be deemed to be the operator-in-charge of a plant or distribution system unless this person’s duties include the active, daily on-site operation of the plant or distribution system. On-site operation may not necessarily mean full-time attendance at the plant or distribution system.

“Plant” means those facilities which are identified as either a water treatment plant, defined as that portion of the water supply system which in some way alters the physical, chemical, or bacteriological quality of the water, or a wastewater treatment plant, defined as the facility or group of units used for the treatment of wastewater from public sewer systems and for the reduction and handling of solids removed from such wastes.

“Population equivalent” for a wastewater treatment plant means the calculated number of people who would contribute the same biochemical oxygen demand (BOD) per day as the system in question, assuming that each person contributes 0.167 pounds of five-day, 20°C, BOD per day.

“Post-high school education” means credit received for completion of courses given or cosponsored by an accredited college, university, technical institute, or issuing agency. Courses offered by regulatory agencies may also be recognized as post-high school education. One year of post-high school education is 30 semester hours or 45 quarter hours or 45 CEUs of credit.

“Primary treatment” means a treatment process designed to remove organic and inorganic settleable solids from wastewater by the physical process of sedimentation.
“Public water system certificate” means a certificate issued by the department certifying that an operator has successfully completed the certification requirements of this chapter. The certificate specifies the grades and classifications for which the certificate is valid.

“Reverse osmosis” means the process in which external pressure is applied to mineralized water against a semipermeable membrane to effectively reduce total dissolved solids (TDS) and radionuclides content as the water is forced through the membrane.

“Rural water district” means a water supply incorporated and organized as such pursuant to Iowa Code chapter 357, 357A or 358.

“Shift operator” means the operator on site who has responsibility for making process control changes and adjustments to the operation, repair, and maintenance of a plant or distribution system during any operating shift. Duties include testing or evaluation to control operations of the plant or distribution system.

“Stabilization” means the addition of chemical compounds to water to maintain an ionic equilibrium whereby the water is not in a depository or corrosive state.

“Veteran” means an individual who meets the definition of “veteran” in Iowa Code section 35.1(2).

“Waste stabilization lagoon” means an excavation designed and constructed to receive raw or pretreated wastewater in which stabilization is accomplished by several natural self-purification processes. This definition includes both anaerobic and aerobic lagoons.

“Wastewater treatment plant” means the facility or group of units used for the treatment of wastewater from public sewer systems and for the reduction and handling of solids removed from such wastes.

“Water distribution system” means that portion of the water supply system in which water is conveyed from the water treatment plant or other supply point to the premises of the consumer, including storage facilities and pumping stations. For the purposes of this chapter, a water distribution system does not include individual service lines to the premises of the consumer, which are not under the control of the system.

“Water supply system” means the system of pipes, structures, and facilities through which water for a public water supply is obtained, treated, sold or distributed for human consumption or household use.

“Water treatment plant” means that portion of the water supply system which in some way alters the physical, chemical, or microbiological quality of the water.

[ARC 1911C, IAB 3/18/15, effective 4/22/15; ARC 3735C, IAB 4/11/18, effective 5/16/18; ARC 6193C, IAB 2/9/22, effective 3/16/22]

567—81.2(455B) General.

81.2(1) Plant grade for system with multiple treatment processes. A plant having a combination of treatment processes that are in different grades shall be assigned the highest numerical plant grade of that combination.

81.2(2) Increase in facility grade for complex systems. The director may increase a plant or water distribution system grade above that indicated in rules 567—81.3(455B) to 567—81.6(455B) for those systems which in the judgment of the director include unusually complex treatment processes, complex distribution systems, or which present unusual operation or maintenance conditions.

81.2(3) Operator-in-charge certification requirement. The operator-in-charge shall hold a certificate of the same classification of the plant or water distribution system and of equal or higher grade than the grade designated for that plant or distribution system.

81.2(4) Shift operator certification. Any person who is responsible for the operation of an operating shift of a plant or distribution system or major segment of the plant or distribution system and is under the supervision of the operator-in-charge identified in 81.2(3) shall be certified in a grade no less than a Grade II level for Grade III and IV plants and distribution systems and Grade I for Grade I and II plants and distribution systems.

81.2(5) Public water system certificate requirement. The operator who is designated by the owner to be the operator-in-charge of both the water treatment plant and the water distribution system shall hold
a public water system (PWS) certificate valid for water treatment and water distribution in accordance with 81.2(3) and 81.2(6).

81.2(6) PWS certificate. A PWS certificate shall be issued to an operator successfully completing water treatment or water distribution certification. The PWS certificate shall specify the grade and classification for which the certificate is valid. An operator successfully completing both water treatment and water distribution certification shall be issued a PWS certificate valid for both classifications. For purposes of renewal, all renewal fees and CEU requirements shall be applied as one certification. The number of CEUs required shall be determined by the highest certification grade on the operator’s public water system certificate.

81.2(7) PWS certificate issuance. Rescinded IAB 1/7/04, effective 2/11/04.

81.2(8) Notification requirements for a personnel change in the operator-in-charge. The owner of a plant or distribution system must notify the department of a change in operator(s)-in-charge within 30 days after the change.

81.2(9) Change of address or employment. Certified operators must report to the department a change in address or employment within 30 days after the change.

81.2(10) Owner reporting requirements. All owners of plants and distribution systems must report, when requested by the department, the method of treatment provided, the average daily pumpage, and the operator(s)-in-charge.

81.2(11) Compliance plan. When the director allows the owner of a plant or distribution system required to have a certified operator time to obtain an operator, the owner must submit a compliance plan indicating what action will be taken to obtain a certified operator. The plan must be on Form 52, Compliance Plan 542-3120, provided by the department and must be submitted within 30 days of the facility owner’s receipt of a notice of violation.

567—81.3(455B) Wastewater treatment plant grades.

81.3(1) Classifications. The wastewater treatment plant classifications are listed in the following table:

<table>
<thead>
<tr>
<th>Treatment Type</th>
<th>Grade</th>
<th>Based on Design Pounds of BOD₅/day</th>
<th>Based on Design Population Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>less than 334</td>
<td>less than 2,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>334-835</td>
<td>2,000-5,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>836-2,505</td>
<td>5,001-15,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,506-8,350</td>
<td>15,001-50,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>more than 8,350</td>
<td>more than 50,000</td>
</tr>
<tr>
<td>1. Onsite Treatment System</td>
<td>W</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>2. Waste Stabilization Lagoon</td>
<td>IL</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>System</td>
<td></td>
<td>IL</td>
<td>IL</td>
</tr>
<tr>
<td>3. Aerated Lagoon System</td>
<td>IL</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>4. Advanced Aerated Lagoon</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Fixed Film Biological Treatment System</td>
<td>II</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IV</td>
</tr>
<tr>
<td>6. Activated Sludge System</td>
<td>II</td>
<td>III</td>
<td>IV</td>
</tr>
</tbody>
</table>

81.3(2) Unknown design BOD₅ loading. When the design BOD₅ loading is unknown, the plant BOD₅ loading shall be determined by using the average pounds of BOD₅ of the 24-hour composite influent samples taken in the last 12 months. If 24-hour composite influent samples are not available, then grab samples shall be used.
81.3(3) *IL wastewater operator requirements.* A Grade I, II, III, or IV wastewater treatment certificate will satisfy the certification requirements for a Grade IL plant.

81.3(4) *Grade W onsite wastewater classification.* Any wastewater treatment plant that discharges to a water of the state and that utilizes onsite wastewater treatment technologies, such as those specified in 567—Chapter 69, but excluding waste stabilization ponds, shall be classified as an onsite treatment system (Grade W).

[ARC 6193C, IAB 2/9/22, effective 3/16/22]

567—81.4(455B) *Water treatment plant grades.*

81.4(1) *Classifications.* The water treatment plant classifications are listed in the following table:

<table>
<thead>
<tr>
<th>Water Treatment Plant Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Type</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1. Iron or manganese removal; aeration; chlorination; fluoridation; stabilization; any other chemical addition; or any combination of these processes</td>
</tr>
<tr>
<td>2. Ion exchange</td>
</tr>
<tr>
<td>3. Direct surface water filtration</td>
</tr>
<tr>
<td>4. Utilization of lime, soda ash or other chemical addition for pH adjustment in the precipitation and coagulation of iron or manganese</td>
</tr>
<tr>
<td>5. Complete surface water clarification or lime softening of surface water or groundwater</td>
</tr>
<tr>
<td>6. Reverse osmosis and electrodialysis</td>
</tr>
<tr>
<td>7. Activated carbon for THM or synthetic organics removal</td>
</tr>
</tbody>
</table>

*For Grade A water supply classification, see subrule 81.6(1).

81.4(2) *Average daily pumpage.* When the average daily pumpage is unknown, the plant grade will be determined from the population of the most recent census and an evaluation of commercial, industrial, and other users.

567—81.5(455B) *Water distribution system grades.*

81.5(1) *Classifications.* The water distribution plant classifications are listed in the following table:

<table>
<thead>
<tr>
<th>Water Distribution System Classifications*</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Type</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>All municipal water systems</td>
</tr>
<tr>
<td>Community water systems not classified as a Grade A water system</td>
</tr>
<tr>
<td>Nontransient noncommunity water systems not classified as a Grade A water system</td>
</tr>
<tr>
<td>Transient noncommunity water systems not classified as a Grade A water system</td>
</tr>
<tr>
<td>Miles of Pipe</td>
</tr>
<tr>
<td>Rural water districts</td>
</tr>
</tbody>
</table>
*Note: A public water system with a well, storage, and a distribution system shall be classified as a water distribution system if no treatment is provided.

**For Grade A water system classification, see subrule 81.6(1).

81.5(2) **Average daily pumpage.** When the average daily pumpage is unknown, the system grade will be determined from the population of the most recent census and an evaluation of commercial, industrial, and other users.

81.5(3) **IR certificate holders.** Rescinded IAB 1/7/04, effective 2/11/04.

[ARC 6193C, IAB 2/9/22, effective 3/16/22]

567—81.6(455B) **Grade A classification.**

81.6(1) **Grade A water system classification.**

a. **Community water system.** A community water system, other than a municipal or rural water system, which serves a population of 250 persons or less and provides no treatment other than hypochlorination or treatment which does not require any chemical addition, process adjustment, backwashing or media regeneration by an operator shall be classified as a Grade A water system.

b. **Nontransient noncommunity water system.** A nontransient noncommunity water system which serves a population of 500 persons or less and provides no treatment other than hypochlorination or treatment which does not require any chemical addition, process adjustment, backwashing or media regeneration by an operator shall be classified as a Grade A water system.

c. **Transient noncommunity water system.** A transient noncommunity water system which serves a population of 500 or fewer persons and provides no treatment other than hypochlorination or treatment which does not require any chemical addition, process adjustment, backwashing or media regeneration by an operator shall be classified as a Grade A water system.

81.6(2) **Certification requirements for Grade A water systems.** Any grade of water treatment certification will satisfy the certification requirements for a Grade A water system with hypochlorination. Any grade of water distribution certification will satisfy the certification requirements for a Grade A water system without hypochlorination.

[ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—81.7(455B) **Operator education and experience qualifications.**

81.7(1) **Education and experience requirements.** All applicants shall meet the education and experience requirements for the grade of certificate shown in the table below prior to being allowed to take the examination. Experience shall be in the same classification for which the applicant is applying except that partial credit may be given in accordance with subrules 81.7(2) and 81.7(3). Directly related post-high school education shall be in the same subject matter as the classification in which the applicant is applying. The director will determine which courses qualify as “directly related” in cases which are not clearly defined. A military service applicant may apply for credit for verified military education, training, or service toward any education or experience requirement for certification, pursuant to subrule 81.7(4).
### Operator Education and Experience Qualifications

<table>
<thead>
<tr>
<th>Grade</th>
<th>Education</th>
<th>Substitution for Education</th>
<th>Experience</th>
<th>Substitution for Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>High school diploma or GED</td>
<td>None</td>
<td>Completion of an IDNR-approved training course</td>
<td>None</td>
</tr>
<tr>
<td>W</td>
<td>High school diploma or GED</td>
<td>None</td>
<td>Completion of an IDNR-approved training course</td>
<td>None</td>
</tr>
<tr>
<td>I</td>
<td>High school diploma or GED</td>
<td>None</td>
<td>1 year</td>
<td>See 81.7(3)“b’’(1), (3)</td>
</tr>
<tr>
<td>II</td>
<td>High school diploma or GED</td>
<td>None</td>
<td>3 years</td>
<td>See 81.7(3)“b’’(2)</td>
</tr>
<tr>
<td>III</td>
<td>High school diploma or GED and 2 years of post-high school education (1 year must be directly related)</td>
<td>See 81.7(3)“a’’(1), (3)</td>
<td>4 years of experience in a Grade I or higher</td>
<td>See 81.7(3)“b’’(2), (3)</td>
</tr>
<tr>
<td>IV</td>
<td>High school diploma or GED and 4 years of post-high school education (2 years must be directly related)</td>
<td>See 81.7(3)“a’’(2), (3)</td>
<td>4 years of experience including 2 years of DRC in a Grade III or higher</td>
<td>See 81.7(3)“b’’(2), (3) and 81.7(3)“c”</td>
</tr>
</tbody>
</table>

#### 81.7(2) Related work experience
The following substitutions of related work experience for operating experience requirements may be accepted by the director.

a. **Laboratory personnel.** Laboratory personnel employed in water or wastewater treatment plants may be allowed 50 percent credit for work experience toward meeting the operating experience requirements for Grades I and II certification only. Laboratory experience must be in the same classification for which the applicant is applying.

b. **Oversight personnel.** Personnel with experience in on-site operation review and evaluation of plants and distribution systems may be allowed 50 percent credit for on-site work experience toward meeting the operating experience requirements for Grades I and II certification only. On-site experience must be in the same classification for which the applicant is applying.

c. **Maintenance personnel.** Maintenance personnel employed in water or wastewater treatment plants may be allowed 50 percent credit for work experience toward meeting the operating experience requirements for Grades I and II certification only. Maintenance experience may be applied either to the water or to the wastewater experience requirements.

d. **Certified operators.**

(1) Certified water treatment operators may be allowed 50 percent credit for work experience toward meeting the operating experience requirements for Grades I and II wastewater treatment certification only.

(2) Certified wastewater treatment operators may be allowed 50 percent credit for work experience toward meeting the operating experience requirements for Grades I and II water treatment certification only.

(3) Certified water treatment operators may be allowed 50 percent credit for work experience toward meeting the operating experience requirements for Grades I and II water distribution certification only.
(4) Certified water distribution operators may be allowed 50 percent credit for work experience toward meeting the operating experience requirements for Grades I and II water treatment certification only.

   e. Limitation. The portion of related work experience that is substituted for operating experience cannot also be used to substitute for education.

81.7(3) Experience and education substitutions. The following substitutions for experience or education may be accepted by the director.

   a. Substitution of experience for education.

      (1) One year of operating experience in a Grade II or higher position may be substituted for one year of post-high school education for Grade III certification up to one-half of the post-high school education requirement.

      (2) One year of operating experience in a Grade III or higher position may be substituted for one year of post-high school education for Grade IV certification up to one-half of the post-high school education requirement.

      (3) Two years of direct responsible charge experience in a Grade III or higher position may be substituted for one year of directly related post-high school education for Grade IV certification up to three-fourths of the post-high school education requirement.

      (4) That portion of experience which is applied toward substitution for education cannot also be used for experience.

   b. Substitutions of education for experience.

      (1) Two semester hours or three quarter hours or three CEUs of directly related post-high school education may be substituted for one-half the experience requirement for Grades I and II.

      (2) Thirty semester hours or 45 quarter hours or 45 CEUs of post-high school education may be substituted for one year of experience up to a maximum of one-half the experience requirement for Grades II, III and IV.

      (3) That portion of education which is applied toward substitution for experience cannot also be used for education.

   (4) Class hours involving closely supervised on-the-job type training in a pilot or full-scale facility where there are clearly defined educational objectives may be applied to the on-the-job experience requirement. The substitution value of such training shall be applicable only toward obtaining a Grade I and Grade II certification and shall not exceed one-half year of on-the-job experience. One hour of on-the-job training is equivalent to three hours of on-the-job experience. One month of on-the-job training consists of 20 eight-hour days. Credit for on-the-job training may be applied only to the examination for the type of system in which the experience was obtained.

   (5) That portion of on-the-job training courses which is applied toward substitution for the on-the-job experience requirement cannot also be used for education.

   c. Substitution of education for direct responsible charge experience. Thirty semester hours or 45 quarter hours or 45 CEUs of directly related post-high school education may be substituted for one year of direct responsible charge experience up to one-half the requirement for Grade IV certification.

81.7(4) Military education, training, and service credit.

   a. The applicant shall identify the experience or education certification requirements for which the credit is requested.

   b. As part of the examination application pursuant to subrule 81.9(1), the applicant shall provide documents, military transcripts, a certified affidavit, or forms that verify completion of the relevant military education, training, or service, which may include, when applicable, the applicant’s Certificate of Release or Discharge from Active Duty (DD Form 214) or Verification of Military Experience and Training (VMET) (DD Form 2586).

81.8(1) Examination fee. The examination fee for each examination shall be $30.
81.8(2) **Oral examination fee.** Rescinded IAB 4/11/18, effective 5/16/18.

81.8(3) **Reciprocity application fee.** The reciprocity application fee for each type of classification shall be $30.

81.8(4) **Certification fee.** The certification fee shall be $20 for each one-half year of a two-year period from the date of issuance to June 30 of odd-numbered years.

81.8(5) **Renewal fee.** The certification renewal fee shall be $60.

81.8(6) **Penalty fee.** The certification and renewal penalty fee shall be $18.

81.8(7) **Duplicate certificate fee.** The duplicate certificate fee shall be $20.

81.8(8) **Temporary certificate fee.** The temporary certificate fee shall be $60.

81.8(9) **Fee adjustments.** The department may adjust the fees annually by up to plus or minus 20 percent to cover costs of administering and enforcing these rules and reimbursement for other expenses relating to operator certification. The environmental protection commission must approve any fee increases above those listed in 81.8(1) through 81.8(8). All fees collected shall be retained by the department for administration of the operator certification program.

[ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—81.9(455B) Examinations.

81.9(1) **Examination application.** All persons wishing to take the examination required to become a certified operator of a wastewater or water treatment plant or a water distribution system shall complete the Operator Certification Examination Application, Form CFN-542-3118/CPG-63997. A listing of dates and locations of examinations is available from the department upon request. The application form requires the applicant to indicate educational background, training and past experience in water or wastewater operation. The completed application and examination fee shall be sent to Iowa Department of Natural Resources, Water Supply Section, 502 East Ninth Street, Des Moines, Iowa 50319-0034. The completed application and examination fee must be received by the department at least 30 days prior to the date of examination.

81.9(2) **Application evaluation.** The director shall designate department personnel to evaluate all applications for examination, certification, and renewal of certification and upgrading of certification. After evaluation of the application, the department will issue the applicant either a letter of examination eligibility or a letter of examination noneligibility that includes a description of the education or experience requirements that have not been met. The director will review applications when it is indicated that the applicant has falsified information or when questions arise concerning an applicant’s qualifications of eligibility for examination or certification.

81.9(3) **Application expiration.** A properly completed application for examination shall be valid for one year from the date the application is approved by the department. An applicant may request only one class and grade of examination with each application. A new application shall be required with each different class or grade of examination desired by the applicant.

81.9(4) **Refund of examination fee.** An applicant who does not qualify for examination at the time of application will have the examination fee refunded if the applicant cannot qualify for examination within one year. If the applicant will qualify for a scheduled examination within one year, the applicant will be notified when the examination may be taken and the fee will not be refunded.

81.9(5) **Reexamination.** Upon failure of the first examination, the applicant may apply for reexamination. Upon failure of the second examination, the applicant shall be required to wait a period of at least 30 days between each subsequent examination.

81.9(6) **Reexamination fee.** Upon each reexamination when a valid application is on file, the applicant shall submit the examination fee to the department at least ten days prior to the date of examination.

81.9(7) **Application invalidation.** Failure to successfully complete the examination within one year from the date of approval of the application shall invalidate the application.

81.9(8) **Retention of completed examinations.** Rescinded IAB 1/7/04, effective 2/11/04.

81.9(9) **Oral examination.** Rescinded IAB 4/11/18, effective 5/16/18.
81.9(10) **Reasonable accommodation.** Upon request for certification by an applicant, the director will consider on an individual basis reasonable accommodation to allow administration of the examination without discrimination on the basis of disability. The applicant shall request the accommodation 30 days prior to the date of the examination. The applicant must provide documentation of eligibility for the accommodation. Documentation shall be submitted with the completed examination application.

[ARC 1911C, IAB 3/18/15, effective 4/22/15; ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—81.10(455B) **Certification by examination.**

81.10(1) **Examination requirement.** All applicants not addressed for certification in 81.11(1) shall successfully complete and pass an examination prior to receiving certification.

81.10(2) **Certification application time line.** Application for certification must be received by the department within 30 days of the date the applicant receives notification of successful completion of the examination. All applications for certification shall be made on a form provided by the department and shall be accompanied by the certification fee.

81.10(3) **Late certification application.** Applications for certification by examination which are received more than 30 days but less than 60 days after notification of successful completion of the examination shall be accompanied by the certification fee and the penalty fee. Applicants who do not apply for certification within 60 days’ notice of successful completion of the examination will not be certified on the basis of that examination.

567—81.11(455B) **Certification by reciprocity.**

81.11(1) **Other states’ mandatory certification programs.** For applicants who have been certified under other states’ mandatory certification programs, the equivalency of which has been previously reviewed and accepted by the department, certification in an appropriate classification and grade, without examination, will be recommended. The applicant must have successfully completed an examination generally equivalent to the Iowa examination and must meet the education and experience qualifications established by the director.

81.11(2) **Other states’ voluntary certification programs.** For applicants who have been certified under voluntary certification programs in other states, certification in an appropriate class will be considered. The applicant must have successfully completed an examination generally equivalent to the Iowa examination and must meet the education and experience qualifications established by the director. The director may require the applicant to successfully complete the Iowa examination.

81.11(3) **Reciprocity application.**

a. **All applicants.** Applicants who seek Iowa certification pursuant to subrule 81.11(1) or 81.11(2) shall submit an Operator Certification Reciprocity Application accompanied by a letter requesting certification pursuant to these subrules. Application for certification pursuant to 81.11(1) and 81.11(2) shall be received by the director in accordance with these subrules. The applicant shall be certified at the appropriate grade pursuant to subrule 81.7(1).

b. **Veteran applicants.** An applicant who is a veteran shall submit an Operator Certification Reciprocity Application pursuant to paragraph 81.11(3)“a” and shall also provide such documentation as is needed to verify the applicant’s status as a veteran under Iowa Code section 35.1(2). The veteran’s application shall be given priority and shall be expedited.

81.11(4) **Certification obtained through reciprocity.** An applicant who obtains certification in Iowa through reciprocity and subsequently allows the certification to lapse will be required to reapply for certification in accordance with 567—81.10(455B).

[ARC 1911C, IAB 3/18/15, effective 4/22/15]

567—81.12(455B) **Restricted certification.** Upon written request by an operator, the director may determine that further education requirements be waived when a plant or distribution system grade has been increased and the operator has been in direct responsible charge of the existing plant or
distribution system. An operator successfully completing the examination will be restricted to that plant or distribution system until the education requirements are met.  

[ARC 3735C, IAB 4/11/18, effective 5/16/18]

567—81.13(455B) Certification renewal.

81.13(1) Renewal period. All certificates shall expire on June 30 of odd-numbered years and must be renewed every two years in order to maintain certification.

81.13(2) Application for renewal. An application for renewal will be mailed to currently certified operators prior to the expiration date of their certificates. Application for renewal must be made in accordance with this rule and the instructions on the form in order to renew the certificate for the next two years. Application for renewal of a certificate without penalty must be received by the director or postmarked prior to the expiration of the certificate, and shall be accompanied by the certification renewal fee.

81.13(3) Late application. A late application for renewal of a certificate may be made provided that the application is received by the director or postmarked within 60 days of the expiration of the certificate on forms provided by the department. Such late application shall be accompanied by the penalty fee and the certification renewal fee.

81.13(4) Failure to renew. If a certificate holder fails to renew within 60 days following expiration of the certificate, the right to renew the certificate is automatically terminated. Certification may be allowed at any time following such termination, provided that the applicant meets all education and experience eligibility requirements pursuant to 567—81.7(455B), and successfully completes an examination. The applicant must then apply for certification in accordance with 567—81.10(455B).

81.13(5) Expired certificate. An operator may not continue as the operator-in-charge of a plant, distribution system, operating shift, or major segment of the plant or distribution system after expiration of a certificate unless the certificate is renewed.

567—81.14(455B,272C) Continuing education.

81.14(1) CEU requirements. Continuing education must be earned during two-year periods between April 1 and March 31 of odd-numbered years. A Grade III or IV certified operator must earn two units or 20 contact hours per certificate during each two-year period. All other certified operators must earn one unit or 10 contact hours per certificate during each two-year period. Newly certified operators (previously uncertified) who become certified after April 1 of a two-year period will not be required to earn CEUs until the next two-year period. If an operator upgrades a certificate after April 1 of a two-year period and that upgrade increases the CEU requirement, the operator will not be required to meet the higher CEU requirement until the next two-year period but must fulfill the lower CEU requirement for that period. For those certified operators holding both a water treatment and a water distribution certification, no less than 25 percent of the required CEUs may be earned in any one area.

81.14(2) Certificate renewal. Only those operators fulfilling the continuing education requirements before the end of each two-year period (March 31) will be allowed to renew their certificate(s). The certificate(s) of operators not fulfilling the continuing education requirements shall expire on June 30 of each odd-numbered year.

81.14(3) CEU approval. All activities for which continuing education credit will be granted must be approved by an accredited college, university, technical institute, or issuing agency, or by the department, and must be directly related to the subject matter of the particular certificate to which the credit is being applied. Any entity holding courses in Iowa for which continuing education credit is offered for water treatment, water distribution, or wastewater operator certification must provide at no cost to the department the opportunity for one staff member to audit the training and receive all training materials.

81.14(4) CEU extensions. The director may, in individual cases involving hardship or extenuating circumstances, grant an extension of up to three months within which the certified operator may fulfill the minimum continuing education requirements. Hardship or extenuating circumstances include documented health-related confinement or other circumstances beyond the control of the certified
operator which prevent attendance at the required activities. All requests for extensions must be made prior to March 31 of each biennium.

81.14(5) CEU reporting. It is the certified operator’s personal responsibility to maintain a written record and to notify the department of the continuing education credit earned during the period. The continuing education credits earned during the period shall be listed on the application for renewal.

567—81.15(455B) Upgrading of certificates. A person holding an unexpired certificate may upgrade the certificate by examination to a higher grade in the same classification in accordance with 567—81.7(455B), 567—81.9(455B) and 567—81.10(455B). The expiration date of the upgraded certificate shall be the same as the unexpired certificate. A person who upgrades a certificate during the biennium must also renew the upgraded certificate in accordance with 567—81.13(455B) and 567—81.14(455B,272C) to maintain the person’s certification.

567—81.16(455B) Operator by affidavit.

81.16(1) Affidavit allowance. The owner of a plant or distribution system that is required to have a Grade A, I, IL, or II certified operator may sign an affidavit with a certified operator of the required classification and grade.

81.16(2) Affidavit requirements. This affidavit will verify that the certified operator is the operator-in-charge and has direct responsibility for a plant or distribution system that does not have first rights on the services of that operator. The affidavit form shall be provided by the director and shall require the name and signature of the certified operator, the operator’s certification number, class and grade, and the date of last renewal of the operator’s certificate. The affidavit form shall be proof that the certified operator has agreed to be directly responsible for the operation and maintenance of the plant or distribution system. The director may specify additional operational and maintenance requirements based on the complexity and size of the plant or distribution system. Four duly notarized copies of the affidavit must be returned to and approved by the director, based upon the ability of the certified operator to properly operate and maintain additional facilities. In event of disapproval, the owner of the plant or distribution system must terminate the agreement with the certified operator and seek the services of another certified operator. Both the owner of the plant or distribution system and the certified operator shall notify the director at least 30 days before the termination of the agreement.

[ARC 6193C, IAB 2/9/22, effective 3/16/22]

567—81.17(455B,272C) Disciplinary actions.

81.17(1) Reasons for disciplinary action. Disciplinary action may be taken against a certified operator on any of the grounds specified in Iowa Code section 455B.219 and chapter 272C and the following more specific grounds.

a. Failure to use reasonable care or judgment or to apply knowledge or ability in performing the duties of a certified operator.


b. Failure to submit required records of operation or other reports required under applicable permits or rules of the department, including failure to submit complete records or reports.

c. Knowingly making any false statement, representation, or certification on any application, record, report or document required to be maintained or submitted under any applicable permit or rule of the department.

d. Fraud in procuring a license.

e. Professional incompetence.

f. Knowingly making misleading, deceptive, untrue or fraudulent representations in the practice of the licensee’s profession or engaging in unethical conduct or practice harmful or detrimental to the public. Proof of actual injury need not be established.

g. Habitual intoxication or addiction to the use of drugs.

h. Conviction of criminal offenses directly related to the profession or occupation of the operator, consistent with Iowa Code sections 272C.1(8) and 272C.10(5).

i. Fraud in representations as to skill or ability.

j. Use of untruthful or improbable statements in advertisements.

k. Willful or repeated violations of the provisions of Iowa Code chapter 272C or 455B, division III.

81.17(2) Disciplinary sanctions. Disciplinary sanctions may include those specified in Iowa Code section 272C.3(2) and the following:

a. Revocation of a certificate. Revocation may be permanent without chance of recertification or for a specified period of time.

b. Partial revocation or suspension. Revocation or suspension of the practice of a particular aspect of the operation of a plant or distribution system, including the restriction of operation to a particular plant or distribution system, or a particular type of plant or distribution system.

c. Probation. Probation under specified conditions relevant to the specific grounds for disciplinary action.

d. Additional education, training, and examination requirements. Additional education, training, and reexamination may be required as a condition of reinstatement.

e. Penalties. Civil penalties not to exceed $1,000 may be assessed for causes identified in 81.17(1).

81.17(3) Procedure.

a. Initiation of disciplinary action. The department staff shall initiate a disciplinary action by conducting such lawful investigation as is necessary to establish a legal and factual basis for action. The administrator of the environmental protection commission or designee shall make a decision as to any disciplinary action based on the department staff recommendations. Except as specified by this subrule, the disciplinary action shall be initiated by a notice of intended action in accordance with rule 561—7.16(17A,455A). At any time, the licensee and the department may enter into a settlement agreement, subject to approval by the director, which provides for a disciplinary sanction.

b. Request for hearing. Notwithstanding references in 561—subrule 7.16(4), a licensee shall be deemed to have waived any right to a contested case hearing unless the licensee appeals the action and requests a hearing within 30 days of receipt of the notice of intended action. If a timely appeal is filed, further contested case procedures shall apply in accordance with 561—Chapter 7.

c. Appeal and review of proposed decision. After a contested case hearing conducted in accordance with rule 561—7.14(17A,455A), the director shall review the presiding officer’s proposed decision issued in accordance with 561—subrule 7.15(3). The proposed decision shall constitute a final decision of the director and the department unless the licensee or the director and department appeal the proposed decision to the environmental protection commission within 30 days of receipt as provided in 561—subrule 7.15(5).

d. Effective date of suspension or revocation. Notwithstanding any contrary interpretation in 561—subrule 7.16(7), suspension, revocation or other disciplinary action shall be effective 30 days after receipt of the notice of intended action if the licensee fails to file a timely appeal and request for hearing. If a contested case hearing is timely requested, the disciplinary action is effective as specified
in the presiding officer’s proposed decision unless the licensee obtains a stay of the action in accordance with 561—subrule 7.15(7) pending a timely appeal to the environmental protection commission.

e. Emergency disciplinary action. The director may initiate an emergency suspension or other disciplinary action upon such grounds and following those procedures as provided in 561—subrule 7.16(6). The terms of the emergency order shall be effective upon service as provided in 561—subrule 7.16(7). The department shall promptly give notice of an opportunity to appeal and request a contested case hearing following the procedures as specified above.

f. Reinstatement of revoked certificates. Upon revocation of a certificate in accordance with the authority provided in Iowa Code section 455B.219 and chapter 272C, application for certification may be allowed after two years from the date of revocation unless otherwise specified in accordance with 81.17(2). Any such applicant must meet all education and experience eligibility requirements pursuant to 567—81.7(455B), and successfully complete an examination and be certified in the same manner as a new applicant.

81.17(4) Noncompliance with child support order procedures. Upon receipt of a certificate of noncompliance with a child support obligation as provided in Iowa Code section 252J.7, the department will initiate procedures to deny an application for certification or renewal, or to suspend a certification in accordance with Iowa Code section 252J.8(4). The department shall issue to the person by restricted certified mail a notice of its intent to deny or suspend operator certification based on receipt of a certificate of noncompliance. The suspension or denial shall be effective 30 days after receipt of the notice unless the person provides the department with a withdrawal of the certificate of noncompliance from the child support recovery unit as provided in Iowa Code section 252J.8(4) “c.” Pursuant to Iowa Code section 252J.8(4), the person does not have a right to a hearing before the department to contest the denial or suspension action under this subrule but may seek a hearing in district court in accordance with Iowa Code section 252J.9.

[ARC 5976C, IAB 10/20/21, effective 11/24/21]

These rules are intended to implement Iowa Code sections 455B.211 to 455B.224 and chapter 272C.

[Filed June 10, 1966; amended August 31, 1971, December 17, 1973, July 1, 1975]

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[Filed 2/25/77, Notice 12/15/76—published 3/23/77, effective 4/27/77]

[Filed emergency 7/27/78—published 8/23/78, effective 7/27/78]

[Filed 10/13/78, Notice 5/31/78—published 11/1/78, effective 12/6/78]

[Filed 1/20/82, Notice 7/22/81—published 2/17/82, effective 3/24/82]

[Filed emergency 6/3/83—published 6/22/83, effective 7/1/83]

[Filed 12/2/83, Notices 6/22/83, 7/20/83—published 12/21/83, effective 1/25/84]

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CHAPTER 16
DOCKS AND OTHER STRUCTURES ON PUBLIC WATERS
[Prior to 12/31/86, Conservation Commission[290] Ch 33]


“Artificial lake” means all river impoundments and all other impoundments of water to which the public has a right of access from land or from a navigable stream inlet. Examples are Lake Panorama, Lake Delhi, Lake Nashua, and Lake Macbride.

“Boat” means “watercraft” as defined in Iowa Code section 462A.2.

“Boat hoist” or “lift” means a structure placed in the water or below the ordinary high-water mark for boat storage, including platforms for storage of personal watercraft. For the purposes of this chapter, a boat hoist that is designed to store multiple small vessels such as personal watercraft or one-person sailboats shall be treated as a single hoist. For the purposes of this chapter, storage of stand-up paddleboards on racks above the platform of a dock shall not be counted as a boat hoist or lift.

“Catwalk” means a platform no more than four feet wide installed to provide access from a dock to a moored boat or boat hoist.

“Commercial dock” means a dock used as part of a business, including a dock extending from residential property if one or more mooring spaces at the dock are rented for a fee. A dock maintenance fee charged by a property owners’ association to its members is not a basis to classify a dock as commercial. This definition is not applicable to docks in dock management areas or concession operations administered by the department.

“Commission” means the natural resource commission.

“Common dock” means a dock serving two or more adjoining shoreline properties.

“Department” means the department of natural resources.

“Director” means the director of the department of natural resources or the director’s designee.

“Dock” means a platform-type structure extending from shoreline property over a public water body, including but not limited to platforms that provide access to boats moored on the water body.

“Dock management area” or “DMA” means an area designated by the department in the bed of a water body adjoining a state park, wildlife management area, or recreation area or adjoining a strip of land that was dedicated to the public and is subject to the jurisdiction of the department pursuant to Iowa Code section 461A.11, second unnumbered paragraph. A dock management area as designated by the department includes an area adjoining public land from which docks extend.

“Impoundment” means a body of water formed by constructing a dam across a waterway.

“Public dock” means a dock constructed and maintained to provide public access from public land to a water body.

“Public land” means land that is owned by the state, a city, or a county or land that has been dedicated for public access to a public water body.

“Public water body” is a water body to which the public has a right of access.

“Shoreline property” means a parcel of property adjoining (littoral to) a lake or adjoining (riparian to) a river or other navigable stream.

“Slip” means a mooring space, usually adjacent to a dock, sometimes accessed by a catwalk.

“Water body” means a river or other stream, a natural lake, an artificial lake or other impoundment, or an excavated pit.

[ARC 3795C, IAB 5/9/18, effective 6/13/18]

DIVISION 1
PRIVATE, COMMERCIAL AND PUBLIC DOCKS

571—16.2(461A,462A) Scope of division and classes of permits. Permits are required for docks on all water bodies open to the public for boating or other recreational uses. This division governs permits for all types of docks except docks in dock management areas designated by the DNR. Classes of permits are designated as follows: Class I permits authorize standard private docks, other private docks in specified areas, and docks permitted by the U.S. Army Corps of Engineers; Class II permits authorize docks that
are managed by a city or county and extend from shoreline property owned by the city or county; Class III permits authorize nonstandard private docks; Class IV permits authorize commercial docks. A dock that involves placement of fill or construction of a permanent structure in a state-owned public water body also requires a construction permit issued under 571—Chapter 13.

571—16.3(461A,462A) Standard requirements for all docks. All docks are subject to the following requirements:

16.3(1) Adverse impacts on aquatic ecosystem. All docks, hoists, slips and related structures shall be located, sized, configured, constructed and installed to limit their adverse impacts on the aquatic ecosystem. In areas of sensitive aquatic habitat, docks and hoists shall be located, configured, constructed and installed to minimize harm to aquatic habitat. Other restrictions may be placed on docks that are in a state protected waters area as necessary to protect the natural features of the designated area.

16.3(2) Adverse impacts on public access for recreational use. A dock shall not be configured to enclose an area of a public water body and create a private water area or otherwise adversely affect public recreational use of the water body. Where walking or wading parallel to the shore below the ordinary high-water mark would be physically practical except for the obstruction created by a dock, the dock owner shall not prevent a person from stepping on or over the dock to bypass the obstruction.

16.3(3) Location and offsets. To the extent practical, a dock and boat hoists shall be placed near the center of the shoreline property frontage and installed perpendicular to the shoreline to maximize offsets from neighboring properties. Each dock, hoist, moored vessel and other permitted structure shall be offset a minimum of 5 feet from an adjoining property line and 5 feet from the projection of a line perpendicular from the shoreline at the common boundary with adjoining shoreline property. A minimum gap of 10 feet shall be maintained between adjoining docks (including “L” or “T” or catwalk segments), hoists or moored boats. Where projection of a line perpendicular from the shoreline is impractical, it is the intent of this rule that a 10-foot gap be maintained in a manner that is equitable to each adjoining shoreline property owner.

16.3(4) Length. A dock shall not extend farther from the water’s edge than the distance necessary for reasonable access to the water body in relation to characteristics of the water body in the vicinity of the dock site and the impacts of the water body and other users. Access to maintain one or more boats in water with a minimum depth of 3 feet shall be considered sufficient access.

16.3(5) Display of 911 address. Each dock owner shall display the 911 address, including the street and city, assigned to the property served by the dock. The owner of a dock authorized by an individual permit shall also display the dock permit number. The information shall be displayed in block letters and numbers at least 1 inch high in a color contrasting with the background, on the water end of the dock, facing away from shore, and shall be plainly visible.

16.3(6) Winter removal. Each dock must be removed from public waters before December 15 of each year and shall not be reinstalled until the following spring unless the removal requirement is waived by a condition of a dock permit or by 571—16.18(461A,462A).

16.3(7) No enclosure of private docks. Private docks and docks in dock management areas shall not be enclosed by roofs or sides. Hoists may be enclosed by roofs and sides constructed of soft-sided natural fiber or synthetic fiber materials for the purpose of protecting watercraft.

16.3(8) Materials and flotation specifications. Every new floating structure authorized by this chapter shall use flotation methods and devices of a type constructed of low-density, closed-cell rigid plastic foam; high-impact polyethylene fiberglass material; wood products pressure-treated with a product approved by the United States Environmental Protection Agency for aquatic use; or other inert materials to provide flotation. Synthetic (such as plastic or fiberglass) or metal containers not originally manufactured as flotation devices may be used as dock flotation devices if they have been cleaned of any product residue, sealed and watertight, and filled with a closed-cell rigid plastic foam.

16.3(9) Flow of water. All docks shall be constructed and placed in a manner that allows the free flow of water beneath them.

16.3(10) Excavation, fill and aquatic vegetation removal prohibited. No bed material may be excavated or fill placed, and no aquatic vegetation may be removed below the ordinary high-water mark
of a water body in association with construction of a dock unless excavation, placement of fill, or aquatic vegetation removal is specifically authorized by a construction permit issued under 571—Chapter 13.

16.3(11) Storage, use, and dispensing of fuel. The storage, use, and dispensing of any fuel on a dock on or over a public water body or adjacent public land shall be in compliance with Iowa Code chapter 101 and administrative rules that implement chapter 101.

16.3(12) Electrical service. Any electrical service on or leading to any dock used for storage or dispensing of fuel must comply with the National Electrical Code, latest revision. All electrical service leading to docks shall include ground fault circuit interrupter protection.

16.3(13) Anchoring of river docks. All river docks must be securely anchored to prevent them from becoming floating hazards during times of high river flows. The riparian owner is responsible for dock retrieval and removal when necessary to prevent or remove a navigation hazard.

16.3(14) Access for inspection. A dock, boat hoist, raft, platform, mooring buoy or any other structure on a public water body may be physically inspected at any time by a representative of the department as needed to determine whether it was placed and is maintained in a manner consistent with the requirements in these rules or with a permit issued under these rules.

571—16.4(461A,462A) Class I permits for standard private docks. This rule establishes criteria and procedures for Class I permits for private docks qualifying as standard docks under criteria in this rule and for certain other docks in areas listed in this rule.

16.4(1) Criteria for standard docks. A Class I permit for a standard dock may authorize a total of one dock and up to two hoists serving one residence. It may authorize a common dock serving two or more residences located on adjoining shoreline properties. A common dock may include up to three hoists per shoreline property and be eligible for a Class I dock permit. The dock must extend from shoreline property on which one or more of the residences are located and must meet all of the following criteria:

a. Dock length limits. A dock on a natural lake may extend the greater of 100 feet from the water’s edge or far enough so that the outer 50 feet of the dock is in 3 feet of water up to a maximum of 300 feet from the water’s edge. These lengths shall be measured from the water’s edge when the dock is installed. A dock on an artificial lake or river may extend the lesser of 50 feet from the water’s edge or one-fourth of the width of the waterway measured from the water’s edge when the dock is installed. However, the department may give notice to a property owner that a shorter dock length is necessary to avoid interference with navigation or an adjoining property owner’s access. The width of an “L” or “T” segment at the outer end of a dock shall be included in measuring the length of the dock.

b. Width and configuration of docks on natural lakes. A dock on a natural lake shall have no more than one “L” or “T” segment. The total length of the “L” or “T” segment facing opposite from shore shall not be greater than 20 feet including the width of the dock. The total area of the “L” or “T” segment shall not exceed 200 square feet. That part of the main dock forming the center of a “T” segment or an extension of an “L” segment shall be included in measuring the area of the “T” or “L” segment. No other part of the dock may be more than 6 feet wide. Catwalks shall be at least 2 feet wide and considered as part of the dock. Catwalks shall be limited in length as in an “L” or “T” segment of the dock construction and shall not extend beyond the width of the hoist, except that a catwalk may be extended around the hoist for access to the hoist.

c. Compliance with standard requirements. The dock and associated hoists must comply with the standard requirements in 571—16.3(461A,462A) for all docks.

d. Other structures not authorized. A Class I permit does not authorize placement of any other anchored or floating structure, such as a swim raft.

16.4(2) Class I permits for private docks in other specified areas. This subrule authorizes issuance of Class I permits for private docks in certain areas where circumstances, including narrowness of the water areas specified below, require different dock and hoist configurations. In the following areas, docks that fail to comply with the offset or 10-foot gap requirement in 16.3(3) but that meet other standard dock requirements in 571—16.3(461A,462A) are eligible for a Class I permit, unless they obstruct navigation or an adjoining property owner’s access: canals off West Okoboji Lake; Okoboji Harbor; inside harbor
of Harbourage at Clear Lake; Venetian Village Canal at Clear Lake; Cottage Reserve on Lake Macbride; Lake Panorama; canals at Lake Manawa; and Lake Delhi.

16.4(3) Procedures for issuance of Class I dock permits. The owner of a standard dock eligible for a Class I permit under the criteria in 16.4(1) or a dock in an area specified in 16.4(2) shall apply for a Class I dock permit on an application form supplied by the department. The applicant shall certify that the dock meets the criteria for a Class I permit. The department shall approve the application based on the applicant’s certification and shall assign a permit number, which may be a series of numbers or letters or a combination of numbers and letters. The applicant shall be responsible for obtaining stickers with the permit numbers and letters, for attaching them to the end of the dock facing opposite from the shoreline, and for displaying the 911 address as provided in 16.3(5). Class I dock permits authorized by this rule shall be issued without administrative fee and remain valid until the property is sold or transferred. In the event the property is sold or transferred, the new owner may request to transfer the Class I dock permit as provided in 16.17(1). A Class I dock permit shall be valid only while dock and hoists comply with the criteria for a Class I permit.

[ARC 3795C, IAB 5/9/18, effective 6/13/18; ARC 6194C, IAB 2/9/22, effective 3/16/22]

571—16.5(461A,462A) Class I permits for docks permitted by Corps of Engineers. This rule authorizes issuance of Class I permits for docks authorized by permits issued by the U.S. Army Corps of Engineers on waters under joint jurisdiction of the department and the U.S. Army Corps of Engineers. By agreement between the Corps of Engineers and the department, a dock permit issued by the Corps of Engineers pursuant to a joint boat dock application review process shall serve in place of a Class I permit issued by the department.

571—16.6(461A,462A) Class II permits for docks authorized by cities and counties that own or otherwise control shoreline property. This rule authorizes issuance of a Class II dock permit to a city or county for docks authorized by a city or county to extend from public land owned or controlled by the city or county. A Class II permit may include all docks and hoists authorized by the city or county on one water body. The Class II dock permit shall require that all docks comply with the standard requirements in 571—16.3(461A,462A). Class II permits shall include exceptions as needed to provide continuing authorization for docks and hoists that were lawfully installed and maintained before the effective date of certain requirements as set forth in this rule. A dock on a natural lake may extend the greater of 100 feet from the water’s edge or far enough so that the outer 80 feet of the dock is in 3 feet of water up to a maximum of 300 feet from the water’s edge. These lengths shall be measured from the water’s edge when the dock is installed. The city or county authorizing maintenance of a dock and boat hoists shall be responsible for enforcing the standard requirements and length limit. The department reserves authority to determine whether the requirements of 571—16.3(461A,462A) and the length limit are met upon complaint of a person who claims that a public or private right is adversely affected by a permitted dock. If the department determines that a dock or hoist must be moved or removed from the water body because of an adverse effect, the department shall issue an administrative order to the city or county that is authorizing maintenance or use of the dock and to the person who is maintaining or using the dock. Issuance of the administrative order shall trigger a right of the city or county and the affected person to a contested case. If shoreline property is public land but there is uncertainty concerning the relationship between the authority of the city or county and the authority of the department, the Class II permit shall include a recital concerning the relative authorities of the department and the permittee. Class II permits shall be issued without fee and may be issued for a term up to five years.

571—16.7(461A,462A) Class III permits for nonstandard private docks. All private docks that are not authorized by Class I or Class II permits shall require a Class III dock permit. In determining whether to issue a Class III permit for a private dock or to condition the permit by denying an application in part, the department shall apply the following criteria:
16.7(1) A Class III private dock permit shall require docks or hoists to be in compliance with requirements in 571—16.3(461A,462A), except as provided in 571—16.9(461A,462A) and 571—16.10(461A,462A).

16.7(2) An individual private dock on a natural lake may be permitted by a Class III permit to extend 100 feet from the water’s edge or far enough so that the outer 80 feet of the dock is in 3 feet of water when the dock is installed. These lengths shall be measured from the water’s edge when the dock is installed. If the water level declines after installation, additional segments may be installed during the season as needed to maintain 80 feet of dock in 3 feet of water, up to a maximum length of 300 feet from the water’s edge. The maximum permitted length of an individual private dock on an artificial lake or river is the lesser of 50 feet from the water’s edge or one-fourth of the width of the waterway measured from the water’s edge at normal water levels. The width of an “L” or “T” segment at the outer end of a dock shall be included in measuring the length of the dock.

16.7(3) The maximum number of hoists authorized by a Class III permit for an individual private dock is one hoist for every 10 feet of shoreline.

16.7(4) A Class III permit for an individual private dock on a natural lake shall not authorize “L” or “T” segments containing more than a total of 240 square feet including the area of the adjoining parts of the main dock.

16.7(5) An individual private dock may be exempted by permit condition from the winter removal requirement in appropriate circumstances under criteria in 571—16.18(461A,462A).

571—16.8(461A,462A) Class IV permits for commercial docks. In determining whether to issue a Class IV permit for a commercial dock or to condition the permit by denying an application in part, the department shall apply the following criteria:

16.8(1) A Class IV permit shall require docks or hoists to be in compliance with requirements in 571—16.3(461A,462A), except as provided in 571—16.9(461A,462A) and 571—16.10(461A,462A). Greater offsets may be required for new commercial docks or hoists if needed to minimize boat traffic and congestion that spills over in front of other shoreline property not owned or controlled by the applicant.

16.8(2) A commercial dock on a natural lake may be permitted to extend a maximum of 300 feet from the water’s edge. However, the applicant must provide justification for a length greater than 150 feet and demonstrate that there are no appropriate alternatives available.

16.8(3) The maximum number of hoists or slips authorized by a permit for a commercial dock is one hoist or slip for every 10 feet of shoreline. This limit shall not apply where a business operated on the shoreline property primarily involves boat sales, rentals, storage, or other boat services. In calculating the hoist limit, courtesy hoists shall not be counted if they are provided without charge to boaters to temporarily moor their boats while they go ashore to access services at a business on the shoreline property.

16.8(4) A permit for a commercial dock shall not be issued or the permit will include restrictions as needed to prevent uses of the dock that would be incompatible with zoning of the shoreline property from which the dock extends (including special use exceptions or variances recognized by the local governing body). However, a change in local zoning ordinance or termination of a local variance or special use exception shall not automatically be a ground for the department to revoke or refuse to renew a dock permit.

16.8(5) Authorization for roofs or sides on commercial docks or slips may be restricted as needed to minimize adverse visual impact on owners of other property and the public.

16.8(6) Each mooring site (slip) shall be marked by an identifying number or letter, in block style at least 3 inches high, of contrasting color, and located uniformly near the vessel’s bow.

571—16.9(461A,462A) Exceptions for renewal of Class III and Class IV permits for existing docks. This rule provides certain exceptions to length limits, hoist limits and platform size limits for docks and hoists that lawfully existed before the effective date of the limits. Criteria for exceptions to offset requirements are separately listed in subrule 16.9(2).
16.9(1) Class III and Class IV permits shall include exceptions as needed to provide continuing authorization for docks and hoists that were lawfully installed and maintained before the effective date of certain requirements as set forth in this rule. Permits shall include exceptions to the length limits in 16.7(2) and 16.8(2) for docks up to 300 feet long that were lawfully installed and maintained before the effective date of the length limits. Permits shall include exceptions to the hoist limit in 16.7(3) and 16.8(3), and to the platform size limit in 16.7(4) for docks and hoists that were lawfully installed and maintained before the effective date of the limits.

16.9(2) An exception to the offset requirements in 16.3(3) shall be granted if the applicant can satisfy all three of the following criteria:
   a. The lack of offset on one side of the property is compensated for by a larger offset on the other side of the property;
   b. The applicant provides the department with a copy of the written consent of each affected adjoining property owner or an affidavit attesting that the affected adjacent property owner named in the affidavit has verbally given the applicant consent for the requested exception, or provides adequate documentation that the adjoining shoreline parcel is burdened by restrictive covenants, easements, or other valid use restrictions which impose on the owner of the parcel an obligation to tolerate docks and hoists that would otherwise violate the offset or gap requirements in 16.3(3); and
   c. The applicant demonstrates that no other dock or hoist configuration is physically practical.

571—16.10(461A,462A) Exceptions to Class III and Class IV permits for new structures. An application for a permit for a new dock, hoist or slip may include a request for an exception under this rule from certain limits or requirements imposed by these rules.

16.10(1) Exceptions to length limits, hoist limits or platform size limits. For proposed new docks, slips or hoists, Class III and Class IV permits may include exceptions to the length limit in 16.7(2), the hoist limit in 16.7(3) and 16.8(3), and the platform size limit in 16.7(4) if the applicant justifies the need for an exception and proposes a configuration of dock(s) and hoists that minimizes adverse impacts on the water body and other users.

16.10(2) Factors for considering requests for exceptions. In determining whether to allow a requested exception to a length limit, hoist limit or platform size limit, in whole or in part, the department shall consider each of the following factors:
   a. The extent to which the request exceeds the applicable limit;
   b. The extent to which the requested exception or a lesser exception would cause adverse impacts on the aquatic ecosystem or use of adjoining public or private property;
   c. The extent to which the requested use would provide some type of access by members of the public;
   d. Whether living units to be benefited by an exception were constructed before July 1, 2006;
   e. Whether denial of an exception would result in loss of property value that was based on a reasonable expectation of water access including storage of boats on the water body;
   f. Whether the exception was authorized by a previous permit;
   g. Whether the exception includes space for vessels without motors including paddle-only vessels and single-hulled sailboats less than 12 feet long.

16.10(3) Exceptions from offset requirements. An exception to the offset requirements in 16.3(3) may be granted under the circumstances listed in 571—16.9(461A,462A).

571—16.11 Reserved.

571—16.12(461A,462A) Initial decision and right of appeal. The decision on an application for a Class II, Class III or Class IV permit shall be made by the department’s district law enforcement supervisor or designee except that the district law enforcement supervisor shall issue an initial decision in the form of a permit or a permit denial on a request for an exception under 571—16.10(461A,462A). If the district law enforcement supervisor decides to deny the permit or to issue a permit with specific conditions that deny the application in part, the written decision shall include notice of the
applicant’s right to request a contested case under 571—Chapter 7. If a request for an exception under 571—16.10(461A,462A) is disapproved by the district law enforcement supervisor, the applicant’s request for a contested case may include a request for a variance or waiver under the provisions of Iowa Code section 17A.9A and 571—Chapter 11.

571—16.13(461A,462A) Application forms and administrative fees.

16.13(1) The applicant for a Class II, Class III or Class IV permit shall submit to the department a completed application on the applicable DNR dock permit application form. If the applicant for a Class III or Class IV permit is not the owner of the shoreline property from which the dock extends, the applicant shall identify the contractual relationship between the applicant and each property owner and shall submit as part of the application the written consent from each owner. The application form shall be accompanied by accurate plans and drawings as specified on the form. The drawings shall accurately show the size and location of each boat hoist, slip, platform, catwalk, buoy, or other structure to be maintained in front of the shoreline property. Docks in front of nonadjoining shoreline properties on the same water body owned by the same person or legal entity may be included in one application. An application for renewal of a permit for an existing dock and hoists must specifically describe each requested modification. The applicant shall submit an administrative fee with the application. The completed application form and payment shall be submitted to the department’s district law enforcement office in the district where the proposed dock is located. The application will be assigned to a conservation officer to investigate.

16.13(2) The Class III permit application fee shall be $125 for one or more individual private docks. The Class IV permit application fee shall be $250 for one or more commercial docks. A Class III permittee shall pay an annual administrative fee of $50 for each hoist or slip in excess of a total of four hoists or slips. A Class IV permittee shall pay an annual administrative fee of $50 for each hoist or slip in excess of a total of six hoists or slips, except for each hoist or slip designated in the permit as courtesy mooring for customers and affixed with a sign identifying it as a courtesy hoist or slip. The hoist/slip fee shall be due on March 1 of each year or whenever a permit is modified by adding a hoist or slip. Any fees owed to the department shall be paid in full prior to the installation of any portion of an individual private dock or commercial dock and before a boat is placed in a hoist or slip. The department may waive the permit application fee if the application is for a minor modification of an existing permit without an extension of the term of the permit.

571—16.14 to 16.16 Reserved.

571—16.17(461A,462A) Duration and transferability of permits; refund of application fees; suspension, modification, or revocation of permits; complaint investigation; property line location.

16.17(1) Duration and transferability of dock permits; administrative fee refunds. With the exception of Class I dock permits, each dock permit shall be issued for a term of five years unless a shorter term is needed due to specified circumstances. The administrative fee paid with an application is nonrefundable unless the application is withdrawn before the department incurs administrative expense in investigating the application. A dock permit is automatically transferable to a new owner of the shoreline property upon request of the new owner.

16.17(2) Suspension, modification, or revocation of permits. A dock permit may be modified, suspended, or revoked, in whole or in part, by written notice served in compliance with Iowa Code section 17A.18, if the director determines that the dock is a hazard to other users of the water body, that a violation of any terms or conditions of the permit has occurred, or that the continuation of the permit is contrary to the public interest. Such modification, suspension, or revocation shall become effective upon a date specified in the notice. The notice shall state the extent of the modification, suspension, or revocation, the reasons for the action, and any corrective or preventative measures to be taken by the permittee to bring the dock, structure, or activity into compliance. Within 30 days following receipt of the notice of a revocation or modification, or during the course of a suspension, the permittee
may request a hearing in order to present information demonstrating that the alleged violation did not occur or that required corrective and preventative measures have been taken, or to present any other information relevant to a decision as to whether the permit should be reinstated, modified, or revoked. The hearing shall be conducted as prescribed by 571—Chapter 7. After completion of the hearing, a final decision will be made concerning the status of the permit. In the event that no hearing is requested, notices of modification and revocation shall remain in effect, and suspended permits shall be reinstated, modified, or revoked. These procedures are not intended to limit the authority of a department law enforcement officer to issue a citation for a violation of a provision of Iowa Code chapter 461A or 462A, or a provision in this chapter.

16.17(3) Investigation of complaints. Any person adversely affected by a permitted dock or associated boat hoist may request, in writing, an investigation and a hearing to reconsider the permit. Requests for hearings shall specify adverse effects on the complainant and shall be made in accordance with procedures described in 571—Chapter 7.

16.17(4) Determining property boundaries. An applicant for a permit, a permittee, and an owner of shoreline property adjoining property of an applicant or permittee are responsible for determining the accurate location of common boundaries of their respective properties. [ARC 6194C, IAB 2/9/22, effective 3/16/22]

571—16.18(461A,462A) Exemptions from winter removal requirement. This rule provides for exemptions from the general requirement in Iowa Code section 462A.27 that nonpermanent structures be removed on or before December 15 of each year. Docks and other structures subject to destruction or damage by ice movement must be removed. Where a dock may be left in ice without damage to the dock, it must have reflective material visible from all directions to operators of snowmobiles, other motorized machines, or wind-propelled vessels lawfully operated on the frozen surface of the water body. Generally, ice damage is greatest on Iowa’s rivers and natural lakes. Docks must be removed by December 15 of each year unless they have the required reflective materials and are specifically exempted by a condition of a dock permit or are located in one of the areas listed as follows: artificial lakes; Upper Gar Lake; canals off West Okoboji Lake; Okoboji Harbor; Lazy Lagoon portion of Triboji dock management area; Smith’s Bay on West Okoboji Lake; area between the trestle and U.S. Highway 71 bridges on Okoboji lakes; Templar Park on Big Spirit Lake; Venetian Village Canal and Harbourage Inlet on Clear Lake; Casino Bay of Storm Lake; Black Hawk Marina at Black Hawk Lake; and canals off Lake Manawa and Carter Lake. A permit shall not authorize an exemption from the winter removal requirement unless the applicant provides adequate documentation that the dock will not be damaged by normal ice movement.

571—16.19(461A,462A) General conditions of all dock permits. All dock permits, unless specifically excepted by another provision of this chapter, shall include the following conditions of approval:

16.19(1) The permit creates no interests, personal or real, in the real estate below the ordinary high water line nor does it relieve the requirement to obtain federal or local authorization when required by law for such activity. The permit does not authorize the permittee to prevent the public from using areas of the water body adjacent to the permitted structure. However, a lawfully permitted private dock or commercial dock is property of the permittee. Use of the dock is reserved to the permittee and the permittee’s invitees, subject to the public right of passage stated in 16.3(2).

16.19(2) A permit is valid only while the permittee has the necessary permissions to use the adjoining shoreline property from which the dock projects.

16.19(3) The permittee shall not charge a fee for use of the dock or associated structure unless: the permit is for a commercial dock; the fee is expressly authorized by the permit; or the permittee is a homeowners association and the fee is for recovery of expenses incurred in providing access to association members.

571—16.20(461A,462A) Permit criteria for rafts, platforms, or other structures. A raft, platform, or other structure maintained on a public water body requires authorization in a permit. The raft, platform,
or other structure may not be placed more than 250 feet from the shoreline, shall be equipped with reflectors that are visible from approaching boats, and shall be subject to the winter removal requirement unless specifically exempted by the permit.

571—16.21 to 16.24 Reserved.

DIVISION II
DOCK MANAGEMENT AREAS

571—16.25(461A) Designation or modification of dock management areas.

16.25(1) Purposes and status of dock management areas. The director may designate an area of public land under the commission’s jurisdiction and adjoining water as a dock management area. The primary purpose of dock management areas is to accommodate requests for boating access from owners of properties that are close to a water body but do not include riparian or littoral property rights. Dock permittees have priority use of the docks for mooring of vessels. However, the docks may be used by members of the public at their own risk for fishing and emergency mooring when public use does not interfere with the permittee’s use. Other uses allowed by the permittee shall be the responsibility of the permittee. The department intends to authorize continuation of all dock management areas existing on June 1, 2006, unless changed circumstances require changes in the size of an existing dock management area.

16.25(2) Criteria for designation or enlargement. In designating a dock management area or authorizing enlargement of an existing dock management area, the director shall apply the following criteria:

a. The shoreline property in question shall be public land and shall have been developed and managed for recreational access to water or determined by the department to be suitable for such access.

b. The establishment or enlargement of a dock management area shall not adversely affect other public recreational use of the water body.

c. A dock management area shall not be established or enlarged where depth or bottom configuration is incompatible with the placement of docks.

d. A dock management area shall not be established or enlarged where fish and wildlife habitat, other natural resources or scenic features would be disturbed by the presence of docks.

e. Documentation of need for a new or larger dock management area and the lack of adverse impacts of the proposal must be sufficient to clearly outweigh and overcome a presumption against increasing the number or size of dock management areas.

571—16.26(461A) Procedures and policies for dock site permits and hoist or slip assignments in dock management areas. A dock site permit authorizes a person to install and maintain a dock in a designated dock management area. Each permit shall identify the number of hoists or slips to be included for storage of boats at the dock. A separate hoist or slip assignment will be issued for each hoist or slip space at the dock. For purposes of these dock management area rules, “permittee” means the person(s) to whom a dock site permit is issued and the person(s) to whom each hoist or slip assignment is issued. Application forms for dock site permits and hoist or slip assignments in a dock management area shall be made available at a nearby DNR office. Dock site permits and hoist or slip assignments shall be available to all members of the public through a selection process. Selection shall be based on the following order of priorities, and a waiting list shall be established that follows the same order of priorities. First priority is for owners of residences adjoining or immediately across a street from the public land; second priority is for owners of other residences within the housing association or subdivision adjoining or immediately across a street from the public land; third priority is for all other Iowa residents; fourth priority is for nonresidents. The order of priorities, changes in the number of residential units per dock site, and changes in the number of vessels per residential unit will be made effective as existing permits expire. For purposes of these dock management area rules, “residence” means a single residential living unit, which may be a rental unit. Notwithstanding these priorities, if property in the first or second priority category is redeveloped with higher density residential living units, there is no assurance that
dock, hoist or slip space will be available to accommodate such increased density before other property included in the first or second priority categories.

571—16.27(461A) Standard requirements for dock management area docks. Docks in dock management areas shall conform to the following requirements:

16.27(1) Occupancy of docks. At least two residences shall share a dock. The department may require that more residences share a dock if there is a waiting list including people in the first or second priority categories established in 571—16.26(461A). A maximum of six residences shall share a dock.

16.27(2) Spacing and alignment. Dock sites where feasible shall be at least 50 feet apart.

16.27(3) Dimensions.

a. Length. A dock may extend the greater of 100 feet from the water’s edge or far enough so that the outer 80 feet of the dock is in 3 feet of water up to a maximum of 300 feet, but the dock shall be no longer than the length for which the applicant provides justification, and the length shall be stated in the permit.

b. Width. Docks shall be at least 4 feet wide and no more than 6 feet wide.

16.27(4) Configuration.

a. “L” or “T” segments. A dock shall have no more than one “L” or “T” segment. The total length of the “L” or “T” segment facing opposite from shore shall not be greater than 20 feet including the width of the dock. The total area of the “L” or “T” segment shall not exceed 200 square feet. That part of the main dock forming the center of a “T” segment or an extension of an “L” segment shall be included in measuring the area of the “T” or “L” segment. A smaller platform size limit may be required at locations specified by the department as having limited available space.

b. Catwalks. Catwalks shall be at least 2 feet wide and considered as part of the dock. The length limit for an “L” or “T” segment stated in paragraph “a” shall be applicable to each catwalk. A catwalk shall not extend beyond the width of the hoist.

c. Hoists. A hoist or other boat storage structure shall not be placed adjacent to any “L” or “T” segment of a dock or adjacent to any other part of a dock that is more than 6 feet wide. The hoist shall not exceed 10 feet in width at locations specified by the department as having limited available space.

16.27(5) Exceptions for certain dock management areas. Notwithstanding other provisions in this rule, in artificially constructed lagoon or harbor areas, the configuration and dimensions of the docks, catwalks and hoists shall be determined by the department on an individual basis, taking into consideration the physical characteristics of the area, the mooring pattern of boats and public safety. Except at Lake Macbride, the Clear Lake Harbourege and Shorewood Hills, and Lake Odessa, a maximum of two residences, each in accordance with 571—16.26(461A), shall share a single dock site.

16.27(6) Display of dock management area sign, DMA name and dock site number. The end of the dock facing the water shall be marked with the DMA name and dock number as assigned by the department. Each hoist shall also be marked with the hoist assignee’s last name and dock site number in two-inch block letters on one of the upright poles. The dock site permittee shall be responsible for installing and maintaining a sign provided by DNR at the landward entrance to the dock. The sign shall state that the dock is privately constructed; it shall include a caution to members of the public with the statement “use at your own risk”; and it shall include the statement “no diving” with a drawing of a diver over which is superimposed the universal no symbol (a circle with a diagonal slash through it).

16.27(7) Other requirements. Standard requirements found in 571—16.3(461A.462A) shall apply to all docks in a dock management area except requirements relating to property line offsets and display of information.

571—16.28(461A) Dock management area permit restrictions and conditions. The following conditions and restrictions shall apply to docks in a dock management area.

16.28(1) Use of dock for mooring. Only the persons named as permittees shall have use of the dock for mooring. All vessels must be registered to the permittees and listed on the dock management area permit. A dock site permit or hoist/slip assignment may authorize an exception to allow a vessel of a tenant of the permittee’s residential rental unit.
16.28(2) Equitable sharing of dock costs. Permittees shall agree on the equitable sharing of the cost of construction, installation, maintenance and removal of the dock and any other component of the dock.

16.28(3) Number of assignments allowed. Only one dock assignment may be allocated to a residence.

16.28(4) Number of hoists allowed. Each permittee may be limited to one hoist for one vessel. The number of hoists and vessels for each permittee should be limited, especially when there is a waiting list that includes people in the first or second priority category established in 571—16.26(461A).

16.28(5) Nontransferability of dock permits and privileges. Dock permits and hoist or slip assignments shall not be transferred, assigned or conveyed by the permittee to any other person.

16.28(6) Liability insurance. Prior to constructing a dock or installing hoists, the dock site permittee shall provide proof of a current liability insurance policy in the amount of $1 million.

16.28(7) Winter storage of docks, catwalks and hoists on public property. Winter storage of docks, catwalks and hoists on public property shall not be allowed unless specifically authorized by a dock site permit or hoist assignment. Docks, hoists and catwalks shall be stored at locations determined by the state parks bureau district supervisor as appropriate for an individual dock management area. A dock, catwalk or hoist stored on public land without authorization from the department may be removed by the department at the owner’s expense.

16.28(8) Land use restrictions. Nothing shall be constructed or placed on public land adjacent to any dock in a dock management area under this rule unless the construction or placement is a necessary appurtenance to the dock as determined by the director.

16.28(9) Expiration of permits. The term of a dock site permit and a hoist or slip assignment shall not exceed five years. Renewals shall be requested on a current application form.

16.28(10) Cancellation for nonuse. A dock site permit or hoist/slip assignment may be canceled for nonuse in order to provide space for applicants on a waiting list.

16.28(11) Other permit restrictions and conditions. All restrictions and conditions in 571—16.19(461A,462A), except subrule 16.19(2), shall apply to all docks in a dock management area.

571—16.29(461A) Fees for docks in dock management areas. Payment of the annual dock site permit fee shall be made upon application. Payment of the annual hoist or slip fee shall be made upon application for the hoist or slip assignment. These fees may be paid in a lump sum in advance for the term of the permit or assignment. Failure to pay the annual fee by April 1 of any year may result in revocation or cancellation of the permit or assignment. Payment of any dock management area fee under this rule shall be made to the department of natural resources as specified in the permit. Annual fees are as follows:

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<th>Dock Fee</th>
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<td>Blue Lake</td>
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<td>Clear Lake North Shore</td>
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<td>Triboji Lakeshore</td>
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<td>Triboji Lazy Lagoon</td>
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<td>Pillsbury Point</td>
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571—16.30(461A) Suspension, modification or revocation of dock management area permits. A dock management area permit may be modified, suspended, or revoked, in whole or in part, by written notice, if the director determines that the dock is not safe, that a violation of any terms or conditions of the permit or these rules has occurred, or that continuation of the permit is not in the public interest. Such modification, suspension, or revocation shall become effective upon a date specified in the notice. The notice shall state the extent of the modification, suspension, or revocation, the reasons for the action, and any corrective or preventative measures to be taken by the permittee to bring the dock, structure, or activity into compliance. Within 30 days following receipt of the notice of a revocation or modification, or during the course of a suspension, the permittee may file a notice of appeal, requesting a contested case pursuant to 571—Chapter 7. The notice of appeal shall specify the basis for requesting that the permit be reinstated.

571—16.31(461A) Persons affected by DMA permit—hearing request. Any person who claims that riparian or littoral property rights are adversely affected by a DMA dock site permit may request, in writing, a hearing to reconsider the permit. Requests for hearings shall show cause and shall be made in accordance with procedures described in 571—Chapter 7.

These rules are intended to implement Iowa Code sections 461A.4, 461A.11, 461A.18, 462A.27 and 462A.32.
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IOWA CARE FOR YOURSELF (IA CFY) PROGRAM
[Prior to 4/4/12, see 641—Chapter 37]

641—8.1(135) Definitions. For purposes of this chapter, the following definitions apply:

“Abnormal screen” means a suspicion of breast or cervical cancer or laboratory values of total cholesterol or blood glucose and average blood pressure reading in the range defined by the CDC according to National Heart, Lung and Blood Institute guidelines.

1. A suspicion of breast cancer includes clinical breast examination findings of: palpable breast mass, breast dimpling, nipple retraction, bloody nipple discharge, palpable lymph nodes around clavicle or axilla, nipple erythema and scaliness, a mammography result of breast imaging reporting and data systems (BI-RADS) category 4 (suspicious abnormality suggesting need for biopsy) or category 5 (highly suggestive of malignancy) (ICD-10 R92.0, R92.1, R92.2, R92.8), breast biopsy result of ductal cancer in situ (ICD-10 D05.10, D05.11, D05.12), lobular cancer in situ (ICD-10 D05.00, D05.01, D05.02) or breast or lymph node (or other) biopsy result of breast cancer.

2. Suspicion of cervical cancer is a Pap test result of atypical squamous cells cannot exclude high-grade squamous intraepithelial lesions (ASC-H) (ICD-10 R87.611 or R87.621), atypical glandular cells (AGC) (ICD-10 R87.619 or R87.629), low-grade squamous intraepithelial lesions (LSIL) (ICD-10 R87.612 or R87.622), or high-grade squamous intraepithelial lesions (HSIL) (ICD-10 R87.613 or R87.623), leukoplakia of the cervix (ICD-10 N88.0), or cervical biopsy result of cervical intraepithelial neoplasia II (ICD-10 N.87.1) or III (ICD-10 D06.0, D06.1, D06.7 or D06.9), or cancer in situ (ICD-10 D06.0, D06.1, D06.7 or D06.9).

3. Abnormal value means laboratory values of total cholesterol or blood glucose (HbA1c if diagnosed diabetic) and average blood pressure reading in the range defined by the CDC according to National Heart, Lung and Blood Institute guidelines.

“ACR” or “American College of Radiology” means one of the Food and Drug Administration-recognized accreditation bodies for minimum quality standards for personnel, equipment, and record keeping in facilities that provide breast imaging.

“Advanced registered nurse practitioner” means an individual licensed to practice under Chapter 7.

“Alert value” means laboratory values of total cholesterol, blood glucose or average blood pressure reading in the range defined by the CDC according to National Heart, Lung and Blood Institute guidelines.

“BCCTPA” or “Breast and Cervical Cancer Prevention and Treatment Act of 2000” means a federal law that provides each state with the option of extending Medicaid eligibility to individuals who were diagnosed with breast or cervical cancer through the National Breast and Cervical Cancer Early Detection Program.

“BCCT option of Medicaid” or “breast and cervical cancer treatment option of Medicaid” means the optional program of medical aid designed for individuals who are unable to afford regular medical service and are diagnosed with breast or cervical precancer or cancer through the National Breast and Cervical Cancer Early Detection Program or through funds from family planning centers, community health centers, or nonprofit organizations. The individuals who receive screening or services meet eligibility requirements established by the Iowa care for yourself program. The BCCT option of Medicaid is financed by federal and state payment sources and is authorized by Title XIX of the Social Security Act.

“Benign” means a noncancerous condition that does not spread to other parts of the body.

“Biopsy” means the removal of a sample or an entire abnormality for microscopic examination to diagnose a problem. Examples of a sampling would be a core biopsy or incisional biopsy; an example of entire removal would be an excisional biopsy.

“BI-RADS” or “breast imaging reporting and data systems” means a standardized reporting system for mammography, breast ultrasound and breast magnetic resonance imaging (MRI) reports.
“Blood glucose” means a simple sugar found in the blood that is an important energy source in living organisms and is a component of many carbohydrates.

“Blood pressure” means the force of blood against the circulatory system. The systolic blood pressure is the force caused when the heart contracts and pushes out the blood. The diastolic blood pressure is when the heart relaxes and fills with blood.

“BMI” or “body-mass index” means a person’s weight in kilograms divided by the square of the person’s height in meters. BMI provides a reliable indicator of body fatness for most people and is used to screen for weight categories that may lead to health problems.

“Breast ultrasound” means an imaging technique commonly used to screen for tumors and other breast abnormalities. The breast ultrasound uses high-energy sound waves to produce a detailed image of the inside of the breast.

“Cancer” means a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body.

“Carcinoma in situ” means a group of abnormal cells found only in the place where they first formed in the body.

“Cardiologist” means a physician licensed to practice under Iowa Code chapter 148 who specializes in the study or treatment of the heart and its action and diseases.

“Cardiovascular disease” means a broad term used to describe a range of diseases that affect the heart and, in some cases, blood vessels.

“Cardiovascular disease risk factors” means identifiable factors that make some people more susceptible than others to cardiovascular disease. Cardiovascular disease risk factors include:

1. Obesity.
2. Physical inactivity.
3. High blood pressure.
4. High blood cholesterol.
5. Diabetes.
6. Tobacco use.

Risk factors that cannot be changed are age, gender and family history. The more cardiovascular disease risk factors a person has increases the person’s chance of developing cardiovascular disease.

“Case management” means the IA CFY program component that involves establishing, brokering, and sustaining a system of available clinical and essential support services for all individuals enrolled in the program.

“CBE” or “clinical breast examination” means complete examination of an individual’s breast and axilla with palpation by a health care provider trained to recognize many different types of abnormalities and warning signs.

“CDC” means the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services, a federal agency that conducts and supports health promotion, prevention and preparedness activities in the United States, with the goal of improving overall public health.

“Cholesterol” means a waxy, fat-like substance made in the liver and other cells and found in certain foods, such as foods from animals, for example, dairy products, eggs and meat. Types of cholesterol are as follows:

1. Low density lipoprotein or LDL, also called “bad” cholesterol. LDL can cause buildup, which narrows the arteries and increases the risk of cardiovascular disease.
2. High density lipoprotein or HDL, also called “good” cholesterol. HDL helps the body get rid of bad cholesterol in the blood. If levels of HDL are low, risk of cardiovascular disease increases.
3. Very low density lipoprotein or VLDL. VLDL is similar to LDL cholesterol in that it contains mostly fat and not much protein. It differs in that VLDL carries triglycerides, whereas LDL carries mainly cholesterol.
4. Total cholesterol means the sum of the very low, low and high density lipoproteins.

“CLIA” or “Clinical Laboratory Improvement Acts of 1988” means the federal regulatory standards that apply to all clinical laboratory testing performed on humans in the United States. These standards establish minimum quality standards for personnel and quality assurance methods that monitor patient
test management and assess quality control, proficiency testing, and personnel handling of laboratory and pathology specimens.

“CLIA-waived tests” means simple laboratory examinations and procedures that are cleared by the federal government for home use, that employ methodologies that are so simple and accurate that erroneous results would be negligible, or that pose no reasonable risk of harm to the patient if the test is performed incorrectly.

“CMS” or “Centers for Medicare and Medicaid Services” is a federal agency within the United States Department of Health and Human Services that administers health care programs, including Medicare, Medicaid, the children’s health insurance program (CHIP) and health insurance exchanges, in partnership with state governments.

“Colposcopy” means a medical procedure that allows close examination of the surface of the cervix with a high-powered microscope.

“Community referral” means to direct individuals elsewhere to obtain needed information, mutual support or community resources through help lines or other methods.

“Community resource” means a source of information, service or expertise that is available within the community, including respite care services, health and mental health services and other social services.

“Cooperative agreement” means a signed contract between the department and another party, for example, a health care facility, which allows the department’s IA CFY program to pay the health care facility for providing services to IA CFY program participants.

“CPT” or “current procedural terminology” means a listing of descriptive terms and identifying codes for uniform language to report medical services and procedures performed by qualified health care professionals and allows clinicians, statisticians, politicians, health insurance programs, health planners and others to speak a common language.

“Creditable coverage” means any insurance that pays for medical bills incurred for the screening, diagnosis, or treatment of breast and cervical cancer. Creditable coverage as described by the Health Insurance Portability and Accountability Act of 1996 includes, but is not limited to, group health plans or health insurance coverage consisting of medical care under any hospital or medical service policy, health maintenance organization, Medicare Part A or B, Medicaid, armed forces insurance, or state health risk pool. An individual who has creditable coverage shall not be eligible for coverage under the breast and cervical cancer treatment option of Medicaid.

“Creditable coverage circumstances” means those instances in which an individual has creditable coverage but is not actually covered for treatment of breast or cervical cancer.

1. When there is a preexisting-condition exclusion or when the annual or lifetime limit on benefits has been exhausted, an individual is not considered to have creditable coverage for this treatment.

2. If an individual has limited coverage, such as a high deductible, limited drug coverage, or a limited number of outpatient visits, the individual is still considered to have creditable coverage and is not eligible for coverage under the breast and cervical cancer treatment option of Medicaid.

3. If an individual has a policy with a limited scope of coverage, such as only dental, vision, or long-term care, or has a policy that covers only a specific disease or illness, the individual is not considered to have creditable coverage unless the policy provides coverage for breast and cervical cancer treatment.

4. For the purposes of this program, eligibility for Indian Health Services or tribal health care is not considered creditable coverage (according to P.L. 107-121, the Native American Breast and Cervical Cancer Treatment Technical Amendment Act of 2001).

“Cytology” means the branch of biology that studies the structure and function of a cell.

“Cytopathology” means the branch of pathology that studies and diagnoses disease on the cellular level.

“Cytotechnologist” means a laboratory professional who studies cells and cellular abnormalities.

“Department” means the Iowa department of public health.
“DHS” or “department of human services” means the Iowa department of human services, a state agency that provides a wide range of services, including health care coverage for low-income uninsured individuals diagnosed with breast or cervical cancer or precancer and requiring treatment.

“Diagnostic mammography” means a radiological examination performed for clinical indications, such as breast mass(es), other breast signs or symptoms (spontaneous nipple discharge, skin changes), or special cases, such as a history of breast cancer with breast conservation or augmented breasts.

“Facility” means a place where health care is provided, including hospitals, clinics, outpatient care centers, laboratories, and specialized care centers that have completed enrollment paperwork with the IA CFY program.

“Family planning clinic” means a Title X family planning program site dedicated to the provision of family planning and related preventive health services to low-income and underserved populations.

“FDA” or “Food and Drug Administration” means the federal governmental body which certifies that a breast imaging facility meets minimum quality standards for personnel, equipment, and record keeping.

“Follow-up” means the IA CFY program component that ensures provision of timely and adequate services for participants who have abnormal screening results.

“Gynecologist” means a physician licensed to practice under Iowa Code chapter 148 who specializes in treating diseases of the female reproductive organs and providing well-woman health care that focuses primarily on the reproductive organs.

“HbA1c” or “glycosylated hemoglobin” means a clinical laboratory test for the purposes of diagnosing diabetes or determining control of diabetes over the past two to three months.

“Health care provider” means any physician, pharmacist, advanced registered nurse practitioner, or physician assistant who is authorized to practice by the state; who is performing within the scope of the practice as defined by state law; and who provides care to IA CFY program-enrolled individuals.

“IA BCEDP” or “Iowa breast and cervical cancer early detection program” means a comprehensive breast and cervical cancer screening program established and funded under Title XV of the federal Public Health Service Act and administered by the Iowa department of public health, with the delegated responsibility of implementation and evaluation from the CDC, Division of Cancer Prevention and Control.

“IA CFY program” or “Iowa care for yourself program” means an integrated comprehensive breast and cervical cancer screening program and cardiovascular risk factor screening and intervention program administered by the Iowa department of public health.

“IA WISEWOMAN” or “Iowa well-integrated screening and evaluation for women across the nation” means a cardiovascular-related risk factor screening and intervention program to provide standard preventive screening services, including blood pressure measurements, cholesterol testing, blood glucose testing, and lifestyle interventions that target poor nutrition, physical inactivity, and tobacco use. The program is authorized by the federal government and administered by the CDC to help reduce deaths and disability from cardiovascular disease and stroke.

“ICD-10” or “International Classification of Disease, 10th edition” means a standardized classification of diseases, injuries, and reasons of death, by cause and anatomic localization, which is systematically put into a number of up to seven digits and which allows clinicians, statisticians, politicians, health planners and others to speak a common language, both in the United States and internationally.

“Infrastructure” means the basic framework of sufficient staff and adequate support systems to plan, implement, and evaluate the components of the IA CFY program.

“In need of treatment” means that a medical or surgical intervention is required because of an abnormal finding of breast or cervical cancer or precancer that was determined as a result of a screening or diagnostic procedure for breast or cervical cancer/precancer.

“Intervention” means services that promote a cardiovascular-healthy diet and physical activity that are based on screening results, which include blood pressure, cholesterol, blood glucose, weight, height, personal medical history, family medical history, and health behavior and readiness-to-change assessments.
“MAB” or “medical advisory board” means a body that may be utilized by the IA CFY program to offer knowledge and experience as related to the fields of expertise of the members of the board. Duties of the MAB may include, but are not limited to, the following:

1. Reviewing and making recommendations for clinical service expansion.
2. Reviewing program-developed clinical protocols.
3. Providing recommendations related to other clinical and participant-related issues.
4. Providing input related to quality assurance issues.
5. Reviewing program screening and diagnostic data.

“MDEs” or “minimum data elements” means a set of standardized data elements used to collect demographic and clinical information on individuals served with NBCCEDP funds. The MDEs are reported to the CDC to evaluate whether programs are meeting clinical standards and programmatic priorities.

“Medicaid” means a health care program that assists low-income families or individuals in paying for doctor visits, hospital stays, long-term medical care, custodial care costs and more; the program is financed by federal and state payment sources and authorized by Title XIX of the Social Security Act and administered by the Iowa Department of Human Services.

“Medicare” means the program of federal payment source for health benefits, especially for the aged, which is authorized by Title XVIII of the Social Security Act. Medicare is administered by CMS.

“MRI” or “magnetic resonance imaging” means a medical imaging technique used in radiology to form pictures of the anatomy and the physiological processes of the body. MRI scanners use strong magnetic fields, magnetic field gradients, and radio waves to generate images of the organs in the body.

“NBCCEDP” or “National Breast and Cervical Cancer Early Detection Program” means a program established with the passage of the Breast and Cervical Cancer Mortality Prevention Act of 1990 (Public Law 101-354). The law authorizes the CDC to establish a program of grants to states, tribes, and territories for increasing the early detection of breast and cervical cancer, particularly among low-income, uninsured, and underserved individuals.

“Nonprofit organization” means a group organized for purposes other than generating profit and in which no part of the organization’s income is distributed to its members, directors, or officers, except under limited circumstances.

“Oncologist” means a physician licensed to practice under Iowa Code chapter 148 who is a specialist in treating or studying the physical, chemical, and biologic properties and features of neoplasms, including causation, pathogenesis, and treatment.

“Outreach” means the IA CFY program component that involves recruiting targeted populations or individuals who never or rarely utilize preventive health services.

“Pap test” or “Papanicolaou screening test” means a procedure to collect cells from the cervix for examination under a microscope. The Pap test can detect abnormal cells or precancerous cells before cancer develops.

“Pathologist” means a physician licensed to practice under Iowa Code chapter 148 who is a specialist who interprets and diagnoses the changes caused by diseases in tissues and body fluids.

“Patient navigation” means an IA CFY program component that assists individuals in overcoming barriers and facilitates timely access to quality screening and diagnostics as well as initiation of breast or cervical cancer treatment services.

“Pharmacist” means an individual licensed to practice under Iowa Code chapter 155A who is able to receive or process prescription drug orders in accordance with the pharmacy laws.

“Physician” means an individual licensed to practice medicine and surgery or osteopathic medicine and surgery under Iowa Code chapter 148.

“Physician assistant” means an individual who has successfully completed an approved program and passed an examination approved by the board or is otherwise found by the board to be qualified to perform medical services under the supervision of a physician and is licensed to practice under Iowa Code chapter 148C.

“Precancerous” means a condition or lesion involving abnormal cells that are associated with an increased risk of developing into cancer.
“Program and fiscal management” means the IA CFY program component that includes planning, organizing, directing, coordinating, managing, budgeting for, and evaluating program activities.

“Quitline Iowa” means a toll-free, statewide tobacco cessation telephone counseling hotline through which trained counselors provide assistance in making an individualized tobacco use quit plan and provide ongoing support through optional follow-up calls.

“Radiologist” means a physician licensed to practice under Iowa Code chapter 148 who specializes in the branch of medicine that diagnoses injuries and diseases using medical imaging procedures such as X-rays, sound waves, or other types of energy.

“Rarely or never been screened” means, as defined for the NBCCEDP, that an individual has not had cervical cancer screening within the last 3,469 days (9.5 years) or has never been screened for cervical cancer.

“Recruitment” means the IA CFY program component that involves finding new individuals to enroll in the IA CFY program for breast and cervical health services.

“Referral” means the IA CFY program component that involves directing individuals with abnormal/alert screening results or barriers to services to appropriate resources for follow-up action.

“Screening mammography” means the use of X-ray of the breasts of asymptomatic individuals in an attempt to detect abnormal lesions of the breast when they are small, nonpalpable, and confined to the breast.

“Service delivery” means providing, either directly or through contractual arrangements, comprehensive breast and cervical cancer screening and cardiovascular disease and stroke risk factor screening, diagnosis, and treatment services through tracking of screening intervals, timeliness of diagnosis, and timeliness of treatment of individuals.

“Surgeon” means a physician licensed to practice under Iowa Code chapter 148 who treats disease, injury, or deformity by physical operation or manipulation.

“Surveillance” means the IA CFY program component that involves the systematic collection, analysis, and interpretation of health data.

“TBS” or “the Bethesda system” means a system for reporting cervical or vaginal cytologic diagnoses, used for reporting Pap test results.

“Triglycerides” means a type of fat that is carried in the blood by very low density lipoproteins. Excess calories, alcohol, or sugar in the body are converted into triglycerides and stored in fat cells throughout the body.

641—8.2(135) Components of the Iowa care for yourself (IA CFY) program. The IA CFY program shall include the following key components:

8.2(1) Program and fiscal management shall be conducted by ensuring strategic planning, implementation, coordination, integration, and evaluation of all programmatic activities and administrative systems, as well as the development of key communication channels and oversight mechanisms to aid in these processes. Program management shall ensure that infrastructure adequately supports service delivery.

8.2(2) Service delivery of specific and appropriate clinical procedures to detect breast and cervical abnormalities and cardiovascular disease or stroke risk factors for individuals enrolled in the IA CFY program shall be directly provided or provided through contractual arrangements.

a. The IA CFY program shall cover breast and cervical cancer screening and diagnostic services including, but not limited to, the following when those services are provided by a participating health care provider whose facility has a cooperative agreement with the Iowa department of public health’s IA CFY program. Payment shall be based on Medicare Part B participating-provider rates as released annually at the beginning of each calendar year.

(1) Physical examinations that include two blood pressure measurements in addition to one or more of the following screening services: CBE, pelvic examination, or Pap test;

(2) Height and weight measurements, when provided in conjunction with one or more of the screening services listed in subparagraph 8.2(2)“a”(1) above;
(3) Mammography (screening and diagnostic);  
(4) Breast ultrasound, when used as an adjunct to mammography;  
(5) Fine-needle aspiration of breast cysts;  
(6) Breast biopsies, excisional and nonexcisional (physician charges only; hospital charges are not covered);  
(7) Colposcopy of the cervix, with or without biopsy;  
(8) Surgical consultations for diagnosis of breast and cervical cancer;  
(9) Pathology charges for breast and cervical biopsies;  
(10) Anesthesia for program-approved CPT and ICD-10 codes (health care provider charges only; hospital charges and supplies are not covered).

b. Breast and cervical cancer-related services not covered by the IA CFY program include, but are not limited to, the following:  
(1) Services not related to breast or cervical cancer screening or diagnosis;  
(2) Treatment procedures and services;  
(3) Services provided by nonparticipating providers;  
(4) Hospital charges for breast biopsies and anesthesia;  
(5) Inpatient services.

c. The IA CFY program shall cover cardiovascular disease-related services for select participants enrolled for WISEWOMAN services for whom at least one breast or cervical cancer screening service was paid for using federal funds. Cardiovascular disease-related services shall include, but not be limited to, the following when a participating health care provider that has a cooperative agreement with the department provides those services. Payment shall be based on Medicare Part B participating-provider rates as released annually at the beginning of each calendar year.  
(1) Physical examinations that include two blood pressure measurements;  
(2) Height and weight measurements;  
(3) Fasting lipid panel that includes total cholesterol, HDL cholesterol, LDL cholesterol, triglycerides; and  
(4) Diabetes screening:  
1. For an individual who has not been diagnosed with diabetes, fasting blood glucose; and  
2. For an individual who has been diagnosed with diabetes, glycosylated hemoglobin (HbA1c).  
d. Cardiovascular disease-related services not covered by the IA CFY program include, but are not limited to, the following:  
(1) A follow-up diagnostic visit to a health care provider if one or more screening values are in the CDC-defined abnormal value range;  
(2) Repeat laboratory testing;  
(3) Any additional testing;  
(4) Medication; and  
(5) Treatment.

e. IA CFY program cardiovascular intervention shall be conducted as a component of the program for all individuals who are eligible and enrolled to receive WISEWOMAN services.

f. A health care provider whose facility has a cooperative agreement with the IA CFY program shall be subject to the following:  
(1) The health care provider agrees that reimbursement of procedures and services provided shall not exceed the amount paid under Medicare Part B participating-provider rates as released annually at the beginning of each calendar year.

(2) A mammography health care provider shall ensure that the provider’s facility has current FDA certification and ACR or state of Iowa accreditation and is a Medicare and Medicaid-approved facility utilizing BI-RADS and following ACR guidelines for mammography report content.

(3) A board-certified radiologist must be immediately available to determine selection of views and readings when a diagnostic mammogram is performed.

(4) The health care provider shall submit obtained cytology and pathology specimens to a CLIA-certified laboratory for processing. The laboratory shall provide cytological reading and
analysis of cervical and vaginal Pap tests by certified/registered cytotechnologists. Cytology (Pap) test results shall be reported using current TBS terminology. The laboratory shall provide board-certified pathologists or experienced certified cytotechnologists to rescreen all analyses and readings of cervical and breast biopsies.

(5) The health care provider shall practice according to the current standards of medical care for breast and cervical cancer early detection, diagnosis, and treatment.

(6) Service delivery may be provided in a variety of settings. Service delivery, however, must include:
1. Providing screening services for specific geographic areas;
2. Providing a point of contact for scheduling appointments;
3. Providing age and income eligibility screening;
4. Providing breast and cervical cancer screening and cardiovascular disease and stroke screening to eligible individuals;
5. Providing referral and follow-up for individuals who have alert-value cardiovascular disease screening results;
6. Providing the required reporting system for screening and follow-up activities;
7. Providing population-based education, outreach, and recruitment activities;
8. Providing IA CFY program cardiovascular intervention as a component of the program for all individuals eligible for and enrolled to receive IA WISEWOMAN program services; and
9. Submitting data within 60 days of service date to establish screening documentation.

(7) The health care provider shall ensure compliance with this chapter and other terms and conditions included in the cooperative agreement.

8.2(3) Referral, tracking, and follow-up utilizing a data system to monitor each enrolled individual’s receipt of screening/rescreening, diagnostic, and treatment procedures shall be conducted by the IA CFY program and contracted county board of health designated agency staff.
   a. The enrolled individual shall be notified by contracted county board of health designated agency staff of the results of the service, whether the results are normal, benign, or abnormal.
   b. The data system shall provide tracking of appropriate and timely clinical services following an abnormal test result or diagnosis of cancer.
   c. If the enrolled individual has an abnormal Pap test or breast screening or an alert-value cardiovascular disease risk factor, the health care provider shall provide the individual with a comprehensive referral to appropriate diagnostic or treatment services.
   d. The comprehensive referral shall be written. Follow-up shall be conducted to determine whether services were timely, completed, or met.

8.2(4) The IA CFY program and contracted county board of health designated agency staff shall provide case management and shall assist participants whose cancer or precancerous breast or cervical condition was diagnosed through the program in obtaining needed treatment services.

8.2(5) IA CFY program staff shall use quality assurance and improvement techniques including use of established standards, systems, policies and procedures to monitor, assess and identify practical methods for improvement of the program and its components.
   a. Quality assurance tools shall include utilizing FDA and ACR minimum standards for mammography facilities and CLIA minimum standards for cytopathology and pathology laboratories.
   b. Quality assurance measures shall contribute to the identification of corrective actions to be taken to remedy problems found as a result of investigating quality of care.

8.2(6) Professional development shall be provided by the IA CFY program and contracted county board of health designated agency staff through a variety of channels and activities that enable professionals to perform their jobs competently, identify needs and resources, and contribute to ensuring that health care delivery systems provide positive clinical outcomes.

8.2(7) Using a variety of methods and strategies to reach priority populations, the IA CFY program and contracted county board of health designated agency staff shall provide population-based public education and recruitment that involve the systematic design and delivery of clear and consistent messages about breast and cervical cancer and the benefits of early detection. Outreach activities should
focus on individuals who have never or rarely been screened and should work toward the removal of barriers to care (i.e., the need for child care, respite care, interpreter services and transportation) through collaborative activities with other community organizations.

8.2(8) The IA CFY program may develop coalitions and partnerships to bring together groups and individuals that establish a reciprocal agreement for sharing resources and responsibilities to achieve the common goal of reducing breast and cervical cancer mortality and cardiovascular disease and stroke mortality.

8.2(9) The IA CFY program shall conduct surveillance utilizing continuous, proactive, timely and systematic collection, analysis, interpretation and dissemination of breast and cervical cancer screening and cardiovascular disease and stroke risk factor behaviors and incidence, prevalence, survival, and mortality rates. Epidemiological studies shall be conducted utilizing MDEs and other data sources to establish trends of disease, diagnosis, treatment, and research needs. Program planning, implementation, and evaluation shall be based on the epidemiological evidence.

8.2(10) Evaluation of the program shall be conducted through systematic documentation of the operations and outcomes of the program, compared to a set of explicit or implicit standards or objectives. [ARC 0059C, IAB 4/4/12, effective 5/9/12; ARC 4905C, IAB 2/12/20, effective 3/18/20; ARC 6163C, IAB 2/9/22, effective 3/16/22]

641—8.3(135) Participant eligibility criteria. An applicant for the IA CFY program must satisfy the criteria outlined in this rule. If an applicant does not meet these criteria, the applicant shall be provided information by contracted county board of health designated agency staff regarding Iowa health and wellness, health insurance marketplace, free care, or sliding-fee clinics available in the area in which the applicant lives.

8.3(1) Age. An applicant for the IA CFY program must satisfy one of these criteria to participate in the IA CFY program.

a. If the applicant is 50 through 64 years of age, the program’s priority population, the applicant may receive annual breast and cervical (if appropriate) cancer screening.

b. If the applicant is 40 through 64 years of age, the applicant may receive cardiovascular risk factor screening in addition to breast and cervical cancer screening services.

c. If the applicant is 40 through 49 years of age, the applicant may receive annual breast and cervical (if appropriate) cancer screening.

d. If the applicant is under 40 years of age and symptomatic for breast cancer, the applicant may receive breast and cervical cancer screening services based upon funding availability. EXCEPTION: This categorized group is not eligible for cardiovascular services under this program.

e. If the applicant is 65 years of age and older and the applicant does not have Medicare Part B coverage, the applicant may be eligible to receive annual breast and cervical (if appropriate) cancer screening. EXCEPTION: This categorized group is not eligible for cardiovascular services under this program.

f. If the applicant is 21 through 39 years of age and asymptomatic for breast cancer, the applicant may receive an office visit for a cervical cancer screening according to IA CFY protocol. If the applicant is determined to be at high risk for developing breast cancer using a risk assessment model that relies on family history, the applicant may receive breast services, including a mammogram and an MRI, in accordance with IA CFY protocols. EXCEPTION: This categorized group is not eligible for cardiovascular services under this program.

8.3(2) Income.

a. IA CFY program income guidelines are based upon 250 percent of the federal poverty level, which is set annually by CMS. New IA CFY program income guidelines will be adjusted following any change in CMS guidelines.

b. Self-declaration of income may be accepted.

c. Eligibility shall be based on net income for the household.

d. Assets shall not affect income status and shall not be counted when eligibility under the IA CFY program is determined.

8.3(3) Insurance.
a. The IA CFY program shall determine an individual to be uninsured if the individual does not have health insurance coverage.

b. The IA CFY program shall determine an individual to be underinsured if the individual has health insurance with unreasonably high copayments, deductibles, or coinsurance or the insurance does not cover IA CFY program-covered services.

c. Individuals who have creditable coverage, Medicaid, or Medicare Part B are eligible for patient navigation if declaring a barrier to services.

8.3(4) Residency.
   a. An individual must be a resident of Iowa or of a state that shall enroll an individual in the BCCT option of Medicaid if the individual is screened or diagnosed by the IA CFY program.
   b. An individual who is a resident of a state that does not accept individuals into the BCCT option of Medicaid and who chooses to continue to receive services in the IA CFY program must be informed that the individual may not be able to have the individual’s treatment paid for by the BCCT option of Medicaid if the individual does not receive services in the individual’s state of residence.
   c. Proof and length of residency in Iowa are not required. EXCEPTION: An individual is not eligible for cardiovascular services if the individual is not a resident of Iowa.

8.3(5) Ineligible. The IA CFY program does not provide coverage for men.

641—8.4(135) Participant application procedures for IA CFY program services.

8.4(1) Enrollment. After an individual is determined eligible for services:
   a. The individual must complete, sign, and return a consent and release form to the IA CFY program. The date on the signed form shall be the participant’s enrollment date.
   b. Upon enrollment, the participant must select an IA CFY program health care facility.
   c. The individual is eligible for services for 12 months from the enrollment date, subject to restrictions in program coverage as provided in rule 641—8.5(135).
   d. If a participant is unable to access a particular health care provider due to unavailability of appointments or if a participant requests to change to another health care provider, designated agency staff shall assist the participant in choosing another IA CFY program health care provider who is available.

8.4(2) Reenrollment.
   a. A participant’s continued eligibility for program coverage shall be determined annually.
   b. No more than 45 days prior to the end of the 12-month coverage period, the IA CFY program shall contact the participant to see if the participant wishes to reenroll in the program.
   c. If a participant wishes to reenroll, the participant must complete, sign and return a consent and release form before receiving any further services.

8.4(3) Termination of enrollment. The IA CFY program shall terminate a participant’s enrollment if the participant:
   a. Requests termination from the program;
   b. No longer meets the criteria set forth in rule 641—8.3(135);
   c. Does not return a signed IA CFY program consent and release form; or
   d. Refuses to receive screening and diagnostic services through an IA CFY program health care provider.

641—8.5(135) Priority for program expenditures.

8.5(1) In the event the IA CFY program director determines there are inadequate funds to meet program needs, either attributable to a reduction in federal funding from the CDC or to a projected enrollment of individuals in excess of anticipated enrollment, the program director may restrict new applicants’ participation in the IA CFY program as follows:
   a. First priority shall be given to individuals 50 through 64 years of age.
   b. Second priority shall be given to individuals under 50 years of age who are symptomatic.
   c. Third priority shall be given to individuals 40 through 49 years of age who are asymptomatic.
d. Fourth priority shall be given to individuals 65 years of age and older who do not have Medicare Part B coverage.

e. Fifth priority shall be given to individuals 21 through 39 years of age.

8.5(2) In the event that the financial demand abates, the program director shall withdraw the financial shortfall determination, at which time individuals shall be eligible for program services in accordance with rule 641—8.3(135).

[ARC 0059C, IAB 4/4/12, effective 5/9/12; ARC 4905C, IAB 2/12/20, effective 3/18/20; ARC 6163C, IAB 2/9/22, effective 3/16/22]

641—8.6(135) Right to appeal. If an individual disagrees with or is dissatisfied with program eligibility, the covered-service determination, or the decision of the program, the individual has the right to appeal the decision or action.

8.6(1) The appeal shall be in writing and shall be submitted, within ten working days of the decision or action, to the designated agency personnel with whom the individual has been working.

8.6(2) The designated agency staff shall contact a state IA CFY program staff person and shall provide the information regarding the appeal to the staff person.

8.6(3) State IA CFY program staff shall confer with the bureau chief supervising the IA CFY program and provide a decision to the designated agency staff within five business days. A decision made by state IA CFY program staff shall be delivered by telephone, if possible, to the individual making the appeal and shall be followed by a written notification of the decision. The decision of state IA CFY program staff shall be considered a final agency decision in accordance with Iowa Code chapter 17A.

[ARC 0059C, IAB 4/4/12, effective 5/9/12]

641—8.7(135) Verification for the breast or cervical cancer treatment (BCCT) option of Medicaid. The Iowa department of public health and the Iowa department of human services have coordinated to develop procedures for individuals to access Medicaid coverage for treatment of breast or cervical cancer or precancerous conditions.

8.7(1) Before referring an individual to the individual’s county of residence’s local office of the department of human services, a contracted county board of health designated agency staff member shall document the following regarding the individual:

a. The individual was enrolled in the IA CFY program when diagnosed; has had at least one of the screening services (Pap test, screening mammogram, CBE or MRI) or diagnostic procedures paid for by the IA CFY program or with funds from family planning centers, community health centers, or nonprofit organizations; and must be in need of treatment for breast or cervical cancer or precancerous conditions; or

b. The individual was enrolled in NBCCEDP and has moved to Iowa. To be considered enrolled in NBCCEDP, the individual must meet the Iowa program age guidelines; have had at least one of the basic screening services (Pap test, screening mammogram, CBE or MRI) or a diagnostic procedure paid for by the NBCCEDP or with funds from family planning centers, community health centers, or nonprofit organizations; and be in need of treatment for breast or cervical cancer or precancerous conditions; and

c. The individual has creditable coverage circumstances or has no creditable coverage for breast or cervical cancer treatment.

8.7(2) The BCCT option of Medicaid is administered by the Iowa department of human services under 441—Chapter 75, “Conditions of Eligibility.”

[ARC 0059C, IAB 4/4/12, effective 5/9/12; ARC 4905C, IAB 2/12/20, effective 3/18/20; ARC 6163C, IAB 2/9/22, effective 3/16/22]

These rules are intended to implement Iowa Code sections 135.11(1) and 135.39 and 42 U.S.C. Section 300k, as amended.

[Filed ARC 7670B (Notice ARC 7538B, IAB 1/28/09), IAB 4/8/09, effective 5/13/09]

[Filed ARC 0059C (Notice ARC 9995B, IAB 2/8/12), IAB 4/4/12, effective 5/9/12]

[Filed ARC 4905C (Notice ARC 4766C, IAB 11/20/19), IAB 2/12/20, effective 3/18/20]

[Filed ARC 6163C (Notice ARC 6050C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 38
GENERAL PROVISIONS FOR RADIATION MACHINES
AND RADIOACTIVE MATERIALS

641—38.1(136C) Purpose and scope.
38.1(1) Except as otherwise specifically provided, these rules apply to all persons who receive, possess, use, transfer, own, or acquire any source of radiation; provided, however, that nothing in these rules shall apply to any person to the extent such person is subject to regulation by the U.S. Nuclear Regulatory Commission. Attention is directed to the fact that regulation by the state of source material, byproduct material, and special nuclear material in quantities not sufficient to form a critical mass is subject to the provisions of the agreement between the state and the U.S. Nuclear Regulatory Commission and to 10 CFR Part 150 of the Commission’s regulations.

38.1(2) All references to any Code of Federal Regulations (CFR) in this chapter are those in effect as of July 22, 2020.

38.1(3) The provisions of Chapter 38 are in addition to, and not in substitution for, any other applicable portions of 641—Chapter 37 and Chapters 39 to 45.

[ARC 8982B, IAB 8/11/10, effective 9/15/10; ARC 1470C, IAB 6/11/14, effective 7/16/14; ARC 1639C, IAB 10/1/14, effective 11/5/14; ARC 3746C, IAB 4/11/18, effective 5/16/18; ARC 5059C, IAB 6/17/20, effective 7/22/20]

641—38.2(136C) Definitions. As used in these rules, these terms have the definitions set forth below and are adopted by reference and included herein for 641—Chapters 39 to 45.

“Absorbed dose” means the energy imparted by ionizing radiation per unit mass of irradiated material. It is determined as the quotient of dE by dM, where dE is the mean energy imparted by ionizing radiation to matter of mass dM. The SI unit of absorbed dose is joule per kilogram and the special name of the unit of absorbed dose is the gray (Gy). The units of absorbed dose are the gray (Gy) and the rad.

“Absorbed dose rate” means absorbed dose per unit time, for machines with timers, or dose monitor unit per unit time for linear accelerators.

“Accelerator” means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV. For purposes of this definition, “particle accelerator” is an equivalent term.

“Accelerator-produced material” means any material made radioactive by a particle accelerator.

“Act” means 1984 Iowa Acts, chapter 1286, relating to regulation of radiation machines and radioactive materials. (Iowa Code chapter 136C)

“Activity” means the rate of disintegration or transformation or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).

“Adult” means an individual 18 years of age or older.

“Agency” means the Iowa department of public health.

“Agreement state” means any state with which the U.S. Nuclear Regulatory Commission or the U.S. Atomic Energy Commission has entered into an effective agreement under Subsection 274b of the Atomic Energy Act of 1954 as amended (73 Stat. 689). The state of Iowa is an agreement state as of January 1, 1986.

“Airborne radioactive material” means any radioactive material dispersed in the air in the form of dusts, fumes, particles, mists, vapors, or gases.

“Airborne radioactivity area” means a room, enclosure, or area in which airborne radioactive material (composed wholly or partly of licensed material) exists in concentrations (1) in excess of the derived air concentrations (DACs) specified in Appendix A of 641—Chapter 40; or (2) to such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.

“Air kerma (K)” means the kinetic energy released in air by ionizing radiation. Kerma is determined as the quotient of dE by dM, where dE is the sum of the initial kinetic energies of all the charged ionizing...
particles liberated by uncharged ionizing particles in air of mass dM. The SI unit of air kerma is joule per kilogram and the special name for the unit of kerma is the gray (Gy).

“Air-purifying respirator” means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

“Annually” means at least once every 365 days.

“As low as is reasonably achievable” (ALARA) means making every reasonable effort to maintain exposures to radiation as far below the dose limits in these rules as is practical, consistent with the purpose for which the licensed or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed or registered sources of radiation in the public interest.

“Assembler” means any person engaged in the business of assembling, replacing, or installing one or more components into an X-ray system or subsystem. The term includes the owner of an X-ray system or the employee or agent who assembles components into an X-ray system that is subsequently used to provide professional or commercial services.

“Assigned protection factor (APF)” means the expected workplace level of respiratory protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

“Atmosphere-supplying respirator” means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

“Background radiation” means radiation from cosmic sources; naturally occurring radioactive materials, including radon (except as a decay product of source or special nuclear material); and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee. “Background radiation” does not include sources of radiation from radioactive materials regulated by the agency.

“Barrier” (see “Protective barrier”).

“Beam axis” means a line from the source through the centers of the X-ray fields.

“Beam-limiting device” means a field defining collimator, integral to the system, which provides a means to restrict the dimensions of the X-ray field or useful beam.

“Beam monitoring system” means a system designed and installed in the radiation head to detect and measure the radiation present in the useful beam.

“Becquerel” (Bq) means the SI unit of activity. One becquerel is equal to 1 disintegration or transformation per second (dps or tps).

“Bioassay” means the determination of kinds, quantities or concentrations and, in some cases, the locations of radioactive material in the human body, whether by direct measurement, in vivo counting, or by analysis and evaluation of materials excreted or removed from the human body. For purposes of these rules, “radiobioassay” is an equivalent term.

“Bone densitometry unit” means a medical device which uses electronically produced ionizing radiation to determine the density of bone structures of human patients.

“Brachytherapy” means a method of radiation therapy in which sealed sources are utilized to deliver a radiation dose at a distance of up to a few centimeters, by surface, intracavitary, intraluminal, or interstitial application.

“Brachytherapy source” means a radioactive source or a manufacturer-assembled source train or a combination of these sources that is designed to deliver a therapeutic dose within a distance of a few centimeters.

“Byproduct material” means:

1. Any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;
2. The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium or thorium solution extraction processes. Under ground ore bodies depleted by these solution extraction operations do not constitute “byproduct material” within this definition;

3. Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity or any material that:
   - Has been made radioactive by use of a particle accelerator; and
   - Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

4. Any discrete source of naturally occurring radioactive material, other than source material, that:
   - The Nuclear Regulatory Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate federal agency, determines would pose a threat to the public health and safety or the common defense and security similar to the threat posed by a discrete source of radium-226; and
   - Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

“Cabinet radiography” means industrial radiography conducted in an enclosure or cabinet shielded so that radiation levels at every location on the exterior meet the limitations specified in 641—40.26(136C).

“Calendar quarter” means not less than 12 consecutive weeks nor more than 14 consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged such that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. No licensee or registrant shall change the method of determining calendar quarters for purposes of these rules except at the beginning of a year.

“Calibration” means the determination of (1) the response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or (2) the strength of a source of radiation relative to a standard.

“Carrier” means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.


“Changeable filters” means any filter, exclusive of inherent filtration, which can be removed from the useful beam through any electronic, mechanical, or physical process.

“Collective dose” means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

“Committed dose equivalent” \((H_{T,50})\) means the dose equivalent to organs or tissues of reference \(T\) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

“Committed effective dose equivalent” \((H_{E,50})\) is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues \((H_{E,50} = \sum w_T H_{T,50})\).

“Consignment” means each shipment of a package or groups of packages or load of radioactive material offered by a shipper for transport.

“Consortium” means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution, a federal facility or a medical facility.

“Constraint” or “dose constraint” means a value above which specified licensee actions are required.
“Controlled area” means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee or registrant for any reason.

“Critical group” means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

“Curie” means a unit of quantity of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of 3.7E+10 transformations per second (tps).

“Decay-in-storage” means the holding of radioactive material having half-lives of less than or equal to 120 days until it decays to background levels. Before disposal in ordinary trash, the material must have been held for a minimum of ten half-lives and its radioactivity is indistinguishable from background as indicated by a survey meter set on its most sensitive scale with no interposing shielding.

“Decommission” means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:
1. Release of the property for unrestricted use and termination of the license; or
2. Release of the property under restricted conditions and termination of the license.

“Deep dose equivalent” (Hd), which applies to external whole body exposure, means the dose equivalent at a tissue depth of 1 centimeter (1000 mg/cm²).

“Demand respirator” means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

“Depleted uranium” means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

“Detector” (see “Radiation detector”).

“Diagnostic clinical procedures manual” means a collection of written procedures that describes each method (and other instructions and precautions) by which the licensee performs diagnostic clinical procedures; where each diagnostic clinical procedure has been approved by the authorized user and includes the radiopharmaceutical, dosage, and route of administration.

“Diagnostic imaging system” means an assemblage of components for the generation, emission, reception, transformation, storage and visual display of the resultant image.

“Diagnostic X-ray imaging system” means an assemblage of components for the generation, emission and reception of X-rays and the transformation, storage and visual display of the resultant X-ray image which are designed and used for irradiation of any part of the human or animal body for the purpose of diagnosis or visualization.

“Direct supervision” means guidance and instruction by a qualified individual who is physically present and watching the performance of the radiological operation or procedure and in such proximity that contact can be maintained and immediate assistance can be given as required.

“Discrete source” means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

“Disposable respirator” means a respirator for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent exhaustion, physical damage, or end-of-service-life renders it unsuitable for use. Examples of this type of respirator are a disposable half-mask respirator or a disposable escape-only self-contained breathing apparatus (SCBA).

“Distinguishable from background” means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

“Dose” is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these rules, “radiation dose” is an equivalent term.

“Dose equivalent (Hd)” means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the sievert (Sv) and rem.
“Dose limits” means the permissible upper bounds of radiation doses established in accordance with these rules. For purposes of these rules, “limits” is an equivalent term.

“Effective dose equivalent (H_E)” means the sum of the products of the dose equivalent to each organ or tissue (H_T) and the weighting factor (w_T) applicable to each of the body organs or tissues that are irradiated (H_E = Σw_TH_T).

“Embryo/fetus” means the developing human organism from conception until the time of birth.

“Entrance or access point” means any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed or registered radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

“Exposure” means being exposed to ionizing radiation or to radioactive material.

“Exposure” means the quotient of dQ by dm where “dQ” is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass “dm” are completely stopped in air. (The special unit of exposure is the roentgen (R) (see 641—38.2(136C) for SI equivalent coulomb per kilogram). When not underlined as above or when indicated as ‘exposure’ or (X), the term “exposure” has a more general meaning in these rules.

“Exposure rate” means the exposure per unit of time, such as roentgen per minute and milliroentgen per hour.

“External dose” means that portion of the dose equivalent received from any source of radiation outside the body.

“Extremity” means hand, elbow, arm below the elbow, foot, knee, and leg below the knee. See 641—subrule 42.1(2) for definitions of “lower extremities” and “upper extremities” for purposes of certification standards.

“Facility” means the location, building, vehicle, or complex under one administrative control, at which radioactive material is stored or used or at which one or more radiation machines are installed, located or used.

“FDA” means the Food and Drug Administration.

“Filtering facepiece (dust mask)” means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, which is not equipped with elastomeric sealing surfaces and adjustable straps.

“Fit factor” means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

“Fit test” means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

“Former U.S. Atomic Energy Commission (AEC) or U.S. Nuclear Regulatory Commission (NRC) licensed facilities” means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or critical mass experimental facilities where AEC or NRC licenses have been terminated.

“Generally applicable environmental radiation standards” means standards issued by the U.S. Environmental Protection Agency (EPA) under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

“Gray (Gy)” means the SI unit of absorbed dose. One gray is equal to an absorbed dose of 1 joule per kilogram (1 Gy=100 rad).

“Half-value layer (HVL)” means the thickness of a specified material which attenuates X-radiation or gamma radiation to an extent such that the air kerma rate, exposure rate or absorbed dose rate is reduced to one-half of the value measured without the material at the same point. The contribution of all scattered radiation, other than any which might be present initially in the beam concerned, is deemed to be excluded.

“Hazardous waste” means those wastes designated as hazardous by U.S. Environmental Protection Agency regulations in 40 CFR Part 261.
“Healing arts” means the occupational fields of diagnosing or treating disease, providing health care and improving health by the practice of medicine, osteopathy, chiropractic, podiatry, dentistry, nursing, veterinary medicine, and supporting professions, such as physician assistants, nurse practitioners, radiologic technologists, and dental hygienists.

“Helmet” means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

“High dose-rate remote afterloader” means a brachytherapy device that remotely delivers a dose rate in excess of 1200 rads (12 gray) per hour at the point or surface where the dose is prescribed.

“High-level radioactive waste” or “HLW” means (1) irradiated reactor fuel; (2) liquid wastes resulting from the operation of the first cycle solvent extraction system, or equivalent, and the concentrated wastes from subsequent extraction cycles, or equivalent, in a facility for reprocessing irradiated reactor fuel; and (3) solids into which such liquid wastes have been converted.

“High radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual’s receiving a dose equivalent in excess of 0.1 rem (1 mSv) in 1 hour at 30 centimeters from any source of radiation or 30 centimeters from any surface that the radiation penetrates.

“Highway route controlled quantity” means a quantity within a single package which exceeds:

1. 3,000 times the A1 value of the radionuclides as specified in 49 CFR 173.435 for special form Class 7 (radioactive) material;
2. 3,000 times the A2 value of the radionuclides as specified in 49 CFR 173.435 for normal form Class 7 (radioactive) material; or
3. 1,000 TBq (27,000 Ci), whichever is least.

“Hood” means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

“Human use” means the internal or external administration of radiation or radioactive material to human beings.

“Individual” means any human being.

“Individual monitoring” means the assessment of:

1. Dose equivalent by the use of devices designed to be worn by an individual or by the use of survey data; or
2. Committed effective dose equivalent by bioassay or by determination of the time-weighted air concentrations to which an individual has been exposed, that is, DAC-hours. See the definition of DAC-hours in 641—Chapter 40.

“Individual monitoring devices” means devices designed to be worn by a single individual for the assessment of dose equivalent. For purposes of these rules, “personnel dosimeter” and “dosimeter” are equivalent terms. Examples of individual monitoring devices are film badges, thermoluminescent dosimeters (TLDs), pocket ionization chambers, optically stimulated luminescent (OSL) devices, and personal air sampling devices.

“Industrial radiography” means an examination of the structure of materials by nondestructive methods, utilizing ionizing radiation to make radiographic images.

“Inspection” means an official examination or observation including, but not limited to, tests, surveys, and monitoring to determine compliance with rules, regulations, orders, requirements, and conditions of the agency.

“Instrument traceability” means, for ionizing radiation measurements, the ability to show that an instrument has been calibrated at specified time intervals using a national standard or a transfer standard. If a transfer standard is used, the calibration must be from a laboratory accredited by a program which required continuing participation in measurement quality assurance with the National Institute of Standards and Technology or other equivalent national or international program.

“Interlock” means a device preventing the start or continued operation of equipment unless certain predetermined conditions prevail.

“Internal dose” means that portion of the dose equivalent received from radioactive material taken into the body.
“Ionizing radiation.” See “Radiation.”
“Irradiation” means the exposure of a living being or matter to ionizing radiation.
“Kilovolt (kV)(kilo electron volt (keV))” means the energy equal to that acquired by a particle with one electron charge in passing through a potential difference of 1000 volts in a vacuum.
“Lead equivalent” means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.
“Leakage radiation” means radiation emanating from the diagnostic or therapeutic source assembly except for:
1. The useful beam, and
2. Radiation produced when the exposure switch or timer is not activated.
“Lens dose equivalent (LDE)” applies to the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm²).
“License” means a license issued by the agency in accordance with the rules adopted by the agency.
“Licensed (or registered) material” means radioactive material received, possessed, used, transferred or disposed of under a general or specific license (or registration) issued by the agency.
“Licensed practitioner” means a person licensed or otherwise authorized by law to practice medicine, osteopathy, chiropractic, podiatry, or dentistry in Iowa, or certified as a physician assistant as defined in Iowa Code section 148C.1, subsection 6, and is authorized to prescribe X-ray tests for the purpose of diagnosis or treatment.
“Licensee” means any person who is licensed by the agency in accordance with these rules and the Act.
“Licensing state” means any state with regulations equivalent to the suggested state regulations for control of radiation relating to, and an effective program for, the regulatory control of NARM and which has been granted final designation by the Conference of Radiation Control Program Directors, Inc.
“Light field” means that area of the intersection of the light beam from the beam-limiting device and one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the illumination is one-fourth of the maximum in the intersection.
“Limits.” See “Dose limits.”
“Loose-fitting facepiece” means a respiratory inlet covering that is designed to form a partial seal with the face.
“Lost or missing licensed (or registered) source of radiation” means licensed (or registered) source of radiation whose location is unknown. This definition includes licensed (or registered) material that has been shipped but has not reached its planned destination and whose location cannot be readily traced in the transportation system.
“Lot tolerance percent defective” means, expressed in percent defective, the poorest quality in an individual inspection lot that should be accepted.
“Low dose-rate remote afterloader” means a brachytherapy device that remotely delivers a dose rate of less than or equal to 200 rads (2 gray) per hour at the point or surface where the dose is prescribed.
“mA” means milliampere.
“Major processor” means a user processing, handling, or manufacturing radioactive material exceeding Type A quantities as unsealed sources or material, or exceeding four times Type B quantities as sealed sources, but does not include nuclear medicine programs, universities, industrial radiographers, or small industrial programs. Type A and B quantities are defined in this rule.
“Mammography” means the radiography of the breast except as defined in 641—subrule 41.6(1).
“Mammography unit” means an assemblage of components for the production of X-rays for use during mammography, including, at a minimum: an X-ray generator, an X-ray control, a tube housing assembly, a beam-limiting device, and the supporting structures for these components.
“Manual brachytherapy” means a type of brachytherapy in which the brachytherapy sources (e.g., seeds, ribbons) are manually placed topically on or inserted either into the body cavities that are in close proximity to a treatment site or directly into the tissue volume.
“Medical use” means the intentional internal or external administration of radioactive material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user.

“Medium dose-rate remote afterloader” means a brachytherapy device that remotely delivers a dose rate of greater than 200 rads (2 gray), but less than 1200 rads (12 gray) per hour at the point or surface where the dose is prescribed.

“Member of the public” means any individual except when that individual is receiving an occupational dose.

“Minor” means an individual less than 18 years of age.

“Misadministration” means the administration of:

Radiation doses received from linear accelerator therapy, deep X-ray machine therapy or superficial therapy; involving:

Administration of external beam radiation that results, or will result, in unintended permanent functional damage to an organ or a physiological system as determined by a physician.

A dose that differs from the prescribed dose by more than 5 rem (0.05 sievert) effective dose equivalent, 50 rem (0.5 sievert) to an organ or tissue, or 50 rem (0.5 sievert) shallow dose equivalent to the skin; and either:

1. The total dose delivered differs from the prescribed dose by 20 percent or more; or
2. The fractionated dose delivered differs from the prescribed dose for a single fraction by 50 percent or more.

A dose that exceeds 5 rem (0.05 sievert) effective dose equivalent, 50 rem (0.5 sievert) to an organ or tissue, or 50 rem (0.5 sievert) shallow dose equivalent to the skin from either of the following:

1. An administration of the wrong treatment modality.
2. An administration to the wrong patient or human research subject.

A dose to the skin or an organ or tissue other than the treatment site that exceeds by 50 rem (0.5 sievert) to an organ or tissue and 50 percent or more of the dose expected from the administration defined in the written directive.

“Monitoring (radiation monitoring, radiation protection monitoring)” means the measurement of radiation levels, radioactive material concentrations, surface area concentrations or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures and doses.

“NARM” means any naturally occurring or accelerator-produced radioactive material. It does not include byproduct, source, or special nuclear material.

“Natural radioactivity” means radioactivity of naturally occurring nuclides. For the purpose of meeting the definition of a licensing state by the Conference of Radiation Control Program Directors, Inc., (CRCPD), NARM refers only to discrete sources of NARM. Diffuse sources of NARM are excluded from consideration by the CRCPD for licensing state designation purposes.

“Negative pressure respirator (tight fitting)” means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

“Nuclear Regulatory Commission (NRC)” means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

“Occupational dose” means the dose received by an individual in the course of employment in which the individual’s assigned duties involve exposure to radiation or to radioactive material from licensed or unlicensed and registered or unregistered sources of radiation, whether in the possession of the licensee, registrant, or other person. Occupational dose does not include dose received from background radiation, from any medical administration the individual has received, from exposure to individuals administered sources of radiation or radioactive material and released in accordance with 641—subrule 41.2(27), from voluntary participation in medical research programs, or as a member of the public.

“Package” means the packaging together with its radioactive contents as presented for transport.

“Particle accelerator.” See “Accelerator.”

“Patient” means an individual or animal subjected to healing arts examination, diagnosis or treatment.
“Peak tube potential” means the maximum value of the potential difference across the X-ray tube during an exposure.

“Person” means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof, and any legal successor, representative, agent, or agency of the foregoing, but shall not include federal government agencies.

“Personnel monitoring equipment.” See “Individual monitoring devices.”

“Phantom” means a volume of material behaving in a manner similar to tissue with respect to the attenuation and scattering of radiation. This requires that both the atomic number (Z) and the density of the material be similar to that of tissue.

“Pharmacist” means an individual licensed by this state to compound and dispense drugs, prescriptions, and poisons.

“Physician” means a person who is currently licensed in Iowa to practice medicine and surgery, osteopathic medicine and surgery, or osteopathy.

“Positive pressure respirator” means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

“Positron emission tomography (PET) radionuclide production facility” means a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.

“Powered air-purifying respirator (PAPR)” means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

“Preceptor” means an individual who provides, directs, or verifies training and experience required for an individual to become an authorized user, an authorized medical physicist, an authorized nuclear pharmacist, a radiation safety officer, or an associate radiation safety officer.

“Prescribed dosage” means the specified activity or range of activity of unsealed radioactive material as documented:

1. In a written directive; or
2. In accordance with the directions of the authorized user for procedures performed in Subrules 41.2(31) and 41.2(33).

“Prescribed dose” means:

1. For gamma stereotactic radiosurgery, the total dose as documented in the written directive;
2. For teletherapy, particle accelerators and X-ray therapy systems, the total dose and dose per fraction as documented in the written directive;
3. For manual brachytherapy, either the total source strength and exposure time or the total dose, as documented in the written directive; or
4. For remote brachytherapy afterloaders, the total dose and dose per fraction as documented in the written directive.

“Pressure demand respirator” means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

“Primary dose monitoring system” means a system which will monitor the useful beam during irradiation and which will terminate irradiation when a preselected number of dose monitor units have been delivered.

“Primary protective barrier” (see “Protective barrier”).

“Principal activities,” as used in this part, means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

“Protective barrier” means a barrier used to reduce radiation exposure. The types of protective barriers are as follows:

1. “Primary protective barrier” means the material, excluding filters, placed in the useful beam.
2. “Secondary protective barrier” means a barrier sufficient to attenuate the stray radiation to the required degree.
“Public dose” means the dose received by a member of the public from exposure to radiation or to radioactive material released by a licensee, registrant, or other person, or to any other source of radiation under the control of a licensee, registrant, or other person. It does not include occupational dose or doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered sources of radiation or radioactive material and released under 641—subrule 41.2(27) or from voluntary participation in medical research programs.

“Pyrophoric material” means any liquid that ignites spontaneously in dry or moist air at or below 130°F (54.4°C) or solid, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and, when ignited, burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

“Qualified expert” means an individual having the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs. For example, individuals certified in the appropriate field by the American Board of Radiology, the American Board of Medical Physics, or the American Board of Health Physics, or those having equivalent qualifications. With reference to the calibration of radiation therapy equipment, an individual having, in addition to the above qualifications, training and experience in the clinical applications of radiation physics to radiation therapy, for example, individuals certified in Therapeutic Radiological Physics or X-Ray and Radium Physics by the American Board of Radiology, or those having equivalent qualifications.

“Qualitative fit test (QLFT)” means a pass-fail fit test to assess the adequacy of respirator fit that relies on the individual’s response to the test agent.

“Quality factor” (Q) means the modifying factor, listed in Tables I and II of 38.4(4), that is used to derive dose equivalent from absorbed dose.

“Quantitative fit test (QNFT)” means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

“Rad” means the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 erg per gram or 0.01 joule per kilogram (0.01 gray).

“Radiation” means alpha particles, beta particles, gamma rays, X-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of these rules, ionizing radiation is an equivalent term. Radiation, as used in these rules, does not include nonionizing radiation, such as radiowaves or microwaves, visible, infrared, or ultraviolet light.

“Radiation area” means any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.05 mSv (0.005 rem) in 1 hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

“Radiation detector” means a device which, in the presence of radiation, by either direct or indirect means, provides a signal or other indication suitable for use in measuring one or more quantities of incident radiation.

“Radiation dose.” See “Dose.”

“Radiation machine” means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.

“Radiation safety officer” means an individual who has the knowledge and responsibility to apply appropriate radiation protection regulations and has been assigned such responsibility by the licensee or registrant.

“Radioactive material” means any solid, liquid, or gas which emits radiation spontaneously.

“Radioactivity” means the transformation of unstable atomic nuclei by the emission of radiation.

“Radiobiology.” See “Bioassay.”

“Radiographic imaging system” means any system whereby a permanent or semipermanent image is recorded on an image receptor by the action of ionizing radiation.

“Radionuclide” means a radioactive element or a radioactive isotope.

“Registrant” means any person who is registered with the agency or is legally obligated to register with the agency pursuant to these rules and the Act.
“Registration” means registration with the agency in accordance with the rules adopted by the agency.

“Regulations of the U.S. Department of Transportation” means the regulations in 49 CFR Parts 100-189.

“Rem” means the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem = 0.01 sievert).

“Reportable medical event” means the medical event:

a. In which, except for an event that results from patient intervention:
   1. A dose that differs from the prescribed dose or dose that would have resulted from the prescribed dosage by more than 5 rem (0.05 Sv) effective dose equivalent, 50 rem (0.5 Sv) to an organ or tissue, or 50 rem (0.5 Sv) shallow dose equivalent to the skin; and
      • The total dose delivered differs from the prescribed dose by 20 percent or more;
      • The total dosage delivered differs from the prescribed dosage by 20 percent or more or falls outside the prescribed dosage range; or
      • The fractionated dose delivered differs from the prescribed dose, for a single fraction, by 50 percent or more.
   2. A dose that exceeds 5 rem (0.05 Sv) effective dose equivalent, 50 rem (0.5 Sv) to an organ or tissue, or 50 rem (0.5 Sv) shallow dose equivalent to the skin from any of the following:
      • An administration of the wrong radioactive drug containing byproduct material or the wrong radionuclide for a brachytherapy procedure;
      • An administration of a radioactive drug containing byproduct material by the wrong route of administration;
      • An administration of a dose or dosage to the wrong individual or human research subject;
      • An administration of a dose or dosage delivered by the wrong mode of treatment; or
      • A leaking sealed source.
   3. A dose to the skin or an organ or tissue other than the treatment site that exceeds by:
      • 50 rem (0.5 Sv) or more the expected dose to that site from the procedure if the administration had been given in accordance with the written directive prepared or revised before administration; and
      • 50 percent or more the expected dose from the procedure if the administration had been given in accordance with the written directive prepared or revised before administration;

b. Resulting from intervention of a patient or human research subject in which administration of byproduct material or radiation from byproduct material results or will result in unintended permanent functional damage to an organ or a physiological system, as determined by a physician.

“Research and development” means (1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and
testing of models, devices, equipment, materials, and processes. Research and development does not include the internal or external administration of radiation or radioactive material to human beings.

“Residual radioactivity” means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee’s control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 641—Chapter 40 or any previous state or federal licenses, rules or regulations.

“Restricted area” means an area, access to which is limited by the licensee or registrant for the purpose of protecting individuals against undue risks from exposure to sources of radiation. A restricted area shall not include any areas used for residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

“Roentgen” means the special unit of exposure. One roentgen (R) equals 2.58 × 10⁻⁴ coulombs/kilogram of air (see “Exposure” and 38.4(4)).

“Scattered radiation” means ionizing radiation emitted by interaction of ionizing radiation with matter, the interaction being accompanied by a change in direction of the radiation. Scattered primary radiation means that scattered radiation which has been deviated in direction only by materials irradiated by the useful beam.

“Sealed source” means radioactive material that is encased in a capsule designed to prevent leakage or escape of the radioactive material.

“Sealed Source and Device Registry” or “SSDR” means the national registry that contains all the registration certificates, generated by both the NRC and the agreement states, that summarizes the radiation safety information for the sealed sources and devices and describes the licensing and use conditions approved for the product.

“Secondary dose monitoring system” means a system which will terminate irradiation in the event of failure of the primary dose monitoring system.

“Secondary protective barrier” (see “Protective barrier”).

“Self-contained breathing apparatus (SCBA)” means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

“Shallow dose equivalent” (H₂), which applies to the external exposure of the skin of the whole body or the skin of an extremity, means the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm²).

“Shutter” means a device attached to the tube housing assembly which can intercept the entire cross-sectional area of the useful beam and which has a lead equivalency not less than that of the tube housing assembly.

“SI” means the abbreviation for the International System of Units.

“Sievert” means the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor (1 Sv = 100 rem).

“Simulator (radiation therapy simulation system)” means any X-ray system intended for localizing the volume to be exposed during radiation therapy and reproducing the position and size of the therapeutic irradiation field.

“Site area emergency” means events may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by off-site response organizations to protect persons off-site.

“Site boundary” means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee or registrant.

“Source” means the focal spot of the X-ray tube.

“Source material” means:
1. Uranium or thorium, or any combination thereof, in any physical or chemical form; or
2. Ores that contain by weight one-twentieth of 1 percent (0.05 percent) or more of uranium, thorium or any combination of uranium and thorium. Source material does not include special nuclear material.
“Source material milling” means any activity that results in the production of byproduct material as defined by definition (2) of byproduct material.

“Source of radiation” means any radioactive material or any device or equipment emitting, or capable of producing, radiation.

“Source traceability” means the ability to show that a radioactive source has been calibrated either by the national standards laboratory of the National Institute of Standards and Technology or by a laboratory which participates in continuing measurement quality assurance programs with the National Institute of Standards and Technology or other equivalent national or international program.

“Special form radioactive material” means radioactive material which satisfies the following conditions:

1. It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;
2. The piece or capsule has at least one dimension not less than 5 millimeters (0.2 inch); and
3. It satisfies the test requirements specified by the U.S. Nuclear Regulatory Commission. A special form encapsulation designed in accordance with the U.S. Nuclear Regulatory Commission requirements in effect on June 30, 1983, and constructed prior to July 1, 1985, may continue to be used. A special form encapsulation either designed or constructed after June 30, 1985, must meet requirements of this definition applicable at the time of its design or construction.

“Special nuclear material” means:

1. Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the agency declares by order to be special nuclear material after the U.S. Nuclear Regulatory Commission, pursuant to the provisions of Section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material; or
2. Any material artificially enriched by any of the foregoing but does not include source material.

“Special nuclear material in quantities not sufficient to form a critical mass” means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; uranium-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed 1. For example, the following quantities in combination would not exceed the limitation and are within the formula:

\[
\frac{175 \text{ (grams contained U-235)}}{350} + \frac{50 \text{ (grams U-233)}}{200} + \frac{50 \text{ (grams Pu)}}{200} = 1
\]

“SSD” means the distance between the source and the skin entrance plane of the patient (see “Target-to-skin distance (TSD)”).

“Stray radiation” means the sum of leakage and scattered radiation.

“Supplied-air respirator (SAR)” or “airline respirator” means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

“Survey” means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of sources of radiation. When appropriate, such evaluation includes a physical survey of the location of radioactive material and measurements or calculations of levels of radiation or concentrations or quantities of radioactive material present.

“Target-to-skin distance (TSD)” means the distance measured along the beam axis from the center of the front surface of the X-ray target or electron virtual source scattering foil to the surface of the irradiated object or patient.

“Termination of irradiation” means the stopping of irradiation in a fashion which will not permit continuance of irradiation without the resetting of operating conditions at the control panel.

“Test” means the process of verifying compliance with an applicable regulation.

“These rules” means 641—Chapters 38 to 45.
“Tight-fitting facepiece” means a respirator inlet covering that forms a complete seal with the face.

“Total effective dose equivalent” (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

“Total organ dose equivalent” (TODE) means the sum of the deep dose equivalent and the committed dose equivalent to the organ receiving the highest dose as described in 641—40.86(1) “f.”

“Traceable to a national standard.” See “Instrument traceability” or “Source traceability.”

“Treatment site” means the anatomical description of the tissue intended to receive a radiation dose, as described in the written directive.

“Tube” means an X-ray tube unless otherwise specified. See “X-ray tube.”

“Tube housing assembly” means the tube housing with tube installed. It includes high-voltage or filament transformers, or both, and other appropriate elements when such are contained within the tube housing.

“Type A quantity” means a quantity of radioactive material, the aggregate radioactivity of which does not exceed A1 for special form radioactive material, or A2, for normal form radioactive material as defined in 10 CFR 71.4.

“Type B quantity” means a quantity of radioactive material greater than a Type A quantity as defined in 10 CFR 71.4.

“Unrefined and unprocessed ore” means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining. Processing does not include sieving or encapsulation of ore or preparation of samples for laboratory analysis.

“Unrestricted area” means an area to which access is neither limited nor controlled by the licensee or registrant. For purposes of these rules, “uncontrolled area” is an equivalent term.


“User seal check (fit check)” means an action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

“Very high radiation area” means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual’s receiving an absorbed dose in excess of 500 rad (5 Gy) in 1 hour at 1 meter from a source of radiation or 1 meter from any surface that the radiation penetrates.

“Waste” means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in paragraphs “2,” “3” and “4” of the definition of “byproduct material” set forth in this chapter.

“Waste handling licensees” means persons licensed to receive and store radioactive wastes prior to disposal or persons licensed to dispose of radioactive waste.

“Wedge filter” means an added filter effecting continuous progressive attenuation on all or part of the useful beam.

“Week” means seven consecutive days starting on Sunday.

“Whole body” means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knee.

“Worker” means an individual engaged in work under a license or registration issued by the agency and controlled by a licensee or registrant, but does not include the licensee or registrant.
“Working level” (WL) means any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of $1.3 \times 10^5$ MeV of potential alpha particle energy. The short-lived radon daughters are—for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

“Working level month” (WLM) means an exposure to 1 working level for 170 hours—2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month.

“Written directive” means an order in writing for a specific patient or human research subject, dated and signed by an authorized user prior to the administration of a radiopharmaceutical or by an individual qualified by training and experience to conduct particle accelerator therapy or radiation for X-ray therapy, as specified in 641—subrule 41.2(87).

"X-radiation" means penetrating electromagnetic radiation with energy greater than 0.1 kV produced by bombarding a metallic target with fast electrons in a high vacuum.

"X-ray tube" means any electron tube which is designed to be used primarily for the production of X-rays.

"Year" means the period of time beginning in January used to determine compliance with the provisions of these rules. The licensee or registrant may change the starting date of the year used to determine compliance by the licensee or registrant provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

[ARC 8982B, IAB 8/11/10, effective 9/15/10; ARC 1639C, IAB 10/1/14, effective 11/5/14; ARC 3746C, IAB 4/11/18, effective 5/16/18; ARC 5059C, IAB 6/17/20, effective 7/22/20]

641—38.3(136C) Exemptions from the regulatory requirements.

38.3(1) General provision. The agency may, upon application therefor or upon its own initiative, grant such exemptions or exceptions from the requirements of the rules in 641—Chapters 38 to 46 as it determines are authorized by law and will not result in undue hazard to public health and safety or property. Application for exemptions or exceptions should be made in accordance with 641—Chapter 178.

38.3(2) Persons using byproduct material under certain Department of Energy and Nuclear Regulatory Commission contracts.

a. Except to the extent that NRC facilities or activities of the types subject to licensing pursuant to the Energy Reorganization Act of 1974 are involved, any prime contractor of the NRC is exempt from the license requirements of these rules and from the regulations of these rules to the extent that such contractor, under the contractor’s prime contract with the NRC, manufactures, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material for:

1. The performance of work for a department at the United States government-owned or government-controlled site, including the transportation of byproduct material to or from such site and the performance of contract services during temporary interruptions of such transportation;
2. Research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof; or
3. The use or operation of nuclear reactors or other nuclear devices in a United States government-owned vehicle or vessel.

b. In addition to the foregoing exemptions and subject to the requirement for licensing of NRC facilities and activities pursuant to the requirements of the Energy Reorganization Act of 1974, any prime contractor or subcontractor of the NRC is exempt from the requirements for a license set forth in the Act and from the regulations in these rules to the extent that such prime contractor or subcontractor manufactures, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material under the contractor’s or subcontractor’s prime contract or subcontract when the NRC determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work can be accomplished without undue risk to the public health and safety.
c. Carriers. Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from these rules to the extent that they transport or store radioactive material in the regular course of carriage for another or of storage incident thereto.

641—38.4(136C) General regulatory requirements.

38.4(1) Records.

a. Each licensee and registrant shall maintain records showing the receipt, transfer, and disposal of all sources of radiation. Additional record requirements are specified elsewhere in these rules.

b. Electronic records.

(1) A record or signature shall not be denied legal effect or enforceability solely because it is in electronic form.

(2) A contract shall not be denied legal effect or enforceability solely because an electronic record was used in its formation.

(3) If a rule requires a record to be in writing, an electronic record shall satisfy the rule.

(4) If a rule requires a signature, an electronic signature shall satisfy the rule.

38.4(2) Inspections.

a. Each licensee and registrant shall afford the agency at all reasonable times opportunity to inspect sources of radiation and the premises and facilities wherein such sources of radiation are used or stored.

b. Each licensee and registrant shall make available to the agency for inspection, upon reasonable notice, records maintained pursuant to these rules.

38.4(3) Tests. Each licensee and registrant shall perform upon instructions from the agency, or shall permit the agency to perform, such reasonable tests as the agency deems appropriate or necessary including, but not limited to, tests of:

a. Sources of radiation;

b. Facilities wherein sources of radiation are used or stored;

c. Radiation detection and monitoring instruments; and

d. Other equipment and devices used in connection with utilization or storage of licensed or registered sources of radiation.

38.4(4) Units of exposure and dose.

a. As used in these rules, the quality factors for converting absorbed dose to dose equivalent are shown in Table I.

<table>
<thead>
<tr>
<th>TYPE OF RADIATION</th>
<th>Quality Factor (Q)</th>
<th>Absorbed Dose Equal to a Unit Dose Equivalent (see footnote “1”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X, gamma, or beta radiation and high-speed electrons</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Alpha particles, multiple-charged particles, fission fragments and heavy particles of unknown charge</td>
<td>20</td>
<td>0.05</td>
</tr>
<tr>
<td>Neutrons of unknown energy</td>
<td>10</td>
<td>0.1</td>
</tr>
<tr>
<td>High-energy protons</td>
<td>10</td>
<td>0.1</td>
</tr>
</tbody>
</table>

1. Absorbed dose in rad equal to 1 rem or the absorbed dose in gray equal to 1 sievert.

b. If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in sievert per hour or rem per hour, as provided in 38.4(4)”a, ” 1 rem (0.01 Sv) of neutron radiation of unknown energies may, for purposes of these rules, be assumed to result from a total fluence of 25 million neutrons per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee or registrant may use the
fluence rate per unit dose equivalent or the appropriate Q value from Table II to convert a measured tissue dose in gray or rad to dose equivalent in sievert or rem.

### TABLE II

**MEAN QUALITY FACTORS, Q, AND FLUENCE PER UNIT DOSE EQUIVALENT FOR MONOENERGETIC NEUTRONS**

<table>
<thead>
<tr>
<th>Neutron Energy (MeV)</th>
<th>Quality Factor(^a) (Q)</th>
<th>Fluence per Unit Dose Equivalent(^b) (neutrons cm(^{-2}) rem(^{-1}))</th>
<th>Fluence per Unit Dose Equivalent(^b) (neutrons cm(^{-2}) Sv(^{-1}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>(thermal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5E–8</td>
<td>2</td>
<td>980E+6</td>
<td>980E+8</td>
</tr>
<tr>
<td>1E–7</td>
<td>2</td>
<td>980E+6</td>
<td>980E+8</td>
</tr>
<tr>
<td>1E–6</td>
<td>2</td>
<td>810E+6</td>
<td>810E+8</td>
</tr>
<tr>
<td>1E–5</td>
<td>2</td>
<td>810E+6</td>
<td>810E+8</td>
</tr>
<tr>
<td>1E–4</td>
<td>2</td>
<td>840E+6</td>
<td>840E+8</td>
</tr>
<tr>
<td>1E–3</td>
<td>2</td>
<td>980E+6</td>
<td>980E+8</td>
</tr>
<tr>
<td>1E–2</td>
<td>2.5</td>
<td>1010E+6</td>
<td>1010E+8</td>
</tr>
<tr>
<td>1E–1</td>
<td>7.5</td>
<td>170E+6</td>
<td>170E+8</td>
</tr>
<tr>
<td>5E–1</td>
<td>11</td>
<td>39E+6</td>
<td>39E+8</td>
</tr>
<tr>
<td>1</td>
<td>11</td>
<td>27E+6</td>
<td>27E+8</td>
</tr>
<tr>
<td>2.5</td>
<td>9</td>
<td>29E+6</td>
<td>29E+8</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>23E+6</td>
<td>23E+8</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>24E+6</td>
<td>24E+8</td>
</tr>
<tr>
<td>10</td>
<td>6.5</td>
<td>24E+6</td>
<td>24E+8</td>
</tr>
<tr>
<td>14</td>
<td>7.5</td>
<td>17E+6</td>
<td>17E+8</td>
</tr>
<tr>
<td>20</td>
<td>8</td>
<td>16E+6</td>
<td>16E+8</td>
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<tr>
<td>40</td>
<td>7</td>
<td>14E+6</td>
<td>14E+8</td>
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<tr>
<td>60</td>
<td>5.5</td>
<td>16E+6</td>
<td>16E+8</td>
</tr>
<tr>
<td>1E+2</td>
<td>4</td>
<td>20E+6</td>
<td>20E+8</td>
</tr>
<tr>
<td>2E+2</td>
<td>3.5</td>
<td>19E+6</td>
<td>19E+8</td>
</tr>
<tr>
<td>3E+2</td>
<td>3.5</td>
<td>16E+6</td>
<td>16E+8</td>
</tr>
<tr>
<td>4E+2</td>
<td>3.5</td>
<td>14E+6</td>
<td>14E+8</td>
</tr>
</tbody>
</table>

\(^a\)Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-centimeter diameter cylinder tissue-equivalent phantom.

\(^b\)Monoenergetic neutrons incident normally on a 30-centimeter diameter cylinder tissue-equivalent phantom.

38.4(5) Reserved.

38.4(6) Additional requirements. The agency may, by rule, regulation, or order, impose upon any licensee or registrant such requirements in addition to those established in these rules as it deems appropriate or necessary to minimize danger to public health and safety or property.

641—38.5 Reserved.

641—38.6(136C) Prohibited uses. A hand-held fluoroscopic screen shall not be used with X-ray equipment unless it has been accepted for certification by the U.S. Food and Drug Administration, Center for Devices and Radiological Health. A shoe-fitting fluoroscopic device shall not be used. Radiation from radiation-emitting machines or radioactive materials shall not be used on humans for nonmedical purposes except as approved by the agency for security-related purposes.

[ARC 5059C, IAB 6/17/20, effective 7/22/20]

641—38.7(136C) Communications.
38.7(1) All communications and reports concerning these rules, and applications filed thereunder, should be addressed to the agency at its office located at the Iowa Department of Public Health, Bureau of Radiological Health, Lucas State Office Building, 5th Floor, Des Moines, Iowa 50319.

38.7(2) Drafts of proposed regulations released to the department from the federal government which constitute essential information needed by the department to ensure compliance with federal regulations are not available for public examination. Therefore, pursuant to Iowa Code section 22.9, the department waives the provision of Iowa Code section 22.2 as it applies to these proposed draft regulations.

641—38.8(136C) Fees.

38.8(1) Radiation machines.

a. Each registrant shall, at the time of registration and the anniversary date thereafter, as long as the registrant owns the radiation machine, remit to the agency a nonrefundable fee sufficient to defray the cost of registering the equipment with the department. All fees shall be paid annually by credit card or by check or money order made payable to the Iowa Department of Public Health. The fees to be paid shall be in the amount computed by the following schedule:

<table>
<thead>
<tr>
<th>Type of X-ray machine</th>
<th>Fee per tube</th>
<th>Maximum fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Medical</td>
<td>$120</td>
<td>$3,000</td>
</tr>
<tr>
<td>2. Osteopathy</td>
<td>$120</td>
<td>$3,000</td>
</tr>
<tr>
<td>3. Chiropractic</td>
<td>$120</td>
<td>$3,000</td>
</tr>
<tr>
<td>4. Dentistry</td>
<td>$60</td>
<td>$1,550</td>
</tr>
<tr>
<td>5. Podiatry</td>
<td>$75</td>
<td>$2,000</td>
</tr>
<tr>
<td>6. Veterinary Medicine</td>
<td>$60</td>
<td>–</td>
</tr>
<tr>
<td>7. (Industrial/Nonmedical Use)</td>
<td>$100</td>
<td>–</td>
</tr>
<tr>
<td>8. Food Sterilization</td>
<td>$500</td>
<td>–</td>
</tr>
<tr>
<td>9. Accelerators and Electronic</td>
<td>$275</td>
<td>–</td>
</tr>
<tr>
<td>Brachytherapy Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Electron Microscope</td>
<td>$40</td>
<td>–</td>
</tr>
<tr>
<td>11. Bone Densitometry</td>
<td>$55</td>
<td>–</td>
</tr>
</tbody>
</table>

Fees for radiation machines not listed in the above schedule shall not be less than $120 per unit/tube.

b. Each registrant shall, where appropriate, pay the following special inspections/interpretation fee at the written request of the department:

(1) Mammography unit inspections fees:
1. $1,575 for the first unit and, if the facility has additional units at the address of the first unit, a fee of $375 for each additional unit; or
2. $1,575 per portable unit for each site; or
3. Dollar amount to be determined and justified by the department on a case-by-case basis for facilities which do not meet the above criteria; or
4. $675 for the second facility follow-up visit to review or determine the corrective action taken to address noncompliances; or
5. $1,575 for each stereotactic breast biopsy unit.

(2) Industrial and oncology accelerator registrants and electronic brachytherapy registrants shall pay for each inspection a fee of $900 for the first unit and $225 for each additional unit.

(3) Industrial radiography X-ray units/walk-in cabinet radiography X-ray unit registrants shall pay for each inspection a fee of $450 for the first unit and $130 for each additional unit.

c. Each person who is engaged in the business of installing or offering to furnish radiation machines or is engaged in the business of furnishing or offering to furnish radiation machine servicing or service in the state shall apply for registration of such service with the agency prior to furnishing or
offering to furnish any such service. Application shall be on a form provided by the department and include an annual nonrefundable fee of $200.

d. Each person engaged in providing health physics services in mammography in Iowa who meets the requirements of 641—paragraph 41.6(3)“c” and is deemed qualified by this agency must submit a $100 annual listing fee to this agency.

e. All mammography facilities providing services in Iowa must submit a $150 annual authorization certification fee.

38.8(2) Radioactive material fee schedule. Fees associated with the possession and use of radioactive materials in Iowa shall not exceed those specified in 10 CFR 170.31 and 10 CFR 171.16. The following fee schedule shall apply.

<table>
<thead>
<tr>
<th>Program Code</th>
<th>Category</th>
<th>Type</th>
<th>New License Fee</th>
<th>Inspection Priority</th>
<th>Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3.L.) 01100</td>
<td>AAB</td>
<td>Academic Type A Broad</td>
<td>$5,400</td>
<td>1</td>
<td>$14,600</td>
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<tr>
<td>(8.A.) 03710</td>
<td>CD</td>
<td>Civil Defense</td>
<td>$2,500</td>
<td>5</td>
<td>$2,000</td>
</tr>
<tr>
<td>(3.E.) 03510</td>
<td>I1</td>
<td>Irradiators, Self-Shielding &lt;10,000 Curies</td>
<td>$3,200</td>
<td>5</td>
<td>$2,600</td>
</tr>
<tr>
<td>(3.O.) 03320</td>
<td>IR1</td>
<td>Industrial Radiography – Temporary Job Sites</td>
<td>$3,100</td>
<td>1</td>
<td>$8,000</td>
</tr>
<tr>
<td>(3.P.) 03120</td>
<td>FG</td>
<td>Measuring Systems – Fixed Gauge</td>
<td>$3,400</td>
<td>5</td>
<td>$2,000</td>
</tr>
<tr>
<td>(3.P.) 03121</td>
<td>PG</td>
<td>Measuring Systems – Portable Gauge</td>
<td>$3,400</td>
<td>5</td>
<td>$2,000</td>
</tr>
<tr>
<td>(3.P.) 02410</td>
<td>IVL</td>
<td>In-Vitro Testing Laboratory</td>
<td>$3,400</td>
<td>5</td>
<td>$2,000</td>
</tr>
<tr>
<td>(7.C.) 02230</td>
<td>HDR</td>
<td>High Dose Rate Afterloader</td>
<td>$5,500</td>
<td>1</td>
<td>$5,100</td>
</tr>
<tr>
<td>(7.C.) 02120</td>
<td>M1</td>
<td>Medical – Diagnostic &amp; Therapy</td>
<td>$5,500</td>
<td>3</td>
<td>$4,000</td>
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<tr>
<td>(7.C.) 02121</td>
<td>M2</td>
<td>Medical – Diagnostic Only</td>
<td>$5,500</td>
<td>4</td>
<td>$3,600</td>
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<tr>
<td>(7.C.) 02240</td>
<td>MET</td>
<td>Medical – Diagnostic, Therapeutic, Emerging Technologies</td>
<td>$5,500</td>
<td>2</td>
<td>$4,500</td>
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<tr>
<td>(3.S.) 03210</td>
<td>PET</td>
<td>Accelerator-Produced RAM</td>
<td>$7,500</td>
<td>1</td>
<td>$5,375</td>
</tr>
<tr>
<td>(3.C.) 02500</td>
<td>NP</td>
<td>Nuclear Pharmacy</td>
<td>$5,100</td>
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<td>$7,700</td>
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<tr>
<td>(7.C.) 02231</td>
<td>NV1</td>
<td>Nuclear Medical Van</td>
<td>$4,140</td>
<td>2</td>
<td>$4,000</td>
</tr>
<tr>
<td>(7.C.) 22160</td>
<td>PMM</td>
<td>Pacemaker – Byproduct and/or SNM</td>
<td>$2,600</td>
<td>R</td>
<td>Note 5</td>
</tr>
<tr>
<td>(3.M.) 03620</td>
<td>RD2</td>
<td>Research &amp; Development – Other</td>
<td>$4,375</td>
<td>3</td>
<td>$4,000</td>
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<tr>
<td>(2.C.) 11300</td>
<td>SM1</td>
<td>Source Material, Other, &gt;150 Kilograms</td>
<td>$2,600</td>
<td>3</td>
<td>$4,000</td>
</tr>
<tr>
<td>(1.D.) 22120</td>
<td>SNM2</td>
<td>SNM Plutonium – Neutron Source</td>
<td>$2,600</td>
<td>5</td>
<td>$3,750</td>
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<tr>
<td>(3.P.) 03221</td>
<td>CAL</td>
<td>Calibration and W/L Tests</td>
<td>$2,275</td>
<td>5</td>
<td>$3,900</td>
</tr>
<tr>
<td>(3.P.) 03122</td>
<td>XRF</td>
<td>X-Ray Fluorescent Analyzer</td>
<td>$2,275</td>
<td>5</td>
<td>$1,860</td>
</tr>
<tr>
<td>(3.P.) 02400</td>
<td>VMT</td>
<td>Veterinary Medicine – Therapy</td>
<td>$3,250</td>
<td>3</td>
<td>$3,900</td>
</tr>
<tr>
<td>(3.B.) 03214</td>
<td>MD</td>
<td>Manufacturing/Distribution</td>
<td>$3,500</td>
<td>3</td>
<td>$3,980</td>
</tr>
</tbody>
</table>
NOTES:
1. Reciprocity fee is $1,800 annually (180 days).
2. Inspection priorities are based on NRC inspection manual chapter 2800. Priority “R” is a remote contact and is not considered an inspection.
3. License amendment fee for all categories is $600.
4. Annual fees are due no later than September 1 of each year. A 10 percent late charge will be assessed per month for late payments. Licensees with more than two authorized locations of use will be charged an additional 10 percent of the annual fee per location.
5. Separate annual fees will not be assessed for pacemaker licenses issued to medical institutions that also hold nuclear medicine licenses with the agency.
6. General license registration fee is $700 annually on registration anniversary.

38.8(3) Industrial radiography testing and certification.
   a. A nonrefundable fee of $275 shall be submitted with each application for taking an industrial radiography examination to become certified by the agency.
   b. A nonrefundable fee of $120 shall be submitted with each application, not associated with an agency-administered industrial radiography examination, for a trainee or trainer card issued to a radiographer’s assistant or an industrial radiographer.

38.8(4) Owner-assessed expenses. In cases in which the agency determines that the cost of regulating or inspecting registered radiation machine facilities or radioactive materials licensees significantly exceeds the fees charged to the facility, it may assess an additional fee to the owner or user of the source(s) of radiation to cover the actual expenses incurred by the agency.

38.8(5) Environmental surveillance fee. A fee may be levied against any licensee, registrant, corporation, company, business, or individual for environmental surveillance activities which are necessary to assess the radiological impact of activities conducted by the licensee, registrant, corporation, company, business, or individual. This fee shall be sufficient to defray actual costs incurred by the agency, including, but not limited to, salaries of agency employees, per diem, travel, and costs of laboratory analysis of samples, when required.

38.8(6) Reserved.

38.8(7) Returned check and late fees. Persons who fail to pay required fees to the agency are subject to the following penalties:
   a. $25 for each payment received by the agency in accordance with these rules, for which insufficient funds are available to fulfill the obligation of such payment to the agency.
   b. $25 for each month for failure to pay any fee administered by this agency starting 30 days after the due date of the original notice. This fee is added to the unpaid fee.

38.8(8) Reciprocity. Fees paid for reciprocal recognition of out-of-state persons wishing to utilize radiation machines or radioactive materials in Iowa shall allow the out-of-state person to operate for a total of 180 days during the 365-day reciprocity period starting the date the fee is received by the agency.
   a. Radiation machines. Any out-of-state person who wishes to bring an X-ray machine or linear accelerators into the state to perform work or services shall pay a reciprocity fee of $500.
   b. Radioactive materials. Out-of-state persons wishing to bring sources of radioactive material into Iowa for business purposes may be subject to a reciprocity fee depending on the type of activity to be performed and the type of radioactive materials license possessed (refer to 641—subrule 39.4(90)). If a reciprocity fee is applicable, it shall be assessed at the rate for reciprocity specified in the radioactive materials fee schedule available through the agency for each 365-day reciprocity period.

38.8(9) and 38.8(10) Reserved.

38.8(11) Radioactive material transport fee schedule.
   a. All shippers shall pay the following fee(s) unless the department obtains sufficient funding from another source, which may include but is not limited to a federal agency or a contract with a shipper.
   (1) $1800 per highway cask for each truck shipment of spent nuclear fuel, high-level radioactive waste, transuranic waste, or highway route controlled quantity of radioactive materials or any material
shipped in accordance with rule 641—37.77(136C) traversing the state or any portion thereof. Single

cask truck shipments are subject to a surcharge of $20 per mile for every mile over 250 miles traveled.

(2) $1300 for the first cask and $125 for each additional cask for each rail shipment of spent nuclear

fuel, high-level radioactive waste, transuranic waste, or any material shipped in accordance with rule

641—37.77(136C) traversing the state or any portion thereof.

(3) $175 for each shipment by truck or by rail paid by the shipper for low-level radioactive waste

shipped in or across Iowa. The department may accept an annual shipment fee as negotiated with a

shipper or accept payment per shipment. This fee applies to waste shipped to a site authorized by a
government agency to receive low-level radioactive waste or shipped to a storage site to be held for

future disposal.

b. All fees must be paid by the shipper prior to shipment. Shippers must request an application for

a permit to ship radioactive material from the Iowa Department of Transportation, Office of Motor Carrier

Services. Assistance may be obtained by calling the Bureau of Radiological Health at (515)281-3478.

Other methods of fee payment may be considered by the department on a case-by-case basis upon request

of the shipper. A request for an alternative method of payment must be made to the department prior to

shipment.

c. All fees received pursuant to this subrule shall be used for purposes related to transporting

radioactive material, including enforcement and planning, developing, and maintaining a capability for

emergency response.

38.8(12) Fee waiver. Any fee may be waived in exchange for services (low-level waste disposal,

radiation detection instrument calibration, instrument repair, sample analysis, etc.) provided to the

agency. The waiver may only occur as a result of a 28E agreement or memorandum of understanding

between the parties.

[ARC 8982B, IAB 8/11/10, effective 9/15/10; ARC 8577C, IAB 2/6/13, effective 3/13/13; ARC 1479C, IAB 6/11/14, effective

7/16/14; ARC 3746C, IAB 4/11/18, effective 5/16/18; ARC 4612C, IAB 8/14/19, effective 9/18/19; ARC 5059C, IAB 6/17/20,

effective 7/22/20; ARC 6164C, IAB 2/9/22, effective 3/16/22]

641—38.9(136C) Administrative enforcement actions.

38.9(1) Scope.

a. This rule prescribes the procedure in cases initiated by the staff, or upon a request by any

person, to impose requirements by order, or to modify, suspend, or revoke a license, registration, or

certificate or to take other action as may be proper against any person subject to the jurisdiction of

the agency. The term “regulated entity” as used in this rule refers to any facility, person, partnership,
corporation or other organization which is regulated by the agency by virtue of these rules, the

Iowa Code, licensing documents, registrations, certificates, or other official regulatory promulgation.

“Authorization” means license, registration, certificate, permit, or any other document issued or

received by the agency that authorizes specific activities related to the possession and use of radioactive

materials or radiation-producing machines in Iowa.

b. This rule also prescribes the procedures in cases initiated by the staff to impose civil penalties

pursuant to Iowa Code section 136C.4.

38.9(2) Notice of violation.

a. In response to an alleged violation of any provision of the Iowa Code, these rules, the

conditions of an authorization issued by the agency or any order issued by the agency, the agency may

serve on the regulated entity a written notice of violation; a separate notice may be omitted if an order

pursuant to 38.9(3) or demand for information pursuant to 38.9(5) is issued that otherwise identifies

the apparent violation. The notice of violation will concisely state the alleged violation(s) and will

require that the regulated entity submit, within 30 days of the date of the notice or other specified time,

a written explanation or statement in reply including:

(1) Corrective steps which have been taken by the regulated entity and the results achieved;

(2) Corrective action which will be taken to prevent recurrence; and

(3) The date when full compliance will be achieved.

b. The notice may require the regulated entity subject to the jurisdiction of the agency to admit

deny the violation and to state the reasons for the violation, if admitted. It may provide that, if an
adequate reply is not received within the time specified in the notice, the agency may issue an order or a demand for information as to why the authorization should not be modified, suspended, or revoked or why such other action as may be proper should not be taken.

c. Violations are categorized according to five levels of severity, which are:

(1) Severity Levels I and II: Violations are of very significant regulatory concern involving actual or high potential impact on the public health and safety.

(2) Severity Level III: Violations are cause for significant concern.

(3) Severity Level IV: Violations are less serious but are of more than minor concern and that, if left uncorrected, could lead to a more serious health and safety concern.

(4) Severity Level V: Violations are of minor safety or environmental concern.

d. A group of violations may be evaluated in the aggregate and assigned a single higher severity level if the violations have the same underlying cause or if the violations contributed to or were unavoidable consequences of the underlying problem.

e. The severity level of a violation may be increased if the violation can be considered a repetitive violation. The term “repetitive violation” or “similar violation” means a violation that reasonably could have been prevented by a regulated entity’s corrective action for a previous violation normally occurring within the past two years of the inspection at issue or the period within the last two inspections, whichever is longer.

f. The severity level of a violation may be increased if the violation involves casual disregard of requirements, deception, or other indications of willfulness. The term “willfulness” is that characteristic of violations ranging from deliberate intent to violate or falsify to intentional disregard for regulatory requirements.

38.9(3) Orders.

a. The agency may institute a proceeding to modify, suspend, or revoke an authorization or to take other action as may be proper by serving on the regulated entity an order which will:

(1) Allege the violations with which the regulated entity is charged, or the potentially hazardous conditions or other facts deemed to be sufficient grounds for the proposed action;

(2) Provide that the regulated entity may file a written answer to the order under oath or affirmation within 20 days of its date, or such other time as may be specified in the order;

(3) Inform the regulated entity of its right, within 20 days of the date of the order, or such other time as may be specified in the order, to demand a hearing on all or part of the order, except in a case where the regulated entity has consented in writing to the order;

(4) Specify the issues for hearing; and

(5) State the effective date of the order; if the agency finds that the public health, safety, or interest so requires or that the violation or conduct causing the violation is willful, the order may provide, for stated reasons, that the proposed action be immediately effective pending further order.

b. A regulated entity who receives an order may respond to an order under this subrule by filing a written answer under oath or affirmation. The answer shall specifically admit or deny each allegation or charge made in the order and may set forth the matters of fact and law on which the regulated entity relies, and, if the order is not consented to, the reasons as to why the order should not have been issued. Except as provided in paragraph “d” of this subrule, the answer may demand a hearing.

c. If the answer demands a hearing, the agency will issue an order designating the time and place of hearing.

d. An answer or stipulation may consent to the entry of an order in substantially the form proposed in the order with respect to all or some of the actions proposed in the order. The consent, in the answer or other written document, of the regulated entity to whom the order has been issued shall constitute a waiver by the regulated entity of a hearing, findings of fact and conclusions of law, and of all right to seek agency and judicial review or to contest the validity of the order in any forum as to those matters which have been consented to or agreed to or on which a hearing has not been requested. An order that
has been consented to shall have the same force and effect as an order made after hearing by a presiding officer or the agency, and shall be effective as provided in the order.

38.9(4) Settlement and compromise. At any time after the issuance of an order designating the time and place of hearing in a proceeding to modify, suspend, or revoke an authorization, the staff and a regulated entity may enter into a stipulation for the settlement of the proceeding or the compromise of a civil penalty.

38.9(5) Demand for information.

a. The agency may issue to a regulated entity a demand for information for the purpose of determining whether an order under 38.9(3) should be issued, or whether other action should be taken, which demand will:

(1) Allege the violations with which the regulated entity is charged, or the potentially hazardous conditions or other facts deemed to be sufficient ground for issuing the demand; and

(2) Provide that the regulated entity must file a written answer to the demand for information under oath or affirmation within 20 days of its date, or such time as may be specified in the demand for information.

b. A regulated entity to whom the agency has issued a demand for information under this subrule must respond to the demand by filing a written answer under oath or affirmation. The regulated entity’s answer shall specifically admit or deny each allegation or charge made in the demand for information, and shall set forth the matters of fact and law on which the licensee relies. A person other than a licensee may answer as described above, or by setting forth its reasons why the demand should not have been issued and, if the requested information is not provided, the reasons why it is not provided.

c. Upon review of the answer filed pursuant to 38.9(5)“a”(2), or if no answer is filed, the agency may institute a proceeding pursuant to 38.9(3) to take such action as may be proper.

d. An answer may consent to the entry of an order pursuant to 38.9(3) in substantially the form proposed in the demand for information. Such consent shall constitute a waiver as provided in 38.9(3)“d.”

38.9(6) Civil penalties.

a. Before instituting any proceeding to impose a civil penalty under Iowa Code section 136C.4, the agency shall serve a written notice of violation upon the person charged. This notice may be included in a notice issued pursuant to 38.9(2). The notice of violation shall specify the date or dates, facts, and the nature of the alleged act or omission with which the person is charged and shall identify specifically the particular provision or provisions of the law, rule, regulation, license, permit, or cease and desist order involved in the alleged violation and must state the amount of each proposed penalty. The notice of violation shall also advise the person charged that the civil penalty may be paid in the amount specified therein, or the proposed imposition of the civil penalty may be protested in its entirety or in part, by a written answer, either denying the violation or showing extenuating circumstances. The notice of violation shall advise the person charged that upon failure to pay a civil penalty subsequently determined by the agency, if any, unless compromised, remitted, or mitigated, the fee shall be collected by civil action, pursuant to Iowa Code section 136C.4.

b. Within 20 days of the date of a notice of violation or other time specified in the notice, the person charged may either pay the penalty in the amount proposed or answer the notice of violation. The answer to the notice of violation shall state any facts, explanations, and arguments denying the charges of violation, or demonstrating any extenuating circumstances, error in the notice of violation, or other reason why the penalty should not be imposed and may request remission or mitigation of the penalty.

c. If the person charged with violation fails to answer within the time specified in 38.9(6)“b,” an order may be issued imposing the civil penalty in the amount set forth in the notice of violation described in 38.9(6)“a.”

d. If the person charged with violation files an answer to the notice of violation, the agency, upon consideration of the answer, will issue an order dismissing the proceeding or imposing, mitigating, or remitting the civil penalty. The person charged may, within 20 days of the date of the order or other time specified in the order, request a hearing.
e. If the person charged with violation requests a hearing, the agency will issue an order designating the time and place of hearing.

f. If a hearing is held, an order will be issued after the hearing by the presiding officer or the agency dismissing the proceeding or imposing, mitigating, or remitting the civil penalty.

g. The agency may compromise any civil penalty, subject to the provisions of 38.9(4).

h. If the civil penalty is not compromised, or is not remitted by the presiding officer or the agency, and if payment is not made within ten days following either the service of the order described in 38.9(6) “c” or “f,” or the expiration of the time for requesting a hearing described in 38.9(6) “d,” the agency may refer the matter to the attorney general for collection.

i. Except when payment is made after compromise or mitigation by the Department of Justice or as ordered by a court of the state, following reference of the matter to the attorney general for collection, payment of civil penalties imposed under Iowa Code section 136C.4 shall be made by check, draft, or money order payable to the Iowa Department of Public Health.

38.9(7) Requests for action under this rule.

a. Any person may file a request to institute a proceeding pursuant to 38.9(3) to modify, suspend, or revoke an authorization as may be proper. Such a request shall be addressed to the Chief, Bureau of Radiological Health, Iowa Department of Public Health, Lucas State Office Building, Des Moines, Iowa 50319. The requests shall specify the action requested and set forth the facts that constitute the basis for the request. The bureau chief will discuss the matter with staff to determine appropriate action in accordance with 38.9(7) “b.”

b. Within a reasonable time after a request pursuant to 38.9(7) “a” has been received, the bureau chief shall institute the requested proceeding in accordance with this rule or shall advise the person who made the request in writing that no proceeding will be instituted, in whole or in part, with respect to the request, and the reasons for the decision.

c. (1) The bureau chief’s decisions under this rule will be filed and within 25 days after the date of the bureau chief’s decision under this rule that no proceeding will be instituted or other action taken in whole or in part, the agency may on its own motion review that decision, in whole or in part, to determine if the bureau chief has abused discretion. This review power does not limit in any way either the agency’s supervisory power over delegated staff actions or the agency’s power to consult with the staff on a formal or informal basis regarding institution of proceedings under this rule.

(2) No petition or other request for agency review of a bureau chief’s decision under this rule will be entertained by the agency.

38.9(8) Impounding. The agency may impound or order the impounding of radioactive material in the possession of a person who fails to observe the provisions of Iowa Code chapter 136C, or any rules, license or registration conditions, or orders issued by this agency.

a. If agency action is necessary to protect the public health and safety, no prior notice need be given the owner or possessor. If agency action is not necessary to protect the public health and safety, the agency will give to either the owner or the possessor of the source of radiation written notice of the intention to impound the source of radiation.

(1) Either the owner or the possessor shall have 20 days from the date of personal service of certified mailing to request a hearing, except in the case where the regulated entity has consented in writing to the impoundment.

(2) If a hearing is requested, the agency will issue an order designating the time and place of hearing.

b. At the agency’s direction, the impounded sources of radiation may be disposed of by:

(1) Returning the source of radiation to a properly licensed or registered owner that did not cause the emergency;

(2) Returning the source of radiation to a licensee or registrant after the emergency is over and after settlement of any compliance action; or

(3) Selling, destroying, or disposing of the source of radiation in another manner within the agency’s discretion.

[ARC 5059C; IAB 6/17/20, effective 7/22/20]
641—38.10(136C) Deliberate misconduct.

38.10(1) Any licensee, registrant, applicant for a license or certificate of registration, employee of a licensee, registrant or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or registrant or applicant for a license or certificate of registration, who knowingly provides to any licensee, applicant, registrant, contractor, or subcontractor any components, equipment, materials, or other goods or services that relate to a licensee’s, registrant’s or applicant’s activities in this rule, may not:

a. Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, registrant, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license or registration issued by the agency; or

b. Deliberately submit to the agency, a licensee, registrant, applicant, or a licensee’s, registrant’s, or applicant’s contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the agency.

38.10(2) A person who violates paragraph 38.10(1) “a” or “b” may be subject to enforcement action in accordance with the procedures in 641—38.9(136C).

38.10(3) For the purposes of paragraph 38.10(1) “a,” deliberate misconduct by a person means an intentional act or omission that the person knows:

a. Would cause a licensee, registrant, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the agency; or

b. Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, registrant, applicant, contractor, or subcontractor.

These rules are intended to implement Iowa Code chapter 136C.

[Filed 4/7/80, Notice 2/6/80—published 4/30/80, effective 7/1/80]
[Filed 5/17/85, Notice 2/7/85—published 6/5/85, effective, see rule 38.18]
[Filed 11/24/86, Notice 10/8/86—published 12/17/86, effective 1/21/87]
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Two or more ARCs

Effective date of 38.8(11) delayed 70 days from May 9, 2001, by the Administrative Rules Review Committee at its meeting held May 4, 2001.

At its meeting held July 10, 2001, the Committee delayed the effective date until adjournment of the 2002 Session of the General Assembly.
CHAPTER 41
SAFETY REQUIREMENTS FOR THE USE OF RADIATION MACHINES AND CERTAIN USES OF RADIOACTIVE MATERIALS

641—41.1(136C) X-rays in the healing arts.

41.1(1) Scope. This rule establishes requirements, for which a registrant is responsible, for use of X-ray equipment and imaging systems by or under the supervision of an individual authorized by and licensed in accordance with state statutes to engage in the healing arts or veterinary medicine.

a. The provisions of Chapter 41 are in addition to, and not in substitution for, any other applicable portions of 641—Chapters 38 to 42.

b. All references to any Code of Federal Regulations (CFR) in this chapter are those in effect as of May 16, 2018.

41.1(2) Definitions. For the purpose of this chapter, the definitions of 641—Chapters 38 and 40 may also apply. The following are specific to 641—Chapter 41.

"Accessible surface" means the external surface of the enclosure or housing of the radiation producing machine as provided by the manufacturer.

"Added filtration" means any filtration which is in addition to the inherent filtration.

"Aluminum equivalent" means the thickness of type 1100 aluminum alloy affording the same attenuation, under specified conditions, as the material in question.

"Attenuation block" means a block or stack, having dimensions 20 centimeters by 20 centimeters by 3.8 centimeters, of type 1100 aluminum alloy or other materials having equivalent attenuation.

"Automatic exposure control (AEC)" means a device which automatically controls one or more technique factors in order to obtain at a preselected location(s) a required quantity of radiation (see also "Phototimer"). (Includes devices such as phototimers and ion chambers.)

"Base density" means the optical density due to the supporting base of the film alone. The base density of a film is the optical density that would result if an unexposed film were processed through the fixer, wash, and dryer, without first passing through the developer.

"Base plus fog density" means the optical density of a film due to its base density plus any action of the developer on the unexposed silver halide crystals. The base plus fog density can be measured by processing an unexposed film through the entire processing cycle and measuring the resultant optical density.

"Beam monitoring system" means a system designed to detect and measure the radiation present in the useful beam.

"C-arm X-ray system" means an X-ray system in which the image receptor and X-ray tube housing assembly are connected by a common mechanical support system in order to maintain a desired spatial relationship. This system is designed to allow a change in the projection of the beam through the patient without a change in the position of the patient.

"Cassette" means a light-tight case, usually made of thin, low X-ray absorption plastic, for holding X-ray film. One or two intensifying screens for the conversion of X-rays to visible light photons are mounted inside the cassette so that they are in close contact to the film.

"Cephalometric device" means a device intended for the radiographic visualization and measurement of the dimensions of the human head.

"Certified components" means components of X-ray systems which are subject to regulations promulgated under Public Law 90-602, the “Radiation Control for Health and Safety Act of 1968,” the Food and Drug Administration.

"Certified system" means any X-ray system which has one or more certified component(s).

"Coefficient of variation" or "C" means the ratio of the standard deviation to the mean value of a population of observations. It is estimated using the following equation:
\[
c = \frac{s}{\bar{x}} = \frac{1}{\bar{x}} \left[ \sum_{i=1}^{n} \frac{(x_i - \bar{x})^2}{n - 1} \right]^{\frac{1}{2}}
\]

where:
- \(s\) = Estimated standard deviation of the population.
- \(\bar{x}\) = Mean value of observations in sample.
- \(x_i\) = \(i^{th}\) observation in sample.
- \(n\) = Number of observations in sample.

“Computed tomography” means the production of a tomogram by the acquisition and computer processing of X-ray transmission data.

“Control chart” means a chart used to record (and control) the results of quality control testing as a function of time.

“Control limit” means the range of variation on a control chart beyond which action must be taken to correct the results of quality control testing.

“Control panel” (see X-ray control panel).

“Cooling curve” means the graphical relationship between heat units stored and cooling time.

“CT” (see “Computed tomography”).

“Dead-man switch” means a switch so constructed that a circuit closing contact can be maintained only by continuous pressure on the switch by the operator.

“Dedicated mammography equipment” means X-ray systems designed specifically for breast imaging, providing optimum imaging geometry, a device for breast compression and low dose exposure that can generate reproducible images of high quality.

“Densitometer” means an instrument which measures the degree of blackening (or radiographic density) of film due to radiation or light by measuring the ratio of the light intensity incident on the film to the light intensity transmitted by the film.

“Detents” means mechanical settings that limit or prevent the motion or rotation of an X-ray tube, cassette assembly, or image receptor system.

“Developer” means a chemical solution (alkaline) that changes the latent image (exposed silver halide crystals) on a film to a visible image composed of minute masses of black metallic silver.

“Developer replenishment” means the process, occurring as film travels past a certain point in the processor, triggering the activation of a pump, whereby fresh developer is added in small amounts to the solution in the developer tank of the processor. The purpose is to maintain the proper alkalinity, chemical activity, and level of solution in the developer tank.

“Diagnostic mammography” means mammography performed on an individual who, by virtue of symptoms or physical findings, is considered to have a substantial likelihood of having breast disease.

“Diagnostic source assembly” means the tube housing assembly with a beam-limiting device attached.

“Direct scattered radiation” means that scattered radiation which has been deviated in direction only by materials irradiated by the useful beam (see “Scattered radiation”).

“Entrance exposure rate” means the exposure free in air per unit time at the point where the center of the useful beam enters the patient.

“Equipment” (see “X-ray equipment”).

“Field emission equipment” means equipment which uses an X-ray tube in which electron emission from the cathode is due solely to the action of an electric field.

“Filter” means material placed in the useful beam to preferentially absorb selected radiations.

“Fixer” means a chemical solution (acidic) which removes the unexposed and undeveloped silver halide crystals from film so it will not discolor or darken with age or exposure to light. Fixer also hardens the gelatin containing the black metallic silver so film may be dried and resist damage from abrasions.

“Fixer retention” means the inadequate removal of fixer from the film by the water in the wash tank of the processor. Retained fixer causes eventual brown discoloration of the radiograph.

“Fluoroscopic imaging assembly” means a subsystem in which X-ray photons produce a visual image. It includes the image receptor(s) such as the image intensifier and spot-film device, electrical
interlocks, if any, and structural material providing linkage between the image receptor and diagnostic source assembly.

“Focal spot (actual)” means the area projected on the anode of the X-ray tube bombarded by the electrons accelerated from the cathode and from which the useful beam originates.

“Focal spot size” means the area of the target or anode that is bombarded by electrons from the cathode of the X-ray tube to produce X-rays. The smaller the focal spot, the better the limited spatial resolution of the X-ray system, especially in magnification mammography.

“Fog” means the density added to a radiograph due to unwanted action of the developer on the unexposed silver halide crystals or by light, radiation, chemical, or heat exposure during storage, handling, and processing.

“General purpose radiographic X-ray system” means any radiographic X-ray system which, by design, is not limited to radiographic examination of specific anatomical regions.

“Gonad shield” means a protective barrier for the testes or ovaries.

“Healing arts screening” means the use of radiation on human beings for the detection or evaluation of health indicators for which the individual is considered at high risk when such tests are not specifically and individually ordered by:

1. An individual authorized under 41.1(3)“a”(7), or
2. An individual licensed as a physician in Iowa and listed as an authorized user on an NRC or agreement state radioactive materials license.

“Heat unit” means a unit of energy equal to the product of the peak kilovoltage, milliamperes, and seconds, i.e., kVp × mA × second.

“Image contrast” means the amount of radiographic density difference between adjacent areas resulting from a fixed amount of attenuation difference or light exposure difference.

“Image intensifier” means a device, installed in its housing, which instantaneously converts an X-ray pattern into a corresponding light image of higher energy intensity.

“Image noise” See “Radiographic noise.”

“Image quality” means the overall clarity and detail of a radiographic image. Limiting spatial resolution (or resolving power), image sharpness, and image contrast are three common measures of image quality.

“Image receptor” means any device, such as a fluorescent screen or radiographic film, which transforms incident X-ray photons either into a visible image or into another form which can be made into a visible image by further transformations.

“Inherent sharpness” means the overall impression of detail and clarity in a radiographic image.

“Inherent filtration” means the filtration of the useful beam provided by the permanently installed components of the tube housing assembly.

“Kilovolts peak” (see “Peak tube potential”).

“kVp” (see “Peak tube potential”).

“kWs” means kilowatt second.

“Leakage technique factors” means the technique factors associated with the diagnostic or therapeutic source assembly which are used in measuring leakage radiation. They are defined as follows:

a. For diagnostic source assemblies intended for capacitor energy storage equipment, the maximum-rated peak tube potential and the maximum-rated number of exposures in an hour for operation at the maximum-rated peak tube potential with the quantity of charge per exposure being 10 milliampere seconds, or the minimum obtainable from the unit, whichever is larger.

b. For diagnostic source assemblies intended for field emission equipment rated for pulsed operation, the maximum-rated peak tube potential and the maximum-rated number of X-ray pulses in an hour for operation at the maximum-rated peak tube potential.

c. For all other diagnostic or therapeutic source assemblies, the maximum-rated peak tube potential and the maximum-rated continuous tube current for the maximum-rated peak tube potential.
“Linear attenuation coefficient” or “\( \mu \)” means the quotient of \( \text{dN}/\text{N} \) divided by \( \text{d}l \) when \( \text{dN}/\text{N} \) is the fraction of uncharged ionizing radiation that experience interactions in traversing a distance \( \text{d}l \) in a specified material.

“Line-voltage regulation” means the difference between the no-load and the load line potentials expressed as a percent of the load line potential. It is calculated using the following equation:

\[
\text{Percent line-voltage regulation} = 100 \left( \frac{V_n - V_l}{V_l} \right)
\]

where

- \( V_n \) = No-load line potential and
- \( V_l \) = Load line potential.

“\( \text{mA}s \)” means milliampere second.

“Maximum line current” means the root-mean-square current in the supply line of an X-ray machine operating at its maximum rating.

“Mobile X-ray equipment” (see “X-ray equipment”).

“PBL” (see “Positive beam limitation”).

“Phototimer” means a method for controlling radiation exposures to image receptors by the amount of radiation which reaches a radiation-monitoring device(s). The radiation-monitoring device(s) is part of an electronic circuit which controls the duration of time the tube is activated (see “Automatic exposure control”).

“PID” (see “Position indicating device”).

“Portable X-ray equipment” (see “X-ray equipment”).

“Position indicating device” means a device on dental X-ray equipment used to indicate the beam position and to establish a definite source-surface (skin) distance. It may or may not incorporate or serve as a beam-limiting device.

“Positive beam limitation” means the automatic or semiautomatic adjustment of an X-ray beam to the size of the selected image receptor, whereby exposures cannot be made without such adjustment.

“Processor” means an automated device which transports film in a controlled manner by a system of rollers through specialized sections where developing, fixing, washing, and drying of the film occur.

“Protective apron” means an apron made of radiation-absorbing materials used to reduce radiation exposure.

“Protective glove” means a glove made of radiation-absorbing materials used to reduce radiation exposure.

“Quality assurance” means the overall program of testing and maintaining the highest possible standards of quality in the acquisition and interpretation of radiographic images.

“Quality control” means the actual process of testing and maintaining the highest possible standards of quality in equipment performance and the acquisition and interpretation of radiographic images.

“Radiation therapy simulation system” means a radiographic or fluoroscopic X-ray system intended for localizing the volume to be exposed during radiation therapy and confirming the position and size of the therapeutic irradiation field.

“Radiograph” means an image receptor on which the image is created directly or indirectly by an X-ray pattern and results in a permanent record.

“Radiographic contrast” means the magnitude of optical density difference between structures of interest and their surroundings, or between areas of film receiving different amount of X-ray or visible light exposure.

“Radiographic noise” means unwanted fluctuations in optical density on the screen-film image.

“Rating” means the operating limits as specified by the component manufacturer.

“Recording” means producing a permanent form of an image resulting from X-ray photons.

“Repeat (or reject) analysis” means a systematic approach to determine the causes for radiographs being discarded or repeated, or both.

“Replenishment rate” means the amount of chemicals added in order to maintain the proper chemical activity of developer and fixer solutions.
"Response time" means the time required for an instrument system to reach 90 percent of its final reading when the radiation-sensitive volume of the instrument system is exposed to a step change in radiation flux from zero sufficient to provide a steady state midscale reading.

"Safelight" means a source of minimal visible light in a darkroom, produced at frequencies (colors) to which the film is insensitive, protecting the film from unwanted exposure (fog) while allowing personnel to function more efficiently and safely.

"Screen" means microscopic phosphor crystals on a plastic support used in conjunction with either single or double emulsion film; the screen emits visible light when exposed to X-radiation, creating a latent image on X-ray film.

"Screen-film combination" means a particular intensifying screen used with a particular type of film. Care must be taken to match the number of screens (one or two) to the number of emulsions coating the film and to match the light output spectrum of the screen to the light sensitivity of the film.

"Screen-film contact" means the close proximity of the intensifying screen to the emulsion of the film, necessary in order to achieve a sharp image on the film.

"Sensitometer" means a device used to reproducibly expose a piece of film to a number of different levels of light intensity.

"Sensitometric strip" means a sheet of film exposed by a sensitometer, resulting in a gray scale range. Such strips are used to measure the range of densities, from minimum to maximum, resulting from a reproducible set of exposures.

"Sensitometry" means a quantitative measurement of the response of film to exposure and development. Sensitometry is used to test the processor setup and stability.

"SID" (see “Source-image receptor distance”).

"Source" means the focal spot of the X-ray tube.

"Source-image receptor distance" means the distance from the source to the center of the input surface of the image receptor.

"Spot check" means a procedure which is performed to ensure that a previous calibration continues to be valid.

"Spot film" means a radiograph which is made during a fluoroscopic examination to permanently record conditions which exist during that fluoroscopic procedure.

"Spot-film device" means a device intended to transport or position a radiographic image receptor between the X-ray source and fluoroscopic image receptor. It includes a device intended to hold a cassette over the input end of an image intensifier for the purpose of making a radiograph.

"Stationary X-ray equipment" (see “X-ray equipment”).

"Technique factors" means the following conditions of operation:

a. For capacitor energy storage equipment, peak tube potential in kV and quantity of charge in mAs;

b. For field emission equipment rated for pulsed operation, peak tube potential in kV, and number of X-ray pulses;

c. For CT X-ray systems designed for pulsed operation, peak tube potential in kV, scan time in seconds, and either tube current in mA, X-ray pulse width in seconds, and the number of X-ray pulses per scan, or the product of tube current, X-ray pulse width, and the number of X-ray pulses in mAs;

d. For CT X-ray systems not designed for pulsed operation, peak tube potential in kV, and either tube current in mA and scan time in seconds, or the product of tube current and exposure time in mAs and the scan time when the scan time and exposure time are equivalent; and

e. For all other equipment, peak tube potential in kV, and either tube current in mA and exposure time in seconds, or the product of tube current and exposure time in mAs.

"Tomogram" means the depiction of the X-ray attenuation properties of a section through the body.

"Tube rating chart" means the set of curves which specify the rated limits of operation of the tube in terms of the technique factors.

"Useful beam" means the radiation emanating from the tube housing port or the radiation head and passing through the aperture of the beam-limiting device when the exposure controls are in a mode to cause the system to produce radiation.
“Variable-aperture beam-limiting device” means a beam-limiting device which has capacity for stepless adjustment of the X-ray field size at a given SID.

“Viewbox” means a device by which a uniform field of white light is transmitted through an X-ray so that the image on the film may be seen.

“Visible area” means that portion of the input surface of the image receptor over which incident X-ray photons are producing a visible image.

“X-ray control panel” means a device which controls input power to the X-ray high-voltage generator and the X-ray tube. It includes equipment such as timers, phototimers, automatic brightness stabilizers, and similar devices, which control the technique factors of an X-ray exposure.

“X-ray equipment” means an X-ray system, subsystem, or component thereof. Types of X-ray equipment are as follows:

a. “Mobile X-ray equipment” means X-ray equipment mounted on a permanent base with wheels or casters for moving while completely assembled.

b. “Portable X-ray equipment” means X-ray equipment designed to be hand-carried but used with a tripod or other stabilization mechanism so the operator is not holding the equipment during exposure.

c. “Stationary X-ray equipment” means X-ray equipment which is installed in a fixed location.

d. “Handheld X-ray equipment” means X-ray equipment designed by the manufacturer to be handheld by the operator during the exposure. X-ray equipment designed without a backscatter shield is prohibited.

“X-ray exposure control” means a device, switch, button or similar means by which an operator initiates or terminates the radiation exposure. The X-ray exposure control may include such associated equipment as timers and backup timers.

“X-ray field” means that area of the intersection of the useful beam and any one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the exposure rate is one-fourth of the maximum in the intersection.

“X-ray high-voltage generator” means a device which transforms electrical energy from the potential supplied by the X-ray control to the tube operating potential. The device may also include means for transforming alternating current to direct current, filament transformers for the X-ray tube(s), high-voltage switches, electrical protective devices, and other appropriate elements.

“X-ray system” means an assemblage of components for the controlled production of X-rays. It includes minimally an X-ray high-voltage generator, an X-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.

“X-ray table” means a patient support device with its patient support structure (tabletop) interposed between the patient and the image receptor during radiography or fluoroscopy. This includes, but is not limited to, any stretcher equipped with a radiolucent panel and any table equipped with a cassette tray (or bucky), cassette tunnel, image intensifier, or spot-film device beneath the tabletop.

41.1(3) Administrative controls.

a. Registrant. The registrant shall be responsible for maintaining and directing the operation of the X-ray system(s) under the registrant’s administrative control, for ensuring that the requirements of these rules are met in the operation of the X-ray system(s), and for having the following minimum tests performed by a registered service facility according to the following schedule:

1. Medical/chiropractic: timer accuracy, exposure reproducibility, kVp accuracy as set forth in 41.1(6), and light field/X-ray field alignment as set forth in 41.1(6) every two years.

2. Dental/podiatry: timer accuracy, exposure reproducibility and kVp accuracy as set forth in 41.1(7) every four years.


4. Veterinary systems are exempt from the above testing requirements.

All service and installation shall be performed by persons registered under 641—subrule 39.3(3). The registrant or the registrant’s agent shall ensure that the requirements of these rules are met in the operation of the X-ray system(s).
(1) An X-ray system which does not meet the provisions of these rules shall not be operated for diagnostic or therapeutic purposes unless so directed by the agency. All position locking, holding, and centering devices on X-ray system components and systems shall function as intended. All X-ray systems shall be maintained in good mechanical repair and comply with all state and local electrical code requirements.

(2) Individuals who will be operating the X-ray systems shall be adequately instructed in safe operating procedures and be competent in the safe use of the equipment. In addition:

1. Operators in medical facilities shall meet the requirements of 641—Chapter 42, as applicable, and shall make the permit available at the individual’s place of employment. If the permit holder works at more than one facility, a duplicate of the permit shall be kept at each facility.

(3) A chart shall be provided in the vicinity of the diagnostic X-ray system’s control panel which specifies, for all examinations performed with that system, the appropriate technique and guidance for employing available dose reduction methods and technologies across all patient sizes and clinical indications. The following information shall be included:

1. Patient’s body part and anatomical size, or body part thickness, or age (for pediatrics), versus technique factors to be utilized unless automatically set by the X-ray system;
2. Type and size of the film or film-screen combination to be used;
3. Type and focal distance of the grid to be used, if any; and
4. Source to image receptor distance to be used, except for dental intraoral radiography.

(4) Written safety procedures shall be provided to each individual operating X-ray equipment, including patient holding and any restrictions of the operating technique required for the safe operation of the particular X-ray system. The operator shall be able to demonstrate familiarity with these procedures.

(5) Except for patients who cannot be moved out of the room, only the staff and ancillary personnel required for the medical procedure or training shall be in the room during the radiographic exposure. Other than the patient being examined:

1. All individuals shall be positioned such that no part of the body will be struck by the useful beam unless protected by 0.5 millimeter lead equivalent.
2. The X-ray operator, other staff, ancillary personnel, and other persons required for the medical procedure shall be protected from the scattered primary radiation by protective aprons or whole body protective barriers of not less than 0.25 millimeter lead equivalent.
3. Human patients who cannot be removed from the room shall be protected from the direct scatter radiation by whole body protective barriers of 0.25 millimeter lead equivalent or shall be so positioned that the nearest portion of the body is at least 2 meters from both the tube head and the nearest edge of the image receptor.

(6) A sufficient number of protective apparel (e.g., aprons, gloves, collars) and shields shall be available to provide the necessary radiation protection for all patients and personnel who are involved with X-ray operations.

(7) Individuals shall not be exposed to the useful beam unless (1) the radiation exposure occurs in the context of a previously established professional relationship between a licensed practitioner of the healing arts or a licensed registered nurse who is registered as an advanced registered nurse practitioner pursuant to Iowa Code chapter 152 and a patient, which includes a physical examination by the practitioner of the patient unless such examination is not clinically indicated; and (2) such practitioner issues a written order for the radiation exposure. The written order shall be issued prior to the exposure unless the exposure results from care provided in an emergency or surgery setting. A verbal order may be issued provided the licensed practitioner is supervising the procedure and the order is documented in the patient’s record after the procedure is completed. This provision specifically prohibits deliberate exposure for the following purposes:

1. Exposure of an individual for training, demonstration, or other non-healing arts purposes; and
2. Exposure of an individual for the purpose of healing arts screening except as authorized by 41.1(3)"a" (11).

(8) When a patient or film must be provided with auxiliary support during a radiation exposure:
1. Mechanical holding devices shall be used when the technique permits. The written safety procedures, required by 41.1(3)”a”(4), shall list individual projections where holding devices cannot be utilized;
2. Written safety procedures, as required by 41.1(3)”a”(4), shall indicate the requirements for selecting a holder and the procedure the holder shall follow;
3. The human holder shall be instructed in personal radiation safety and protected as required by 41.1(3)”a”(5)”2”;
4. No individual shall be used routinely to hold film or patients; and
5. In those cases where the human patient must hold the film, except during intraoral examinations, any portion of the body other than the area of clinical interest struck by the useful beam shall be protected by not less than 0.5 millimeter lead equivalent material.
6. Each facility shall have leaded aprons and gloves available in sufficient numbers to provide protection to all personnel who are involved with X-ray operations and who are otherwise not shielded.

(9) Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be utilized.
1. The speed of film or screen and film combinations shall be the fastest speed consistent with the diagnostic objective of the examinations. Film cassettes without intensifying screens shall not be used for any routine diagnostic radiological imaging, with the exception of veterinary radiography and standard film packets for intraoral use in dental radiography.
2. The radiation exposure to the patient shall be the minimum exposure required to produce images of good diagnostic quality.
3. Portable or mobile X-ray equipment shall be used only for examinations, excluding intraoral dental imaging, where it is impractical to transfer the patient(s) to a stationary X-ray installation. Handheld mobile X-ray equipment may be used for routine intraoral dental imaging in place of stationary equipment. Handheld X-ray equipment shall be used only for intraoral dental radiography.
4. X-ray systems subject to 41.1(6) shall not be utilized in procedures where the source to human patient distance is less than 30 centimeters.
5. If grids are used between the patient and the image receptor to decrease scatter to the film and improve contrast, the grid shall:
   • Be positioned properly, i.e., tube side facing the correct direction, and the grid centered to the central ray;
   • If the grid is of the focused type, be at the proper focal distance for the SID(s) being used.
(10) All individuals who are associated with the operation of an X-ray system are subject to the requirements of 641—subrule 40.36(4) and rules 641—40.15(136C) and 641—40.37(136C). In addition:
1. When protective clothing or devices are worn on portions of the body and a personnel monitoring device(s) is present, it (they) shall be worn in accordance with the recommendations found in Chapter 4 of the National Council of Radiation Protection and Measurements Report No. 57.
2. Exposure of a personnel monitoring device to deceptively indicate a dose delivered to an individual is prohibited.
(11) Healing arts screening. Any person proposing to conduct a healing arts screening program shall not initiate such a program in the state of Iowa without prior written approval of the agency. When requesting such approval, that person shall submit the information outlined in Appendix C of this chapter. The agency shall not approve a healing arts screening program unless the applicant submits data supporting the efficacy of the screening test in diagnosing the disease or condition being screened. If any information submitted to the agency becomes invalid or outdated, the applicant shall notify the agency in writing within five calendar days.
   b. Information and maintenance record and associated information. Records in 41.1(3)”b”(1) and (3) below shall be maintained until the X-ray system is removed from the facility. There shall be two cycles of records on file for items in 41.1(3)”b”(2) below. The registrant shall maintain the following information for each X-ray system for inspection by the agency:
   (1) User’s manual for the X-ray system;
(2) Records of surveys, calibrations, maintenance, and modifications performed on the X-ray system(s) with the names of persons who performed such services;

(3) A copy of all correspondence with this agency regarding that X-ray system.

c. X-ray utilization log. Except for veterinary facilities, each facility shall maintain an X-ray log containing the patient’s name, the type of examinations, the dates the examinations were performed, the name of the individual performing the X-ray procedure, and the number of exposures and retakes involved. When the patient or film must be provided with human auxiliary support, the name of the human holder shall be recorded. These records shall be kept until the facility is inspected by this agency or until all films listed on the utilization log have been purged.

d. Plan review.

(1) Prior to construction of all new installations, or modifications of existing installations, or installation of equipment into existing facilities utilizing X-rays for diagnostic or therapeutic purposes, the floor plans and equipment arrangements shall be submitted to the agency for review and verification that national standards have been met. The required information is denoted in Appendices A and B of this chapter.

(2) The agency may require the applicant to utilize the services of a qualified expert to determine the shielding requirements prior to the plan review and approval.

(3) The approval of such plans shall not preclude the requirement of additional modifications should a subsequent analysis of operating conditions indicate the possibility of an individual receiving a dose in excess of the limits prescribed in 641—Chapter 40.

e. Federal performance standards. All X-ray equipment shall comply with the applicable performance standards of 21 CFR 1020.30 to 1020.40 which were in effect at the time the unit was manufactured. All equipment manufactured before the effective date of 21 CFR 1020.30 to 1020.40 shall meet the requirements of the Iowa rules. Persons registered to possess the affected radiation-emitting equipment in Iowa shall be responsible for maintaining the equipment in compliance with the appropriate federal performance standards.

f. X-ray film processing facilities and practices (except for mammography). Each installation using a radiographic X-ray system and using analog image receptors (e.g., radiographic film) shall have available suitable equipment for handling and processing radiographic film in accordance with the following provisions:

(1) Manually developed film.

1. Processing tanks shall be constructed of mechanically rigid, corrosion-resistant material; and

2. Film shall be processed in accordance with the time-temperature relationships recommended by the film developer manufacturer. The specified developer temperature and immersion time shall be posted in the darkroom. Deviations from the manufacturer’s recommendations shall be in writing and on file at the facility. Documentation shall include justification for the deviation.

3. Devices shall be utilized which will indicate the actual temperature of the developer and signal the passage of a preset time appropriate to the developing time required.

(2) Automatic processors and other closed processing systems.

1. Film shall be processed in accordance with the time-temperature relationships recommended by the film developer manufacturer.

2. Processing deviations from the requirements of 41.1(3)“f” shall be documented by the registrant in such manner that the requirements are shown to be met or exceeded (e.g., extended processing and special rapid chemistry).

3. All processing equipment shall be in good mechanical working order.

(3) Other requirements.

1. Pass boxes, if provided, shall be so constructed as to exclude light from the darkroom when cassettes are placed in or removed from the boxes, and shall incorporate adequate shielding from stray radiation to prevent exposure of undeveloped film.

2. The darkroom shall be light tight and use proper safelighting such that any film type in use exposed in a cassette to X-radiation sufficient to produce an optical density from 1 to 2 when processed shall not suffer an increase in density greater than 0.1 when exposed out of the cassette in the darkroom.
for 2 minutes with all safelights on. If used, daylight film handling boxes shall preclude fogging of the film.

3. Darkrooms typically used by more than one individual shall be provided a method to prevent accidental entry while undeveloped films are being handled or processed.
4. Film shall be stored in a cool, dry place and shall be protected from exposure to stray radiation. Film in open packages shall be stored in a light tight container.
5. Film cassettes and intensifying screens shall be inspected periodically and shall be cleaned and replaced as necessary to best ensure radiographs of good diagnostic quality.
6. Outdated X-ray film shall not be used for diagnostic radiographs, unless the film has been stored in accordance with the manufacturer’s recommendations and a sample of the film passes a sensitometric test for normal ranges of base plus fog and speed.
7. Film developing solutions shall be prepared in accordance with the directions given by the manufacturer and shall be maintained in strength by replenishment or renewal so that full development is accomplished within the time specified by the manufacturer.

4. Records shall be maintained to verify that the items in 41.1(3) “f” are performed according to the requirements. Records may be discarded only after an agency inspection has been completed and the facility determined to be in compliance.

7. Retention of films. Record retention of films shall be seven years for patients 18 years of age or older and seven years plus the difference between the patient’s age and 18 for minors.
   (1) If the facility is currently utilizing hard-copy film to store images, it may continue to use this method throughout the retention period.
   (2) If the facility is currently utilizing computer media and also storing images in a hard-copy format, it may continue to use this method of retention throughout the retention period. If the images are also on computer media, the data should be backed up, or refreshed, at appropriate intervals as defined by the facility.
   (3) If the facility is solely utilizing computer media to store study information for which a report is generated, the recording media is to be stored in conditions that will ensure that deterioration will not occur for the period required by this policy. The facility must maintain either retrieval or access or both to the stored images.
   (4) If a patient’s medical images are identified as being involved in a legal case, the records should immediately be coded appropriately, and maintained for the required time frame defined in this paragraph. At the time the records have reached the end of the appropriate time frame for retention, the previously identified responsible individuals involved in the legal action should be contacted for further instruction.
   (5) If records are temporarily transferred to any party, appropriate information relating to location, date of release, and individual having custody of the records should be maintained.
   (6) A facility that is ceasing operations must either transfer its film records to another facility or provide the film records to its patients. A certified letter as to the location, or disposition, of the film records must be sent to notify the patients of the transferal.

41.1(4) General requirements for all diagnostic X-ray systems. In addition to other requirements of this chapter, all diagnostic X-ray systems shall meet the following requirements:
   a. Warning label. The control panel containing the main power switch shall bear the warning statement, legible and accessible to view: “WARNING: This X-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed.”
   b. Battery charge indicator. On battery-powered X-ray generators, visual means shall be provided on the control panel to indicate whether the battery is in a state of charge adequate for proper operation.
   c. Leakage radiation from the diagnostic source assembly. The leakage radiation from the diagnostic source assembly measured at a distance of 1 meter in any direction from the source shall not exceed 100 milliroentgens (25.8 µC/kg) in one hour when the X-ray tube is operated at its leakage technique factors. Compliance shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.
d. Radiation from components other than the diagnostic source assembly. The radiation emitted by a component other than the diagnostic source assembly shall not exceed 2 milliroentgens (0.516 µC/kg) in one hour at 5 centimeters from any accessible surface of the component when it is operated in an assembled X-ray system under any conditions for which it was designed. Compliance shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

e. Beam quality.

(1) Half-value layer.

1. The half-value layer of the useful beam for a given X-ray tube potential shall not be less than the values shown in Table I. If it is necessary to determine such half-value layer at an X-ray tube potential which is not listed in Table I, linear interpolation or extrapolation may be made.

<table>
<thead>
<tr>
<th>Design operating range (kVp)</th>
<th>Measured potential (kVp)</th>
<th>Half-value layer (mm of aluminum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 50</td>
<td>30</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>0.5</td>
</tr>
<tr>
<td>50 to 70</td>
<td>50</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>1.5</td>
</tr>
<tr>
<td>Above 70</td>
<td>71</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>2.7</td>
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<tr>
<td></td>
<td>110</td>
<td>3.0</td>
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<td></td>
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<tr>
<td></td>
<td>140</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td>4.1</td>
</tr>
</tbody>
</table>

2. and 3. Reserved.

4. For capacitor energy storage equipment, compliance with the requirements of 41.1(4)“e” shall be determined with the system fully charged and a setting of 10 mAs for each exposure.

5. The required minimal half-value layer of the useful beam shall include the filtration contributed by all materials which are permanently between the source and the patient.

(2) Filtration controls. For X-ray systems which have variable kVp and variable filtration for the useful beam, a device shall link the kVp selector with the filter(s) and shall prevent an exposure unless the minimum amount of filtration required by 41.1(4)”e”(1)”l” is in the useful beam for the given kVp which has been selected.

f. Multiple tubes. Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes which have been selected shall be clearly indicated prior to initiation of the exposure. This indication shall be both on the X-ray control panel and at or near the tube housing assembly which has been selected.
g. Mechanical support of tube head. The tube housing assembly supports shall be adjusted such that the tube housing assembly will remain stable during an exposure unless tube housing movement is a designed function of the X-ray system.

h. Technique indicators.
(1) The technique factors to be used during an exposure shall be indicated before the exposure begins. If automatic exposure controls are used, the technique factors which are set prior to the exposure shall be indicated.

(2) The requirement of 41.1(4)“h”(1) may be met by permanent markings on equipment having fixed technique factors. Indication of technique factors shall be visible from the operator’s position except in the case of spot films made by the fluoroscopist.

(3) The technique indicators shall be accurate to within manufacturer’s standards.

41.1(5) Fluoroscopic X-ray systems except for computed tomography X-ray systems. All fluoroscopic X-ray systems shall be image intensified and meet the following requirements:

a. Limitation of useful beam.
(1) Primary barrier.
1. The fluoroscopic imaging assembly shall be provided with a primary protective barrier which intercepts the entire cross section of the useful beam at any SID.

2. The X-ray tube used for fluoroscopy shall not produce X-rays unless the barrier is in position to intercept the entire useful beam.

(2) Fluoroscopic beam limitation.
1. For certified fluoroscopic systems with or without a spot film device, neither the length nor the width of the X-ray field in the plane of the image receptor shall exceed that of the visible area of the image receptor by more than 3 percent of the SID. The sum of the excess length and the excess width shall be no greater than 4 percent of the SID.

2. For uncertified fluoroscopic systems with a spot film device, the X-ray beam with the shutter fully opened (during fluoroscopy or spot filming) shall be no larger than the largest spot film size for which the device is designed. Measurements shall be made at the maximum SID available but at no less than 20 centimeters from the tabletop to the film plane distance.

3. For uncertified fluoroscopic systems without a spot film device, the requirements of 41.1(5)“a”(2)“1” apply.

4. Other requirements for fluoroscopic beam limitation:
- Means shall be provided to permit further limitation of the field. Beam-limiting devices manufactured after May 22, 1979, and incorporated in equipment with a variable SID or a visible area of greater than 300 square centimeters shall be provided with means for stepless adjustment of the X-ray field;
- All equipment with a fixed SID and a visible area of 300 square centimeters or less shall be provided either with stepless adjustment of the X-ray field or with means to further limit the X-ray field size at the plane of the image receptor to 125 square centimeters or less;
- If provided, stepless adjustment shall, at the greatest SID, provide continuous field sizes from the maximum attainable to a field size of 5 centimeters by 5 centimeters or less;
- For equipment manufactured after February 25, 1978, when the angle between the image receptor and beam axis is variable, means shall be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor;
- For noncircular X-ray fields used with circular image receptors, the error in alignment shall be determined along the length and width dimensions of the X-ray field which pass through the center of the visible area of the image receptor.

(3) Spot-film beam limitation. Spot-film devices shall meet the following requirements:

1. Means shall be provided between the source and the patient for adjustment of the X-ray field size in the plane of the film to the size of that portion of the film which has been selected on the spot-film selector. Such adjustment shall be automatically accomplished except when the X-ray field size in the plane of the film is smaller than that of the selected portion of the film. For spot-film devices
manufactured after June 21, 1979, if the X-ray field size is less than the size of the selected portion of the film, the means for adjustment of the field size shall be only at the operator’s option;

2. Neither the length nor the width of the X-ray field in the plane of the image receptor shall differ from the corresponding dimensions of the selected portion of the image receptor by more than 3 percent of the SID when adjusted for full coverage of the selected portion of the image receptor. The sum, without regard to sign, of the length and width differences shall not exceed 4 percent of the SID;

3. It shall be possible to adjust the X-ray field size in the plane of the film to a size smaller than the selected portion of the film. The minimum field size at the greatest SID shall be equal to, or less than, 5 centimeters by 5 centimeters;

4. The center of the X-ray field in the plane of the film shall be aligned with the center of the selected portion of the film to within 2 percent of the SID; and

5. On spot-film devices manufactured after February 25, 1978, if the angle between the plane of the image receptor and beam axis is variable, means shall be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor, and compliance shall be determined with the beam axis indicated to be perpendicular to the plane of the image receptor.

(4) Override. If a means exists to override any of the automatic X-ray field size adjustments required in 41.1(5)”a”(2) and 41.1(5)”a”(3), that means:

1. Shall be designed for use only in the event of system failure;

2. Shall incorporate a signal visible at the fluoroscopist’s position which will indicate whenever the automatic field size adjustment is overridden; and

3. Shall have a clear and durable label as follows:

FOR X-RAY FIELD
LIMITATION SYSTEM FAILURE

b. Activation of the fluoroscopic tube. X-ray production in the fluoroscopic mode shall be controlled by a device which requires continuous pressure by the fluoroscopist for the entire time of any exposure. When recording serial fluoroscopic images, the fluoroscopist shall be able to terminate the X-ray exposure(s) at any time, but means may be provided to permit completion of any single exposure of the series in process.

c. Exposure rate limits.

(1) Entrance exposure rate allowable limits.

1. Fluoroscopic equipment which is provided with automatic exposure rate control shall not be operable at any combination of tube potential and current which will result in an exposure rate in excess of 2.6 mC/kg (10 roentgens) per minute at the point where the center of the useful beam enters the patient, except

   • During recording of fluoroscopic images; or

   • When an optional high level control is provided. When so provided, the equipment shall not be operable at any combination of tube potential and current which will result in an exposure rate in excess of 5 roentgens (1.3 mC/kg) per minute at the point where the center of the useful beam enters the patient unless the high level control is activated. Special means of activation of high level controls shall be required. The high level control shall only be operable when continuous manual activation is provided by the operator. A continuous signal audible to the fluoroscopist shall indicate that the high level control is being employed.

2. Fluoroscopic equipment which is not provided with automatic exposure rate control shall not be operable at any combination of tube potential and current which will result in an exposure rate in excess of 5 roentgens (1.3 mC/kg) per minute at the point where the center of the useful beam enters the patient, except:

   • During recording of fluoroscopic images; or

   • When the mode or modes have an optional high level control, in which case the mode or modes shall not be operable at any combination of tube potential and current which shall result in an exposure rate in excess of 5 roentgens (1.3 mC/kg) per minute at the point where the center of the useful beam enters the patient, unless the high level control is activated. Special means of activation of high level controls
shall be required. The high level control shall only be operable when continuous manual activation is provided by the operator. A continuous signal audible to the fluoroscopist shall indicate that the high level control is being employed.

3. **Compliance with the requirements of 41.1(5)“c” shall be determined as follows:**
   - If the source is below the table, exposure rate shall be measured 1 centimeter above the tabletop or cradle;
   - If the source is above the table, the exposure rate shall be measured at 30 centimeters above the tabletop with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement;
   - All C-arm fluoroscopes, both stationary and mobile, shall meet the entrance exposure rate limits at 30 centimeters from the input surface of the fluoroscopic imaging assembly with the source positioned at any available SID provided that the end of the spacer assembly or beam-limiting device is not closer than 30 centimeters from the input surface of the fluoroscopic imaging assembly.
   - For a lateral type fluoroscope, the exposure rate shall be measured at a point 15 centimeters from the centerline of the X-ray table and in the direction of the X-ray source with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it shall be positioned as closely as possible to the lateral X-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters to the centerline of the X-ray table.

4. **Fluoroscopic equipment which is provided with both automatic exposure rate control mode and a manual mode shall not be operable at any combination of tube potential and current which shall result in an exposure rate in excess of 10 roentgens (2.6 mC/kg) per minute in either mode at the point where the center of the useful beam enters the patient, except:**
   - During recording of fluoroscopic images; or
   - When the mode or modes have an optional high level control, in which case the mode or modes shall be operable at any combination of tube potential and current which shall result in an exposure rate in excess of 5 roentgens (1.3 mC/kg) per minute at the point where the center of the useful beam enters the patient, unless the high level control is activated. Special means of activation of high level controls shall be required. The high level control shall only be operable when continuous manual activation is provided by the operator. A continuous signal audible to the fluoroscopist shall indicate that the high level control is being employed.

5. **Any fluoroscopic equipment manufactured after May 19, 1995, which can exceed 5 roentgens (1.3 mC/kg) per minute shall be equipped with an automatic exposure rate control. All entrance exposure rate limits shall be 10 roentgens (2.6 mC/kg) per minute with an upper limit of 20 roentgens (5.2 mC/kg) per minute when the high level control is activated.**

6. **Conditions of periodic measurement of maximum entrance exposure rate are as follows:**
   - The measurement shall be made under the conditions that satisfy the requirements of 41.1(5)“c’”(1)“3”;
   - The kVp, mA, or other selectable parameters shall be adjusted to those settings which give the maximum entrance exposure rate;
   - The X-ray system(s) that incorporates automatic exposure rate control shall have sufficient attenuative material placed in the useful beam to produce either a milliamperage or kilovoltage or both to satisfy the conditions of 41.1(5) “c’”(1)“3.”

   (2) **Reserved.**

   d. **Barrier transmitted radiation rate limits.**

   (1) The exposure rate due to transmission through the primary protective barrier with the attenuation block in the useful beam, combined with radiation from the image intensifier, if provided, shall not exceed 2 milliroentgens (0.516 µC/kg) per hour at 10 centimeters from any accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor for each roentgen per minute of entrance exposure rate.

   (2) **Measuring compliance of barrier transmission.**
1. The exposure rate due to transmission through the primary protective barrier combined with radiation from the image intensifier shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

2. If the source is below the tabletop, the measurement shall be made with the input surface of the fluoroscopic imaging assembly positioned 30 centimeters above the tabletop.

3. If the source is above the tabletop and the SID is variable, the measurement shall be made with the end of the beam-limiting device or spacer as close to the tabletop as it can be placed, provided that it shall not be closer than 30 centimeters.

4. Movable grids and compression devices shall be removed from the useful beam during the measurement.

   e. Indication of potential and current. During fluoroscopy and cinefluorography the kV and the mA shall be continuously indicated.

   f. Source-to-skin distance. The SSD shall not be less than:

      (1) 38 centimeters on stationary fluoroscopes installed on or after August 1, 1974,
      (2) 35.5 centimeters on stationary fluoroscopes which were in operation prior to August 1, 1974,
      (3) 30 centimeters on all mobile fluoroscopes, and
      (4) 20 centimeters for mobile fluoroscopes used for specific surgical application.

   g. Fluoroscopic timer.

      (1) Means shall be provided to preset the cumulative on-time of the fluoroscopic X-ray tube. The maximum cumulative time of the timing device shall not exceed five minutes without resetting.
      (2) A signal audible to the fluoroscopist shall indicate the completion of any preset cumulative on-time. Such signal shall continue to sound while X-rays are produced until the timing device is reset.
      (3) Control of scattered radiation.

         (i) Fluoroscopic table designs when combined with procedures utilized shall be such that no unprotected part of any staff or ancillary individual’s body shall be exposed to unattenuated scattered radiation which originates from under the table. The attenuation required shall be not less than 0.25 millimeter lead equivalent.

         (2) Equipment configuration when combined with procedures shall be such that no portion of any staff or ancillary individual’s body, except the extremities, shall be exposed to the unattenuated scattered radiation emanating from above the tabletop unless that individual:

            1. Is at least 120 centimeters from the center of the useful beam, or
            2. The radiation has passed through not less than 0.25 millimeter lead equivalent material including, but not limited to, drapes, Bucky-slot cover panel, or self-supporting curtains, in addition to any lead equivalency provided by the protective apron referred to in 41.1(3)“(a)”(5).

         (3) The agency may grant exemptions to 41.1(5)“(h)”(2) where a sterile field will not permit the use of the normal protective barriers. Where the use of prefitted sterilized covers for the barriers is practical, the agency shall not permit such exemption.

         i. Spot-film exposure reproducibility. Fluoroscopic systems equipped with spot-film (radiographic) mode shall meet the exposure reproducibility requirements of 41.1(6)“(d)” when operating in the spot-film mode.

         j. Radiation therapy simulation systems. Radiation therapy simulation systems shall be exempt from all the requirements of 41.1(5)“(a),”“(c),”“(d),” and “(g)” provided that:

            (1) Such systems are designed and used in such a manner that no individual other than the patient is in the X-ray room during periods of time when the system is producing X-rays; and
            (2) Systems which do not meet the requirements of 41.1(5)“(g)” are provided with a means of indicating the cumulative time that an individual patient has been exposed to X-rays. Procedures shall require in such cases that the timer be reset between examinations.

         k. Dose-area-product monitor requirements.

            (1) All fluoroscopic equipment installed after July 1, 2002, and used for special procedures (e.g., pacemaker implantation, diagnostic cardiac procedures (catheterization), and therapeutic cardiac
procedures (angioplasty-balloon; stent; directional coronary atherectomy; rotational atherectomy; laser atherectomy; radio frequency ablation; and intravascular brachtherapy)) shall be equipped with a dose-area-product monitor capable of recording the total radiation dose received by a patient when the fluoroscopic tube is used. Equipment used and installed prior to July 1, 2002, shall be retrofitted with the radiation exposure device by January 1, 2004.

(2) Each facility using fluoroscopic equipment for special procedures shall include in the patient’s chart and in a log for agency review the patient radiation exposure received per procedure. Adult doses that exceed 300 rad and doses for children (under the age of 18) that exceed 100 rad must be reviewed by the facility’s radiation safety committee. The review must document the reason why a dose exceeded 300 rad for adults or 100 rad for children, and the reason must be documented in the committee’s minutes. If a facility does not have a radiation safety committee, the facility must provide the agency, within 30 days of the event, documentation stating why the patient’s dose exceeded 300 rad for adults or 100 rad for children. Also, if the patient doses noted above are exceeded, the patient’s physician must do a follow-up examination of the patient to determine if there is any evidence of dose recorded reaction and to ensure that proper treatment is rendered.

(3) All fluoroscopic radiation detection devices in this subrule shall be calibrated annually or after repair or replacement.

1. Equipment operation.
   (1) All imaging formed by the use of fluoroscopic X-ray systems shall be directly viewed and interpreted by a licensed practitioner of the healing arts.
   (2) Overhead fluoroscopy shall not be used as a positioning tool for general purpose radiographic examinations.

2. Facilities that use fluoroscopic X-ray systems shall maintain a record of cumulative fluoroscopic exposure time used and the number of spot films for each examination. This record shall indicate patient identification, type of examination, date of examination, and operator’s name.

3. Additional requirements for stationary fluoroscopic systems used for cardiac catheterization procedures.
   (1) Protective barriers shall be available for use by individuals whose presence is required in the room during activation of the X-ray tube(s). If a protective barrier includes or consists of a transparent viewing panel, the viewing panel shall afford protection of not less than 0.5 millimeter of lead equivalent.
   (2) Protective aprons of not less than 0.25 millimeter of lead equivalent shall be worn in the fluoroscopy room by all individuals (except the patient). Any individual required to be in the room for short periods of time may not be required to wear a protective apron if exposure levels below minimum as seen on film badge reports can be verified. Individuals not using protective aprons should follow ALARA by using time and distance to reduce exposure. Any declared pregnant individual must meet the requirements of 641—40.22(136C).

4. Supervision of fluoroscopy. The use of fluoroscopy by radiologic technologists and radiologic students shall be performed under the direct supervision of a licensed practitioner, a radiologist assistant or an advanced registered nurse practitioner (ARNP), pursuant to 655—subrule 7.2(2), for the purpose of localization to obtain images for diagnostic or therapeutic purposes.

41.1(6) Radiographic systems other than fluoroscopic, dental intraoral, veterinary, or computed tomography X-ray systems.

a. Beam limitation. The useful beam shall be limited to the area of clinical interest. This shall be considered met if a positive beam-limiting device meeting manufacturer’s specifications and the requirements of 41.1(6)”h”(2) have been properly used or if evidence of collimation is shown on at least three sides or three corners of the film (for example, projections from the shutters of the collimator, cone cutting at the corners, or borders at the film’s edge.)
   (1) General purpose stationary and mobile X-ray systems and veterinarian systems (other than portable) installed after July 1, 1998.
      1. Only X-ray systems provided with means for independent stepless adjustment of at least two dimensions of the X-ray field shall be used.
      2. A method shall be provided for visually defining the perimeter of the X-ray field.
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- Illuminance shall be greater than 7.5 foot-candles or 80.3 LUX at 100 centimeters or maximum SID whichever is less.
- The total misalignment of the edges of the visually defined field with the respective edges of the X-ray field along either the length or width of the visually defined field shall not exceed 2 percent of the distance from the source to the center of the visually defined field when the surface upon which it appears is perpendicular to the axis of the X-ray beam.

3. The agency may grant an exemption on noncertified X-ray systems to 41.1(6)“a”(1)“1” and “2” provided the registrant makes a written application for such exemption and in that application demonstrates it is impractical to comply with 41.1(6)“a”(1)“1” and “2”; and the purpose of 41.1(6)“a”(1)“1” and “2” will be met by other methods.

2. Additional requirements for stationary general purpose X-ray systems. In addition to the requirements of 41.1(6)“a”(1), stationary general purpose X-ray systems, both certified and noncertified, shall meet the following requirements:

1. A method shall be provided to indicate when the axis of the X-ray beam is perpendicular to the plane of the image receptor, to align the center of the X-ray field with respect to the center of the image receptor to within 2 percent of the SID, and to indicate the SID to within 2 percent;

2. The beam-limiting device shall indicate numerically the field size in the plane of the image receptor to which it is adjusted; and

3. Indication of field size dimensions and SIDs shall be specified in inches or centimeters, and shall be such that aperture adjustments result in X-ray field dimensions in the plane of the image receptor which correspond to those indicated by the beam-limiting device to within 2 percent of the SID when the beam axis is indicated to be perpendicular to the plane of the image receptor.

3. X-ray systems designed for one image receptor size. Radiographic equipment designed for only one image receptor size at a fixed SID shall be provided with means to limit the field at the plane of the image receptor to dimensions no greater than those of the image receptor, and to align the center of the X-ray field with the center of the image receptor to within 2 percent of the SID, or shall be provided with means to both size and align the X-ray field such that the X-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor.

4. Reserved.

5. X-ray systems other than those described in 41.1(6)“a”(1), (2), and (3), and veterinary systems installed prior to July 1, 1998, and all portable veterinary X-ray systems.

1. Means shall be provided to limit the X-ray field in the plane of the image receptor so that such field does not exceed each dimension of the image receptor by more than 2 percent of the SID when the axis of the X-ray beam is perpendicular to the plane of the image receptor.

2. Means shall be provided to align the center of the X-ray field with the center of the image receptor to within 2 percent of the SID, or means shall be provided to both size and align the X-ray field such that the X-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor. Compliance shall be determined with the axis of the X-ray beam perpendicular to the plane of the image receptor.

3. 41.1(6)“a”(5)“1” and “2” may be met with a system that meets the requirements for a general purpose X-ray system as specified in 41.1(6)“a”(1) or, when alignment means are also provided, may be met with either:

- An assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed with each such device having clear and permanent markings to indicate the image receptor size and SID for which it is designed; or

- A beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed. Permanent, clearly legible markings shall indicate the image receptor size and SID for which each aperture is designed and shall indicate which aperture is in position for use.

b. Radiation exposure control devices.

1. Timers.
1. Means shall be provided to initiate the radiation exposure by a deliberate action on the part of the operator, such as the depression of a switch. Radiation exposure shall not be initiated without such an action.

2. Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition, it shall not be possible to make an exposure when the timer is set to a “zero” or “off” position if either position is provided. Except for dental panoramic systems, termination of an exposure shall cause automatic resetting of the timer to its initial setting or to “zero.”

(2) X-ray control.

1. Manual exposure control. An X-ray control shall be incorporated into each X-ray system such that an exposure can be terminated by the operator at any time except for exposure of one-half second or less, or during serial radiography when means shall be provided to permit completion of any single exposure of the series in process.

2. Each X-ray control shall be located in such a way as to meet the following requirements:

a. Stationary X-ray systems (except podiatry and veterinary units) shall be required to have the X-ray exposure switch permanently mounted in a protected area so that the operator is required to remain in that protected area during the entire exposure and so that the operator can view the patient while making any exposures; and mobile and portable X-ray systems which are:
   - Used for greater than one week in the same location, i.e., a room or suite, shall meet the requirements of 41.1(6)“b”(2)“2”; or
   - Used for greater than one hour and less than one week at the same location, i.e., a room or suite, or in a clinical setting for routine extremities only, or where moving the X-ray system from room to room is impractical, shall meet the requirement of the above paragraph or be provided with a 6.5 foot (1.98 m) high protective barrier which is placed at least 2.7 meters (9 feet) from the tube housing assembly. Written procedures must instruct the operator to remain in the protected area during the entire exposure. Stationary podiatric systems which do not meet the above requirements shall be provided with a 9-foot exposure button cord which allows the operator to remain behind a protective barrier during the entire exposure. If the protective barrier is moveable, written procedures must be on file at the facility, which dictate that the operator will remain behind the barrier during the entire exposure.

3. The X-ray control shall provide visual indication observable at or from the operator’s protected position whenever X-rays are produced. In addition, a signal audible to the operator shall indicate that the exposure has terminated.

(3) Automatic exposure controls. When an automatic exposure control is provided:

1. Indication shall be made on the control panel when this mode of operation is selected;

2. If the X-ray tube potential is equal to or greater than 50 kVp, the minimum exposure time for field emission equipment rated for pulsed operation shall be equal to or less than a time interval equivalent to 2 pulses;

3. The minimum exposure time for all equipment other than that specified in 41.1(6)“b”(3)“2” shall be equal to or less than one-sixtieth second or a time interval required to deliver 5 mAs, whichever is greater;

4. Either the product of peak X-ray tube potential, current, and exposure time shall be limited to not more than 60 kWs per exposure, or the product of X-ray tube current and exposure time shall be limited to not more than 600 mAs per exposure except that, when the X-ray tube potential is less than 50 kVp, the product of X-ray tube current and exposure time shall be limited to not more than 2000 mAs per exposure; and

5. A visible signal shall indicate when an exposure has been terminated at the limits required by 41.1(6)“b”(3)“4,” and manual resetting shall be required before further automatically timed exposures can be made.

(4) Reproducibility. With a timer setting of 0.5 seconds or less, the average exposure period (T) shall be greater than or equal to five times the maximum exposure period (T_max) minus the minimum exposure period (T_min) when four timer tests are performed:
\[ T \geq 5 \left( T_{\text{max}} - T_{\text{min}} \right) \]

(5) Exposure duration (timer) linearity. For systems having independent selection of exposure time settings, the average ratios \( X_i \) of exposure to the indicated timer setting, in units of C kg\(^{-1}\)s\(^{-1}\) (mR/s), obtained at any two clinically used timer settings shall not differ by more than 0.10 times their sum. This is written as:

\[ (X_1 - X_2) \leq 0.1 \left( X_1 + X_2 \right) \]

where \( X_1 \) and \( X_2 \) are the average C kg\(^{-1}\)s\(^{-1}\) (mR/s) values.

c. Source-to-skin distance. All mobile or portable radiographic systems shall be provided with means to limit the source-to-skin distance to equal to or greater than 30 centimeters except for veterinary systems.

d. Exposure reproducibility. When all technique factors are held constant, including control panel selections associated with automatic exposure control systems, the coefficient of variation of exposure for both manual and automatic exposure control systems shall not exceed 0.05. This requirement applies to clinically used techniques.

e. Radiation from capacitor energy storage equipment in standby status. Radiation emitted from the X-ray tube when the system is fully charged and the exposure switch or timer is not activated shall not exceed a rate of 2 milliroentgens (0.516 \( \mu \)C/kg) per hour at 5 centimeters from any accessible surface of the diagnostic source assembly, with the beam-limiting device fully open.

f. Accuracy. Deviation of measured technique factors from indicated values of kVp and exposure time shall not exceed the limits specified for that system by its manufacturer. In the absence of manufacturer’s specifications, the deviation shall not exceed 10 percent of the indicated value for kVp and 20 percent for time.

g. mA/mAs linearity. The following requirements apply when the equipment is operated on a power supply as specified by the manufacturer for any fixed X-ray tube potential within the range of 40 percent to 100 percent of the maximum rated:

(1) Equipment having independent selection of X-ray tube current (mA). The average ratios \( X_i \) of exposure to the indicated milliampere-seconds product (C kg\(^{-1}\)mAs\(^{-1}\) (or mR/mAs)) obtained at any two consecutive tube current settings shall not differ by more than 0.10 times their sum:

\[ X_1 - X_2 \leq 0.10 \left( X_1 + X_2 \right) \]

where \( X_1 \) and \( X_2 \) are the average values obtained at each of two consecutive tube current settings, or at two settings differing by no more than a factor of 2 where the tube current selection is continuous.

(2) Equipment having a combined X-ray tube current-exposure time product (mAs) selector, but not a separate tube current (mA) selector. The average ratios \( X_i \) of exposure to the indicated milliampere-seconds product, in units of mR/mAs (or C kg\(^{-1}\)mAs\(^{-1}\)), obtained at any two consecutive mAs selector settings shall not differ by more than 0.10 times their sum:

\[ X_1 - X_2 \leq 0.10 \left( X_1 + X_2 \right) \]

where \( X_1 \) and \( X_2 \) are the average values obtained at any two consecutive mAs selector settings, or at two settings differing by no more than a factor of 2 where the mAs selector provides continuous selection.

(3) Measuring compliance. Determination of compliance shall be based on 10 exposures taken within a time period of one hour, at each of the two settings. These two settings may include any two focal spot sizes except where one is equal to or less than 0.45 millimeters and the other is greater than 0.45 millimeters. For purposes of this requirement, focal spot size is the nominal focal spot size specified by the X-ray tube manufacturer.
h. Additional requirements applicable to certified systems only. Diagnostic X-ray systems incorporating one or more certified component(s) shall be required to comply with the following additional requirement(s) which relate to that certified component(s).

1. Beam limitation for stationary and mobile general purpose X-ray systems.

   1. There shall be provided a means of stepless adjustment of the X-ray field. The minimum field size at an SID of 100 centimeters shall be equal to or less than 5 centimeters by 5 centimeters.

   2. When a light localizer is used to define the X-ray field, it shall provide an average illumination of not less than 160 lux or 15 foot-candles at 100 centimeters or at the maximum SID, whichever is less. The average illumination shall be based upon measurements made in the approximate center of each quadrant of the light field. Radiation therapy simulation systems manufactured on and after May 27, 1980, are exempt from this requirement.

   3. The edge of the light field at 100 centimeters or at the maximum SID, whichever is less, shall have a contrast ratio, corrected for ambient lighting, of not less than 4 in the case of beam-limiting devices designed for use on stationary equipment, and a contrast ratio of not less than 3 in the case of beam-limiting devices designed for use on mobile equipment. The contrast ratio is defined as $I_1/I_2$ where $I_1$ is the illumination 3 millimeters from the edge of the light field toward the center of the field; and $I_2$ is the illumination 3 millimeters from the edge of the light field away from the center of the field. Compliance shall be determined with a measuring instrument aperture of 1 millimeter in diameter.

2. Beam limitation and alignment on stationary general purpose X-ray systems equipped with PBL. If PBL is being used, the following requirements shall be met:

   1. PBL shall prevent the production of X-rays when

      • Either the length or width of the X-ray field in the plane of the image receptor differs, except as permitted by 41.1(6)“h”(3), from the corresponding image receptor dimensions by more than 3 percent of the SID; or

      • The sum of the length and width differences as stated in 41.1(6)“h”(2)“1” above without regard to sign exceeds 4 percent of the SID;

   2. Compliance with 41.1(6)“h”(2)“1” shall be determined when the equipment indicates that the beam axis is perpendicular to the plane of the image receptor. Compliance shall be determined no sooner than 5 seconds after insertion of the image receptor;

   3. The PBL system shall be capable of operation, at the discretion of the operator, such that the size of the field may be made smaller than the size of the image receptor through stepless adjustment of the field size. The minimum field size at an SID of 100 centimeters shall be equal to or less than 5 centimeters by 5 centimeters;

   4. The PBL system shall be designed such that if a change in image receptor does not cause an automatic return to PBL function as described in 41.1(6)“h”(2)“1,” then any change of image receptor size or SID must cause the automatic return.

3. Beam limitation for portable X-ray systems. Beam limitation for portable X-ray systems shall meet the beam limitation requirements of 41.1(6)“a” or 41.1(6)“h”(2).

   i. Tube stands for portable X-ray systems. A tube stand or other mechanical support shall be used for portable X-ray systems, so that the X-ray tube housing assembly need not be handheld during exposures.

   j. Systems used in a clinical (nonsurgical) setting shall be restricted to one room within a location or suite which meets the requirements of 41.1(3)“d.”

41.1(7) Intraoral dental radiographic systems. In addition to the provisions of 41.1(3) and 41.1(4), the requirements of 41.1(7) apply to X-ray equipment and associated facilities used for dental radiography. Requirements for extraoral dental radiographic systems are covered in 41.1(6). Only systems meeting the requirements of 41.1(7) shall be used. Additional requirements specific to handheld dental X-ray equipment are outlined in 41.1(7)“i.”

   a. Source-to-skin distance. X-ray systems designed for use with an intraoral image receptor shall be provided with means to limit source-to-skin distance to not less than:

      (1) 18 centimeters if operable above 50 kVp, or

      (2) 10 centimeters if not operable above 50 kVp.
b. **Beam limitation.** Radiographic systems designed for use with an intraoral image receptor shall be provided with means to limit the X-ray beam such that:

1. If the minimum source-to-skin distance (SSD) is 18 centimeters or more, the X-ray field, at the minimum SSD, shall be containable in a circle having a diameter of no more than 7 centimeters; and
2. If the minimum SSD is less than 18 centimeters, the X-ray field, at the minimum SSD, shall be containable in a circle having a diameter of no more than 6 centimeters.
3. The position indicating device shall be shielded and open-ended. The shielding shall be equivalent to the requirements of 41.1(4)“c.”

c. **Exposure control.**

1. Exposure initiation.
   1. Means shall be provided to initiate the radiation exposure by a deliberate action on the part of the operator, such as the depression of a switch. Radiation exposure shall not be initiated without such an action; and
   2. It shall not be possible to make an exposure when the timer is set to a “zero” or “off” position if either position is provided.
2. Exposure indication. Means shall be provided for visual indication observable at or from the operator’s protected position whenever X-rays are produced. In addition, a signal audible to the operator shall indicate that the exposure has terminated except in X-ray systems that cannot be altered to meet this requirement.
3. Exposure termination.
   1. Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition:
      2. Termination of exposure shall cause automatic resetting of the timer to its initial setting or to “zero.”
      3. An X-ray control shall be incorporated into each X-ray system such that an exposure can be terminated by the operator at any time, except for exposures of one-half (½) second or less.
4. Exposure duration (timer) linearity. For systems having independent selection of exposure time settings, the average ratios (X₁) of exposure to the indicated timer setting, in units of C kg⁻²s⁻¹ (mR/s), obtained at any two clinically used timer settings shall not differ by more than 0.10 times their sum. This is written as:

   \[(X₁ - X₂) \leq 0.1 \ (X₁ + X₂)\]

   where X₁ and X₂ are the average values.
5. Each X-ray exposure switch shall be located in such a way as to meet the following requirements:

   1. Stationary X-ray systems shall be required to have the X-ray exposure switch located in a protected area or have an exposure switch cord of sufficient length to permit the operator to activate the equipment while in a protected area, e.g., corridor outside the operatory. The procedures required under 41.1(3)“a”(4) must instruct the operator to remain in the protected area during the entire exposure.
   2. Mobile and portable X-ray systems which are:
      - Used for greater than one week in the same location, i.e., a room or suite, shall meet the requirements of 41.1(7)“c”(5)”1.”
      - Used for greater than one hour and less than one week at the same location, i.e., a room or suite, shall meet the requirements of the above paragraph or be provided with a 6.5 foot (1.98 m) high protective barrier or means to allow the operator to be at least 6 feet (1.8 meters) from the tube housing assembly while making exposure.
   3. Portable dental X-ray systems designed with a backscatter shield may be used without an additional protective barrier, but the operator must stand directly behind the equipment to allow the shield to function as designed.
d. **Reproducibility.** When the equipment is operated on an adequate power supply as specified by the manufacturer, the estimated coefficient of variation of radiation exposures shall be no greater than 0.05, for any specific combination of selected technique factors.

e. **mA/mS linearity.** The following requirements apply when the equipment is operated on a power supply as specified by the manufacturer for any fixed X-ray tube potential within the range of 40 percent to 100 percent of the maximum rated.

1. Equipment having independent selection of X-ray tube current (mA). The average ratios ($X_1$) of exposure to the indicated milliampere-seconds product, in units of C kg\(^{-1}\) mAs\(^{-1}\) (or mR/mAs), obtained at any two consecutive tube current settings shall not differ by more than 0.10 times their sum:

\[
(X_1 - X_2) \leq 0.1 \ (X_1 + X_2)
\]

where $X_1$ and $X_2$ are the average values obtained at each of two consecutive tube current settings, or at two settings differing by no more than a factor of 2 where the tube current selection is continuous.

2. Equipment having a combined X-ray tube current-exposure time product (mAs) selector, but not a separate tube current (mA) selector. The average ratios ($X_1$) of exposure to the indicated milliampere-seconds product, in units of C kg\(^{-1}\) mAs\(^{-1}\) (or mR/mAs), obtained at any two consecutive mAs selector settings shall not differ by more than 0.10 times their sum:

\[
(X_1 - X_2) \leq 0.1 \ (X_1 + X_2)
\]

where $X_1$ and $X_2$ are the average values obtained at any two mAs selector settings, or at two settings differing by no more than a factor of 2 where the mAs selector provides continuous selection.

3. Measuring compliance. Determination of compliance shall be based on 10 exposures taken within a time period of one hour, at each of the two settings. These two settings may include any two focal spot sizes except where one is equal to or less than 0.45 millimeters and the other is greater than 0.45 millimeters. For purposes of this requirement, focal spot size is the nominal focal spot size specified by the X-ray tube manufacturer.

f. **Accuracy.** Deviation of technique factors from indicated values for kVp and exposure time (if time is independently selectable) shall not exceed the limits specified for that system by its manufacturer. In the absence of manufacturer’s specifications the deviation shall not exceed 10 percent of the indicated value for kVp and 20 percent for time.

g. **kVp limitations.** Dental X-ray machine with a nominal fixed kVp of less than 50 kVp shall not be used to make diagnostic dental radiographs of humans.

h. **Administrative controls.**

1. Patient and film holding devices shall be used when the techniques permit.

2. The tube housing and the PID for stationary or mobile systems shall not be held by the operator during an exposure.

3. The X-ray system shall be operated in such a manner that the useful beam at the patient’s skin does not exceed the requirements of 41.1(7)“b”(1).

4. Dental fluoroscopy without image intensification shall not be used.

i. **Handheld dental X-ray systems.** Only equipment specifically designed by the manufacturer to be held by the operator for intraoral dental X-ray exposures is allowed to be operated pursuant to this subrule.

1. Operators shall be specifically trained to operate the equipment. Records of training shall be kept at the facility until the operator is no longer an employee or until the equipment is removed from the facility.

2. Protective aprons of not less than 0.25 millimeter lead equivalent shall be provided for operators to wear while operating the equipment.

3. Dosimetry shall be provided for operators who are expected to exceed 10 percent of the annual occupational dose limit as outlined in 641—40.84(136C).

4. Operators shall operate the equipment according to the manufacturer’s instructions.
(5) The image receptor used must be digital radiography (DR), computed radiography (CR), or intraoral film with a speed class designated as “E/F” or a film with a faster speed designation than “F” or “E/F.”

(6) No individual except the equipment operator may be within a radius of at least 6 feet from the patient during exposures.

(7) The equipment shall not be operated unless the backscatter shield is in place as designed by the manufacturer.

(8) The equipment shall not be operated in hallways, waiting rooms, or other areas where access for individuals of the general public cannot be controlled.

(9) The equipment shall be held without any motion during a patient examination. If the operator has difficulty in holding the equipment stationary, the operator shall use a tube stand. The equipment shall be operated on a tube stand whenever practicable to avoid unnecessary motion and retakes.

(10) When not in use, the equipment shall be stored in a manner that would prevent inadvertent exposures or use by unauthorized individuals.

41.1(8) Reserved.

41.1(9) Bone densitometry units.

a. No additional shielding for the room is required.

b. Film badges, OSL devices, or TLDs must be issued for the first six months to all personnel operating the unit. If monitoring indicates no exposure, the IDPH may allow discontinuance of monitoring upon written request. When new procedures are started that have not been previously monitored, monitoring must be reinstated for six months and another request for discontinuance submitted to the agency.

c. Reserved.

d. Specific operating procedures must be prepared and made available at the operator’s position.

e. Bone densitometry on human patients shall be conducted only under a prescription of a licensed physician, a licensed physician assistant as defined in Iowa Code section 148C.1, subsection 6, or a licensed registered nurse who is registered as an advanced registered nurse practitioner pursuant to Iowa Code chapter 152.

f. During the operation of the bone densitometry system:

(1) The operator, ancillary personnel, and members of the general public shall be positioned at least one meter from the patient and bone densitometry system during the examination.

(2) The operator shall advise the patient that the bone densitometry examination is a type of X-ray procedure.

g. Equipment shall be maintained and operated in accordance with the manufacturer’s specifications. Records of maintenance shall be kept for inspection by the agency.

41.1(10) Veterinary medicine radiographic installations.

a. Equipment.

(1) The protective tube housing shall be equivalent to the requirements of 41.1(4)”c.”

(2) Diaphragms or cones shall be provided for collimating the useful beam to the area of clinical interest and shall provide the same degree of protection as is required of the housing.

(3) The total filtration permanently in the useful beam shall not be less than 0.5 millimeters aluminum equivalent for machines operating up to 50 kVp, 1.5 millimeters aluminum equivalent for machines operating between 50 and 70 kVp, and 2.5 millimeters aluminum equivalent for machines operating above 70 kVp.

b. Operator protection.

(1) All wall, ceiling, and floor areas shall be equivalent to or provided with applicable protective barriers to ensure compliance with 641—40.15(136C) and 641—40.21(136C) and 641—subrule 40.26(1).

(2) All stationary, mobile or portable X-ray systems shall be provided with either a 2 meter (6.5 feet) high protective barrier for operator protections during exposures, or shall be provided with means to allow the operator to be at least 2.7 meters (9 feet) from the tube housing assembly during exposures.
c. Operating procedures. Veterinary medicine radiographic installations are exempt from the requirements of 641—41.1(136C) except for subrules 41.1(3) and 41.1(10).

(1) No individual other than the operator shall be in the X-ray room while exposures are being made unless such individual’s assistance is required, and

(2) The operator shall stand behind the protective barrier of 9 feet from the useful beam and the animal during radiographic exposures, or

(3) When an animal must be held in position during radiography, mechanical supporting or restraining devices should be used. If the animal must be held by an individual, that individual shall be protected with appropriate shielding devices, such as protective gloves and apron, and shall be so positioned that no part of the holder’s body will be struck by the useful beam. The exposure of any individual used for this purpose shall be monitored.

41.1(11) Computed tomography X-ray systems.

a. Definitions. In addition to the definitions provided in 641—38.2(136C), 641—40.2(136C), and 41.1(2), the following definitions shall be applicable to 41.1(11):

"Computed tomography dose index" means the integral from \(-7T\) to \(+7T\) of the dose profile along a line perpendicular to the tomographic plane divided by the product of the nominal tomographic section thickness and the number of tomograms produced in a single scan, that is:

\[
\text{CTDI} = \frac{1}{nT} \int_{-7T}^{+7T} D(z) \, dz
\]

where:

\(z\) = Position along a line perpendicular to the tomographic plane.

\(D(z)\) = Dose at position \(z\).

\(T\) = Nominal tomographic section thickness.

\(n\) = Number of tomograms produced in a single scan.

This definition assumes that the dose profile is centered around \(z = 0\) and that, for a multiple tomogram system, the scan increment between adjacent scans is \(nT\).

"Contrast scale" means the change in the linear attenuation coefficient per CTN relative to water, that is:

\[
\text{CS} = \frac{\mu_x - \mu_w}{\text{CTN}_x - \text{CTN}_w}
\]

where:

\(\mu_x\) = Linear attenuation coefficient of the material of interest.

\(\mu_w\) = Linear attenuation coefficient of water.

\(\text{CTN}_x\) = of the material of interest.

\(\text{CTN}_w\) = of water.

"CS" (see "Contrast scale").

"CT conditions of operation" means all selectable parameters governing the operation of a CT X-ray system including, but not limited to, nominal tomographic section thickness, filtration, and the technique factors as defined in 41.1(2).

"CTDI" (see “Computed tomography dose index”).

"CT gantry" means the tube housing assemblies, beam-limiting devices, detectors, and the supporting structures and frames which hold these components.

"CTN" (see “CT number”).
"CT number" means the number used to represent the X-ray attenuation associated with each elemental area of the CT image.

\[
\text{CTN} = \frac{k(\mu_x - \mu_w)}{\mu_w}
\]

where:
- \( k \) = A constant. (The constant has a normal value of 1,000 when the Houndsfield scale of CTN is used.)
- \( \mu_x \) = Linear attenuation coefficient of the material of interest.
- \( \mu_w \) = Linear attenuation coefficient of water.
- "Dose profile" means the dose as a function of position along a line.
- "Elemental area" means the smallest area within a tomogram for which the X-ray attenuation properties of a body are depicted (see also "Picture element").
- "Multiple tomogram system" means a computed tomography X-ray system which obtains X-ray transmission data simultaneously during a single scan to produce more than one tomogram.
- "Noise" means the standard deviation of the fluctuation in CTN expressed as a percentage of the attenuation coefficient of water. Its estimate (S_\text{n}) is calculated using the following expression:

\[
S_n = \frac{100 \times \text{CS}}{\mu_w} \cdot s
\]

where:
- \( \text{CS} \) = Linear attenuation coefficient of the material of interest.
- \( \mu_w \) = Linear attenuation coefficient of water.
- \( s \) = Estimated standard deviation of the CTN of picture elements in a specified area of the CT image.

"Nominal tomographic section thickness" means the full width at half-maximum of the sensitivity profile taken at the center of the cross-sectional volume over which X-ray transmission data are collected.
- "Picture element" means an elemental area of a tomogram.
- "Reference plane" means a plane which is displaced from and parallel to the tomographic plane.
- "Scan" means the complete process of collecting X-ray transmission data for the production of a tomogram. Data can be collected simultaneously during a single scan for the production of one or more tomograms.
- "Scan increment" means the amount of relative displacement of the patient with respect to the CT X-ray system between successive scans measured along the direction of such displacement.
- "Scan sequence" means a preselected set of two or more scans performed consecutively under preselected CT conditions of operation.
- "Scan time" means the period of time between the beginning and end of X-ray transmission data accumulation for a single scan.
- "Single tomogram system" means a CT X-ray system which obtains X-ray transmission data during a scan to produce a single tomogram.
- "Tomographic plane" means that geometric plane which is identified as corresponding to the output tomogram.
- "Tomographic section" means the volume of an object whose X-ray attenuation properties are imaged in a tomogram.

b. Requirements for equipment.

1. Termination of exposure.
   (1) Means shall be provided to terminate the X-ray exposure automatically by either deenergizing the X-ray source or shuttering the X-ray beam in the event of equipment failure affecting data collection. Such termination shall occur within an interval that limits the total scan time to no more than 110 percent of its preset value through the use of either a backup timer or devices which monitor equipment function.
2. A visible signal shall indicate when the X-ray exposure has been terminated through the means required by 41.1(11) “b”(1)”1.”

3. The operator shall be able to terminate the X-ray exposure at any time during a scan, or series of scans under CT X-ray system control, of greater than one-half second duration.
   (2) Tomographic plane indication and alignment.
   1. For any single tomogram system, means shall be provided to permit visual determination of the tomographic plane or a reference plane offset from the tomographic plane.
   2. For any multiple tomogram system, means shall be provided to permit visual determination of the location of a reference plane. This reference plane can be offset from the location of the tomographic planes.

4. If a device using a light source is used to satisfy 41.1(11) “b” (2)”1” or “2,” the light source shall provide illumination levels sufficient to permit visual determination of the location of the tomographic plane or reference plane under ambient light conditions of up to 500 lux.
   (3) Beam-on and shutter status indicators and control switches.
   1. The CT X-ray control and gantry shall provide visual indication whenever X-rays are produced and, if applicable, whether the shutter is open or closed.
   2. Each emergency button or switch shall be clearly labeled as to its function.

   (4) Indication of CT conditions of operation. The CT X-ray system shall be designed such that the CT conditions of operation to be used during a scan or a scan sequence shall be indicated prior to the initiation of a scan or a scan sequence. On equipment having all or some of these conditions of operation at fixed values, this requirement may be met by permanent markings. Indication of CT conditions of operation shall be visible from any position from which scan initiation is possible.

   (5) Extraneous radiation. When data are not being collected for image production, the radiation adjacent to the tube port shall not exceed that permitted by 41.1(4)”c.”

   (6) Maximum surface CTDI identification. The angular position where the maximum surface CTDI occurs shall be identified to allow for reproducible positioning of a CT dosimetry phantom.

   (7) Additional requirements applicable to CT X-ray systems containing a gantry manufactured after September 3, 1985.
   1. The total error in the indicated location of the tomographic plane or reference plane shall not exceed 5 millimeters.
   2. If the X-ray production period is less than one-half second, the indication of X-ray production shall be actuated for at least one-half second. Indicators at or near the gantry shall be discernible from any point external to the patient opening where insertion of any part of the human body into the primary beam is possible.

   3. The deviation of indicated scan increment versus actual increment shall not exceed plus or minus 1 millimeter with any mass from 0 to 100 kilograms resting on the support device. The patient support device shall be incremented from a typical starting position to the maximum incremented distance of 30 centimeters, whichever is less, and then returned to the starting position. Measurement of actual versus indicated scan increment may be taken anywhere along this travel.

   4. Premature termination of the X-ray exposure by the operator shall necessitate resetting of the CT conditions of operation prior to the initiation of another scan.

   c. Facility design requirements.
   (1) Aural communication. Provision shall be made for two-way aural communication between the patient and the operator at the control panel.

   (2) Viewing systems.
   1. Windows, mirrors, closed-circuit television, or an equivalent shall be provided to permit continuous observation of the patient during irradiation and shall be so located that the operator can observe the patient from the control panel.

   2. When the primary viewing system is by electronic means, an alternate viewing system (which may be electronic) shall be available for use in the event of failure of the primary viewing system.

   d. Surveys, calibrations, spot checks, and operating procedures.
   (1) Surveys.
1. All CT X-ray systems shall have a survey made by, or under the direction of, a qualified expert. In addition, such surveys shall be done after any change in the facility or equipment which might cause a significant increase in radiation hazard.

2. The registrant shall obtain a written report of the survey from the qualified expert, and a copy of the report shall be made available to the agency upon request.

   (2) Radiation calibrations.
   1. The calibration of the radiation output of the CT X-ray system shall be performed by, or under the direction of, a qualified expert who is physically present at the facility during such calibration.
   2. The calibration of a CT X-ray system shall be performed at intervals specified by a qualified expert and after any change or replacement of components which, in the opinion of the qualified expert, could cause a change in the radiation output.

3. The calibration of the radiation output of a CT X-ray system shall be performed with a calibrated dosimetry system. The calibration of such system shall be traceable to a national standard. The dosimetry system shall have been calibrated within the preceding two years.

4. CT dosimetry phantom(s) shall be used in determining the radiation output of a CT X-ray system. Such phantom(s) shall meet the following specifications and conditions of use: CT dosimetry phantom(s) shall be right circular cylinders of polymethyl methacrylate of density 1.19 plus or minus 0.01 grams per cubic centimeter. The phantom(s) shall be at least 14 centimeters in length and shall have diameters of 32.0 centimeters for testing CT X-ray systems designed to image any section of the body and 16.0 centimeters for systems designed to image the head or for whole body scanners operated in the head scanning mode; CT dosimetry phantom(s) shall provide means for the placement of a dosimeter(s) along the axis of rotation and along a line parallel to the axis of rotation 1.0 centimeter from the outer surface and within the phantom. Means for the placement of dosimeters or alignment devices at other locations may be provided; any effects on the doses measured due to the removal of phantom material to accommodate dosimeters shall be accounted for through appropriate corrections to the reported data or included in the statement of maximum deviation for the values obtained using the phantom; and all dose measurements shall be performed with the CT dosimetry phantom placed on the patient couch or support device without additional attenuation materials present.

5. The calibration shall be required for each type of head, body, or whole-body scan performed at the facility.

6. Calibration shall meet the following requirements: The dose profile along the center axis of the CT dosimetry phantom for the minimum, maximum, and midrange values of the nominal tomographic section thickness used by the registrant shall be measurable. Where less than three nominal tomographic thicknesses can be selected, the dose profile determination shall be performed for each available nominal tomographic section thickness; the CTDI\(^3\)/ along the two axes specified in 41.1(11)“d”(2)“4” shall be measured. (For the purpose of determining the CTDI, the manufacturer’s statement as to the nominal tomographic section thickness for that particular system may be utilized.) The CT dosimetry phantom shall be oriented so that the measurement point 1.0 centimeter from the outer surface and within the phantom is in the same angular position within the gantry as the point of maximum surface CTDI identified. The CT conditions of operation shall correspond to typical values used by the registrant; and the spot checks specified in 41.1(11)“d”(3) shall be made.

7. Calibration procedures shall be in writing. Records of calibrations performed shall be maintained for inspection by the agency.

   (3) Spot checks.
   1. The spot-check procedures shall be in writing and shall have been developed by a qualified expert.
   2. The spot-check procedures shall incorporate the use of a CT dosimetry phantom which has a capability of providing an indication of contrast scale, noise, nominal tomographic section thickness, the resolution capability of the system for low and high contrast objects, and measuring the mean CTN for water or other reference material.
   3. All spot checks shall be included in the calibration required by 41.1(11)“d”(2) and at time intervals and under system conditions specified by a qualified expert.
4. Spot checks shall include acquisition of images obtained with the CT dosimetry phantom(s) using the same processing mode and CT conditions of operation as are used to perform calibrations required by 41.1(11) “d”(2). The images shall be retained, until a new calibration is performed, in two forms as follows: photographic copies of the images obtained from the image display device; and images stored in digital form on a storage medium compatible with the CT X-ray system.

5. Written records of the spot checks performed shall be maintained for inspection by the agency.

(4) Operating procedures.

1. The CT X-ray system shall not be operated except by a licensed practitioner or an individual who has been specifically trained in its operation and holds a current permit to practice as a general radiologic technologist as defined under the provisions of 641—Chapter 42.

[ARC 8659B, IAB 4/7/10, effective 5/12/10; ARC 0577C, IAB 2/6/13, effective 3/13/13; ARC 1639C, IAB 10/1/14, effective 11/5/14; ARC 3163C, IAB 6/7/17, effective 7/12/17; ARC 3746C, IAB 4/11/18, effective 5/16/18; ARC 5683C, IAB 6/16/21, effective 7/21/21]

641—41.2(136C) Use of radionuclides in the healing arts.

41.2(1) Purpose and scope.

a. This rule establishes requirements and provisions for the use of radionuclides in the healing arts and for issuance of licenses authorizing the medical use of this material. These requirements and provisions provide for the protection of the public health and safety. The requirements and provisions of this rule are in addition to, and not in substitution for, the applicable portions of 641—Chapters 38 to 40. The requirements and provisions of these rules apply to applicants and licensees subject to this rule unless specifically exempted.

b. All references to any Code of Federal Regulations (CFR) in this chapter are those in effect as of July 22, 2020.

41.2(2) Definitions. For the purpose of this chapter, the definitions of 641—Chapters 38 to 40 may also apply. As used in 41.2(136C), the following definitions apply:

“Area of use” means a portion of a physical structure that has been set aside for the purpose of receiving, using, or storing radioactive material.

“Associate radiation safety officer” means an individual who:

a. Meets the requirements of 41.2(65) and 41.2(77); and

b. Is currently identified as an associate radiation safety officer for the types of use of byproduct material for which the duties and tasks by the radiation safety officer on:

1. A specific medical use license issued by the NRC or an agreement state; or

2. A medical use permit issued by an NRC master material licensee.

“Authorized medical physicist” means an individual who:

a. Meets the requirements of 41.2(74) and 41.2(77); or

b. Is identified as an authorized medical physicist or teletherapy physicist on:

1. A specific medical use license issued by this agency, the NRC, or an agreement state;

2. A medical use permit issued by an NRC master material licensee;

3. A permit issued by an NRC or agreement state broad scope medical use licensee; or

4. A permit issued by an NRC master material license broad scope medical use permittee.

“Authorized nuclear pharmacist” means a pharmacist who:

a. Has met the appropriate requirements of 41.2(77) and 41.2(78), or before May 3, 2006, meets the requirements in 10 CFR 35.980(a) and 10 CFR 35.59; or:

b. Is identified as an authorized nuclear pharmacist on:

1. A specific license issued by the agency, NRC or agreement state that authorizes medical use or the practice of nuclear pharmacy;

2. A permit issued by an NRC master material licensee that authorizes medical use or the practice of nuclear pharmacy;

3. A permit issued by the NRC or agreement state broad scope medical use licensee that authorizes medical use or the practice of nuclear pharmacy; or

4. A permit issued by an NRC master material license broad scope medical use permittee that authorizes medical use or the practice of nuclear pharmacy; or
c. Is identified as an authorized nuclear pharmacist by a commercial nuclear pharmacy that has been identified to identify authorized nuclear pharmacists; or

d. Is designated as an authorized nuclear pharmacist in accordance with 641—38.2(136C)

"Authorized user" means a physician, dentist, or podiatrist who has met the appropriate requirements of 41.2(67) "a," 41.2(68) "a," 41.2(69) "a," 41.2(70) "a," 41.2(72) "a," 41.2(73) "a," 41.2(81) "a," or 41.2(82) "a," or before May 3, 2006, meets the requirements in 10 CFR 35.910(a), 35.920(a), 35.930(c), 35.940(a), 35.950(a), or 35.960(a) and 10 CFR 35.59; or who is identified on:

1. A current Iowa, NRC, or agreement state license that authorizes the medical use of radioactive material;
2. A permit issued by an NRC master material licensee that is authorized to permit the medical use of radioactive material;
3. A permit issued by an NRC, agreement state, or Iowa-specific licensee of broad scope that is authorized to permit medical use of radioactive material; or
4. A permit issued by an NRC master material license broad scope permittee that is authorized to permit medical use of radioactive material.

"Dedicated check source" means a radioactive source that is used to ensure the constant operation of a radiation detection or measurement device over several months or years. This source may also be used for other purposes.

"Management" means the chief executive officer or that individual’s designee.

"Medical institution" means an organization in which several medical disciplines are practiced.

"Mobile nuclear medicine service" means the transportation and medical use of radioactive material.

"Ophthalmic physicist" means an individual who:

a. Meets the requirements of 41.2(85) "a"(2) and 41.2(77); and

b. Is identified as an ophthalmic physicist on a:

1. Specific medical use license issued by an NRC or an agreement state;
2. Permit issued by an NRC or agreement state broad scope medical use licensee;
3. Medical use permit issued by an NRC master material licensee; or
4. Permit issued by an NRC master material licensee broad scope medical use permittee.

"Output" means the exposure rate, dose rate, or a quantity related in a known manner to these rates from a teletherapy unit for a specified set of exposure conditions.

"Pharmacist" means an individual licensed by a state or territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to practice pharmacy.

"Radiation safety officer" means an individual who, in addition to the definition in 641—38.2(136C):

a. Meets the requirements of 41.2(65) and 41.2(77); and

b. Is identified as a radiation safety officer on:

1. A specific medical use license issued by the NRC or an agreement state; or
2. A medical use permit issued by an NRC master material licensee.

"Stereotactic radiosurgery" means the use of external radiation in conjunction with a stereotactic guidance device to very precisely deliver a therapeutic dose to a tissue volume.

"Teletherapy" means therapeutic irradiation in which the source of radiation is at a distance from the body.

"Unit dosage" means a dosage prepared for medical use for administration as a single dosage to a patient or human research subject without any further manipulation of the dosage after it is initially prepared.

"Visiting authorized user" means an authorized user who is not identified on the license of the licensee being visited.

41.2(3) License required.

a. No person shall manufacture, produce, acquire, receive, possess, use, or transfer radioactive material for medical use except in accordance with a specific license issued pursuant to these rules.
b. Unless prohibited by license condition, an individual may receive, possess, use, or transfer radioactive material in accordance with these rules under the supervision of an authorized user as provided in 41.2(11).

c. An individual may prepare unsealed radioactive material for medical use in accordance with these rules under the supervision of an authorized nuclear pharmacist or authorized user as provided in 41.2(11) unless prohibited by license condition.

d. A licensee may conduct research involving human subjects using radioactive material provided that the research is conducted, funded, supported, or regulated by another federal agency which has implemented the Federal Policy for the Protection of Human Subjects. Otherwise, a licensee shall apply for and receive approval of a specific amendment to its license before conducting such research. Both types of licensees shall, at a minimum, obtain informed consent from the human subjects and obtain prior review and approval of the research activities by an Institutional Review Board in accordance with the meaning of these terms as defined and described in the Federal Policy for the Protection of Human Subjects.

Nothing in this subrule relieves the licensee from complying with applicable FDA, federal, and other state requirements governing radioactive drugs or devices.

e. An applicant that satisfies the requirements of 641—paragraph 39.4(28) “b” may apply for a Type A specific license of broad scope.

41.2(4) License amendments.

a. A licensee shall apply for and receive a license amendment:

(1) Before using byproduct material for a method or type of medical use not permitted by the license issued under this rule;

(2) Before permitting anyone to work as an authorized user or authorized nuclear pharmacist under the license unless the individual meets “visiting” status in accordance with 41.2(12);

(3) Before changing a radiation safety officer;

(4) Before permitting anyone to work as an associate radiation safety officer, or before the radiation safety officer assigns duties and tasks to an associate radiation safety officer that differ from those for which this individual is authorized on the license;

(5) Before receiving byproduct material in excess of the amount authorized on the license;

(6) Before adding to or changing the address or addresses of use identified in the application or on the license; and

(7) Before it receives a sealed source from a different manufacturer or of a different model number than authorized by its license unless the sealed source is used for manual brachytherapy, is listed in the Sealed Source and Device Registry, and is in a quantity and for an isotope authorized by the license.

b. License amendment exemptions regarding Type A specific licenses of broad scope. A licensee possessing a Type A specific license of broad scope for medical use is exempt from the following:

(1) The provision of 41.2(4) “a”(2);

(2) The provisions of 41.2(4) “a”(6) regarding additions to or changes in the areas of use only at the addresses specified in the license.

41.2(5) Notifications.

a. A licensee shall notify the agency no later than 30 days after:

(1) An authorized user, an authorized nuclear pharmacist, a radiation safety officer, an associate radiation safety officer, an authorized medical physicist, or an ophthalmic physicist permanently discontinues performance of duties under the license or has a name change;

(2) The licensee permits an individual qualified to be a radiation safety officer under 41.2(65) and 41.2(77) to function as a temporary radiation safety officer and to perform the functions of a radiation safety officer in accordance with 41.2(10) “c”;

(3) The licensee’s mailing address changes;

(4) The licensee’s name changes but the name change does not constitute a transfer of control of the license as described in 641—paragraph 39.4(32) “b”; or

(5) The licensee has added to or changed the areas of use identified in the application or on the license where byproduct material is used.
b. Notifications requiring agency approval prior to implementation for remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units include:

(1) Revisions to procedures required by 41.2(52), 41.2(59)“a,” 41.2(59)“b,” and 41.2(59)“c” as applicable, where such revision reduces radiation safety;

(2) Changes that could impact radiation levels in adjacent spaces, such as shielding or location of device.

c. The licensee shall mail the documents required in this subrule to the agency in accordance with 641—38.7(136C).

d. Notification exemptions regarding Type A specific licenses of broad scope. A licensee possessing a Type A specific license of broad scope for medical use is exempt from the following:

(1) The provisions of 41.2(5)“a”(1) for an authorized user, an authorized nuclear pharmacist, an authorized medical physicist, or an ophthalmic physicist.

(2) The provisions of 41.2(5)“a”(5).

41.2(6) Maintenance of records.

a. Each record required by this rule must be legible throughout the retention period specified by each subrule. The record may be original or reproduced copy or a microform, provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period.

b. The record may also be stored on electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications must include all pertinent information such as stamps, initials, and signatures.

c. The licensee shall maintain adequate safeguards against tampering with and loss of records specified in 41.2(6)“a” and “b.”

41.2(7) ALARA program.

a. Each licensee shall develop and implement a written program to maintain radiation doses and releases of radioactive material in effluents to unrestricted areas as low as reasonably achievable in accordance with 641—subrule 40.1(3).

b. To satisfy the requirement of 41.2(7)“a”:

(1) The management, radiation safety officer, and all authorized users shall participate in the establishment, implementation, and operation of the program as required by these rules or the radiation safety committee; or

(2) For licensees that are not medical institutions, management and all authorized users shall participate in the program as required by the radiation safety officer.

c. The ALARA program shall include an annual review by the radiation safety committee for licensees that are medical institutions, or management and the radiation safety officer for licensees that are not medical institutions, of summaries of the types and amounts of radioactive material used, occupational dose reports, and continuing education and training for all personnel who work with or in the vicinity of radioactive material. The purpose of the review is to ensure that individuals make every reasonable effort to maintain occupational doses, doses to the general public, and releases of radioactive material as low as reasonably achievable, taking into account the state of technology, and the cost of improvements in relation to benefits.

d. The licensee shall retain a current written description of the ALARA program for the duration of the license. The written description shall include:

(1) A commitment by management to keep occupational doses as low as reasonably achievable;

(2) A requirement that the radiation safety officer brief management once each year on the radiation safety program;

(3) Personnel exposure investigational levels as established in accordance with 41.2(9)“b”(8) that, when exceeded, will initiate an investigation by the radiation safety officer of the cause of the exposure; and
(4) Personnel exposure investigational levels that, when exceeded, will initiate a prompt investigation by the radiation safety officer of the cause of the exposure and a consideration of actions that might be taken to reduce the probability of recurrence.

41.2(8) Radiation safety officer.

a. A licensee shall appoint a radiation safety officer responsible for implementing the radiation safety program. The licensee, through the radiation safety officer, shall ensure that radiation safety activities are being performed in accordance with approved procedures and regulatory requirements in the daily operation of the licensee’s radioactive material program.

b. The radiation safety officer shall:

1. Investigate overexposures, accidents, spills, losses, thefts, unauthorized receipts, uses, transfers, and disposals, and other deviations from approved radiation safety practice and implement corrective actions as necessary;
2. Implement written policy and procedures for:
   1. Authorizing the purchase of radioactive material;
   2. Receiving and opening packages of radioactive material;
   3. Storing radioactive material;
   4. Keeping an inventory record of radioactive material;
   5. Using radioactive material safely;
   6. Taking emergency action if control of radioactive material is lost;
   7. Performing periodic radiation surveys;
   8. Performing checks and calibrations of survey instruments and other safety equipment;
   9. Disposing of radioactive material;
   10. Training personnel who work in or frequent areas where radioactive material is used or stored;
and
11. Keeping a copy of all records and reports required by the agency rules, a copy of these rules, a copy of each licensing request and license and amendments, and the written policy and procedures required by the rules; and
3. For medical use not sited at a medical institution, approve or disapprove radiation safety program changes with the advice and consent of management prior to submittal to the agency for licensing action; or
4. For medical use sited at a medical institution, assist the radiation safety committee in the performance of its duties.

41.2(9) Radiation safety committee. Each medical institution licensee shall establish a radiation safety committee to oversee the use of radioactive material.

a. The committee shall meet the following administrative requirements:

1. Membership must consist of at least three individuals and shall include an authorized user of each type of use permitted by the license, the radiation safety officer, a representative of the nursing service, and a representative of management who is neither an authorized user nor a radiation safety officer. Other members may be included as the licensee deems appropriate.
2. The committee shall meet at least once each calendar quarter.
3. Reserved.
4. The minutes of each radiation safety committee meeting shall include:
   1. The date of the meeting;
   2. Members present;
   3. Members absent;
4. Summary of deliberations and discussions;
5. Recommended actions and the numerical results of all ballots; and
6. Document any reviews required in 41.2(7)”c.” and 41.2(9)”b.”
5. The committee shall provide each member with a copy of the meeting minutes and retain one copy until the agency authorizes its disposition.

b. To oversee the use of licensed material, the committee shall:
1. Be responsible for monitoring the institutional program to maintain occupational doses as low as reasonably achievable;
   (2) Review:
   1. Review, on the basis of safety and with regard to the training and experience standards of this rule, and approve or disapprove any individual who is to be listed as an authorized user, an authorized nuclear pharmacist, the radiation safety officer, or teletherapy physicist before submitting a license application or request for amendment or renewal;
   2. Review on the basis of the board certification, the license, or the permit identifying an individual, and approve or disapprove any individual prior to allowing that individual to work as an authorized user or authorized nuclear pharmacist.
   (3) Review on the basis of safety and approve or disapprove each proposed method of use of radioactive material;
   (4) Review on the basis of safety, and approve with the advice and consent of the radiation safety officer and the management representative, or disapprove procedures and radiation safety program changes prior to submittal to the agency for licensing action;
   (5) Review quarterly, with the assistance of the radiation safety officer, occupational radiation exposure records of all personnel working with radioactive material;
   (6) Review quarterly, with the assistance of the radiation safety officer, all incidents involving radioactive material with respect to cause and subsequent actions taken;
   (7) Review annually, with the assistance of the radiation safety officer, the radioactive material program; and
   (8) Establish a table of investigational levels for occupational dose that, when exceeded, will initiate investigations and considerations of action by the radiation safety officer.

41.2(10) Authority and responsibilities for the radiation protection program.
   a. In addition to the radiation protection program requirements of 641—40.10(136C), a licensee’s management shall approve in writing:
   (1) Requests for a license application, renewal, or amendment before submittal to this agency;
   (2) Any individual before allowing that individual to work as an authorized user, authorized nuclear pharmacist, or authorized medical physicist; and
   (3) Radiation protection program changes that do not require a license amendment.
   b. A licensee’s management shall appoint a radiation safety officer, who agrees, in writing, to be responsible for implementing the radiation protection program. The licensee, through the radiation safety officer, shall ensure that the radiation safety activities are being performed in accordance with licensee-approved procedures and regulatory requirements. A licensee’s management may appoint, in writing, one or more associate radiation safety officers to support the radiation safety officer. The radiation safety officer, with written agreement of the licensee’s management, must assign the specific duties and tasks to each associate radiation safety officer. These duties and tasks are restricted to the types of use for which the associate radiation safety officer is listed on the license. The radiation safety officer may delegate duties and tasks to the associate radiation safety officer but shall not delegate the authority or responsibilities for implementing the radiation protection program.
   c. For up to 60 days each year, a licensee may permit an individual qualified to be a radiation safety officer under 41.2(65) or 41.2(75) to function as a temporary radiation safety officer to perform the functions of radiation safety officer, as provided in 41.2(10)“g,” if the licensee takes the actions required in 41.2(10)“b,” “e,” “g,” and “h” and notifies this agency in accordance with 41.2(5).
   d. A licensee may simultaneously appoint more than one temporary radiation safety officer in accordance with 41.2(10)“c” if needed to ensure that the licensee has a temporary radiation safety officer who satisfies the requirements to be a radiation safety officer for each of the different types of byproduct material permitted on the license.
   e. A licensee shall establish the authority, duties, and responsibilities of the radiation safety officer in writing.
f. Licensees that are authorized for two or more different types of uses of radioactive materials or two or more types of units under this rule shall establish a radiation safety committee to oversee all uses of radioactive material permitted by the license.

g. A licensee shall provide the radiation safety officer sufficient authority, organizational freedom, time, resources, and management prerogative to:
   (1) Identify radiation safety problems;
   (2) Initiate, recommend, or provide corrective solutions;
   (3) Verify implementation of corrective actions; and
   (4) Stop unsafe operations.

h. A licensee shall retain a record of actions taken under 41.2(10) in accordance with 641—40.80(136C).

41.2(11) Supervision.

a. A licensee that permits the receipt, possession, use, or transfer of radioactive material by an individual under the supervision of an authorized user as allowed by 41.2(3) shall, in addition to the requirements in 641—40.111(136C):
   (1) Instruct the supervised individual in the licensee’s written radiation protection procedures, written directive procedures, rules of this chapter, and license conditions appropriate to that individual’s use of radioactive material;
   (2) Review the supervised individual’s use of radioactive material, provide reinstruction as needed and review records kept to reflect this use;
   (3) Require the authorized user to be immediately available to communicate with the supervised individual;
   (4) Require the authorized user to be able to be physically present and available to the supervised individual on one hour’s notice (the supervising authorized user need not be present for each use of radioactive material); and
   (5) Require that only those individuals certified and issued a current permit to practice in accordance with 641—Chapter 42 as a nuclear medicine technologist or a radiation therapist, as applicable, or an Iowa-licensed physician and designated by the authorized user, shall be permitted to administer radionuclides (sealed sources only for radiation therapists) or radiation to patients or human research subjects. For a nuclear medicine technologist or a radiation therapist, the individual’s permit to practice shall be made available at the individual’s place of employment. If the permit holder works at more than one facility, a duplicate of the permit shall be kept at each facility.

b. A license shall require the supervised individual receiving, possessing, using or transferring radioactive material under 41.2(3) to:
   (1) Follow the instructions of the supervising authorized user for the medical uses of byproduct material;
   (2) Follow the written radiation protection and written directive procedures established by the radiation safety officer; and
   (3) Comply with these rules and the license conditions with respect to the use of radioactive material.

c. A licensee that permits the preparation of radioactive material for medical use by an individual under the supervision of an authorized nuclear pharmacist or physician who is an authorized user, as allowed by 41.2(3)“c,” shall, in addition to the requirements in 641—40.111(136C):
   (1) Instruct the supervised individual in the preparation of radioactive material for medical use and the principles of and procedures for radiation safety and in the licensee’s written procedures for maintaining written directives, as appropriate to that individual’s use of radioactive material;
   (2) Require the supervised individual to follow the instructions of the supervising authorized user or authorized nuclear pharmacist regarding the preparation of radioactive material for medical use, written radiation protection procedures established by the licensee, the regulations of this chapter and license conditions; and
(3) Require the supervising authorized nuclear pharmacist or physician who is an authorized user to periodically review the work of the supervised individual as it pertains to preparing radioactive material for medical use and the records kept to reflect that work.

d. A licensee that supervises an individual is responsible for the acts and omissions of the supervised individual.

41.2(12) Visiting authorized user; visiting authorized medical physicist, visiting ophthalmic physicist, and visiting authorized nuclear pharmacist.

a. A licensee may permit any visiting authorized user, visiting authorized medical physicist, visiting ophthalmic physicist, or visiting authorized nuclear pharmacist to use licensed material for medical use under the terms of the licensee’s license for 60 days each year if:

(1) The visiting authorized user, visiting authorized medical physicist, visiting ophthalmic physicist, or visiting authorized nuclear pharmacist has the prior written permission of the licensee’s management and, if the use occurs on behalf of an institution, the institution’s radiation safety committee;

(2) The licensee has a copy of the NRC or agreement state license that identifies the visiting authorized user, visiting authorized medical physicist, visiting ophthalmic physicist, or visiting authorized nuclear pharmacist by name for the medical use being utilized by the licensee; and

(3) Only those procedures for which the visiting authorized user, visiting authorized medical physicist, visiting ophthalmic physicist, or visiting authorized nuclear pharmacist is specifically authorized by an NRC or agreement state license are performed by that individual.

b. A licensee need not apply for a license amendment in order to permit a visiting authorized user, visiting authorized medical physicist, visiting ophthalmic physicist, or visiting authorized nuclear pharmacist to use licensed material as described in 41.2(12)”a.”

c. A licensee shall retain copies of the records specified in 41.2(12)”a” for five years from the date of the last visit.

41.2(13) Mobile nuclear medicine service administrative requirements.

a. The agency will only license mobile nuclear medicine services in accordance with this rule and other applicable requirements of these rules.

b. Mobile nuclear medicine service licensees shall retain for the duration of service a letter signed by the management of each location where services are rendered that authorizes use of radioactive material and clearly delineates the authority of the licensee and client.

c. If a mobile nuclear medicine service provides services that the client is also authorized to provide, the client is responsible for ensuring that services are conducted in accordance with the rules in this chapter while the mobile nuclear medicine service is under the client’s direction.

d. A mobile nuclear medicine service shall not have radioactive material delivered directly from the manufacturer or the distributor to the client’s address of use.

e. Mobile nuclear medicine service licensees shall also perform the following:

(1) Check instruments used to measure the activity of unsealed radioactive material for proper function before use at each client’s address or on each day of use, whichever is more frequent. At a minimum, the check for proper function required by this rule must include a constancy check;

(2) Check survey instruments for proper operation with a dedicated check source before use at each client’s address;

(3) Before leaving a client’s address, survey all areas of use to ensure compliance with the requirements of 641—Chapters 40 and 41.

41.2(14) Records and reports of reportable medical events.

a. When a reportable medical event, as defined in 641—38.2(136C), occurs, the licensee shall notify the agency by telephone. The licensee shall also notify the referring physician of the affected patient or human research subject and the patient or human research subject or a responsible relative or guardian, unless the referring physician agrees to inform the patient or human research subject or believes, based on medical judgment, that telling the patient or human research subject or the patient’s or human research subject’s responsible relative or guardian would be harmful to one or the other, respectively. These notifications must be made within 24 hours after the licensee discovers the
reportable medical event. If the referring physician, patient or human research subject, or the patient’s or human research subject’s responsible relative or guardian cannot be reached within 24 hours, the licensee shall notify them as soon as practicable. The licensee is not required to notify the patient or human research subject or the patient’s or human research subject’s responsible relative or guardian without first consulting the referring physician; however, the licensee shall not delay medical care for the patient or human research subject because of this notification requirement including remedial care as a result of the reportable medical event because of any delay in notification.

b. Written reports.

(1) The licensee shall submit a written report to the agency within 15 days after discovery of the reportable medical event. The written report must include the licensee’s name, the prescribing physician’s name, a brief description of the event, why the event occurred, the effect on the patient or the human research subject, what improvements are needed to prevent recurrence, actions taken to prevent recurrence, whether the licensee notified the patient or the human research subject or the patient’s or the human research subject’s responsible relative or guardian (this individual will subsequently be referred to as “the patient or the human research subject”), and if not, why not, and if the patient or the human research subject was notified, what information was provided to that individual. The report must not include the patient’s or the human research subject’s name or other information that could lead to identification of the patient or the human research subject.

(2) If the patient or the human research subject was notified, the licensee shall also furnish, within 15 days after discovery of the reportable medical event, a written report to the patient or the human research subject and the referring physician by sending either:

1. A copy of the report that was submitted to the agency; or
2. A brief description of both the event and the consequences as they may affect the patient or the human research subject, provided a statement is included that the report submitted to the agency can be obtained from the licensee.

c. Reserved.

d. Each licensee shall retain a record of each reportable medical event for three years. The record shall contain the names of all individuals involved in the event, including the physician, allied health personnel, the patient or human research subject, and the patient’s or human research subject’s referring physician, the patient’s or human research subject’s social security number or identification number if one has been assigned, a brief description of the event, why it occurred, the effect on the patient or human research subject, what improvements are needed to prevent recurrence, and the action taken, if any, to prevent recurrence.

e. Aside from the notification requirement, nothing in 41.2(14)”a” to 41.2(14)”d” shall affect any rights or duties of licensees and physicians in relation to each other, patients or human research subjects, or responsible relatives or guardians.

f. Report and notification of a dose to an embryo/fetus or a nursing child.

(1) A licensee shall report any dose to an embryo/fetus that is greater than 5 rem (50 mSv) dose equivalent that is a result of an administration of byproduct material or radiation from byproduct material to a pregnant individual unless the embryo/fetus was specifically approved, in advance, by the authorized user.

(2) A licensee shall report any dose to a nursing child that is a result of an administration of byproduct material to a breast-feeding individual that:

1. Is greater than 5 rem (50 mSv) total effective dose equivalent; or
2. Has resulted in unintended permanent functional damage to an organ or a physiological system of the child, as determined by a physician.

(3) The licensee shall notify this agency by telephone no later than the next calendar day after a dose to the embryo/fetus or nursing child that requires a report in 41.2(14)”f”(1) or (2).

(4) The licensee shall submit a written report to the agency within 15 days after discovery of a dose to the embryo/fetus or nursing child that requires a report in 41.2(14)”f”(1) or (2).

1. The written report must include:
   • The licensee’s name;
- The name of the prescribing physician;
- A brief description of the event;
- Why the event occurred;
- The effect, if any, on the embryo/fetus or the nursing child;
- What actions, if any, have been taken or are planned to prevent recurrence; and
- Certification that the licensee notified the pregnant individual or mother (or the mother’s or child’s responsible relative or guardian), and if not, why not.

2. The report must not contain the individual’s or child’s name or any other information that could lead to identification of the individual or child.

(5) The licensee shall provide notification of the event to the referring physician and also notify the pregnant individual or mother, both hereafter referred to as the mother, no later than 24 hours after discovery of an event that would require reporting under 41.2(14) “f”(1) or (2), unless the referring physician personally informs the licensee either that the physician will inform the mother or that, based on medical judgment, telling the mother would be harmful. The licensee is not required to notify the mother without first consulting with the referring physician. If the referring physician or mother cannot be reached within 24 hours, the licensee shall make the appropriate notifications as soon as possible thereafter. The licensee may not delay any appropriate medical care for the embryo/fetus or for the nursing child, including any necessary remedial care as a result of the event, because of any delay in notification. To meet the requirements of this paragraph, the notification may be made to the mother’s or child’s responsible relative or guardian instead of the mother. If a verbal notification is made, the licensee shall inform the mother, or the mother’s or child’s responsible relative or guardian, that a written description of the event can be obtained from the licensee upon request. The licensee shall provide such a written description if requested.

(6) A licensee shall:
1. Annotate a copy of the report provided to the agency with the:
   - Name of the pregnant individual or the nursing child who is the subject of the event; and
   - Social security number or other identification number, if one has been assigned, of the pregnant individual or the nursing child who is the subject of the event; and
2. Provide a copy of the annotated report to the referring physician, if other than the licensee, no later than 15 days after the discovery of the event.

41.2(15) Suppliers. A licensee shall use for medical use only:

a. Radioactive material manufactured, labeled, packaged, and distributed in accordance with a license issued pursuant to these rules or the equivalent regulations of another agreement state, a licensing state or the U.S. Nuclear Regulatory Commission; and

b. Reagent kits that have been manufactured, labeled, packaged, and distributed in accordance with an approval issued by the U.S. Food and Drug Administration;

c. Teletherapy sources manufactured and distributed in accordance with a license issued pursuant to these rules, or the equivalent regulations of another agreement state, a licensing state, or the U.S. Nuclear Regulatory Commission.

41.2(16) Quality control of imaging equipment. Each licensee shall establish written quality control procedures for all equipment used to obtain images from radionuclide studies. As a minimum, the procedures shall include quality control procedures recommended by equipment manufacturers or procedures which have been approved by the agency. The licensee shall conduct quality control procedures in accordance with written procedures.

41.2(17) Possession, use, calibration, and check of dose calibrators.

a. A medical use licensee authorized to administer radiopharmaceuticals shall possess a dose calibrator and use it to measure the amount of activity administered to each patient or human research subject.

b. A licensee shall:

(1) Check each dose calibrator for constancy with a dedicated check source at the beginning of each day of use. To satisfy the requirement of this section, the check shall be done on frequently used
settings with a sealed source of not less than 10 microcuries (370 kBq) of radium-226 or 50 microcuries (1.85 MBq) of any other photon-emitting radionuclide with a half-life greater than 90 days;

(2) Test each dose calibrator for accuracy upon installation and at 12-month intervals thereafter by assaying at least two sealed sources containing different radionuclides, the activity of which the manufacturer has determined within 5 percent of the stated activity, with minimum activity of 10 microcuries (370 kBq) for radium-226 and 50 microcuries (1.85 MBq) for any other photon-emitting radionuclide, and at least one of which has a principal photon energy between 100 keV and 500 keV;

(3) Test each dose calibrator for linearity upon installation and at 3-month intervals thereafter over the range of use between 30 microcuries (1.1 megabequerels) and the highest dosage that will be administered; and

(4) Test each dose calibrator for geometry dependence upon installation over the range of volumes and volume configurations for which it will be used. The licensee shall keep a record of this test for the duration of the use of the dose calibrator.

c. A licensee shall mathematically correct dosage readings for any geometry or linearity error that exceeds 10 percent if the dosage is greater than 10 microcuries (370 kBq) and shall repair or replace the dose calibrator if the accuracy or constancy error exceeds 10 percent.

d. A licensee shall also perform checks and tests required by 41.2(17)“b” following adjustment or repair of the dose calibrator.

e. A licensee shall retain a record of each check and test required by 41.2(17) for three years, except the geometry dependence test which shall be retained in accordance with 41.2(17)“b”(4). The records required by 41.2(17)“b” shall include:

(1) For 41.2(17)“b”(1), the model and serial number of the dose calibrator, the identity and calibrated activity of the radionuclide contained in the check source, the date of the check, the activity measured, the instrument settings, and the initials of the individual who performed the check;

(2) For 41.2(17)“b”(2), the model and serial number of the dose calibrator, the model and serial number of each source used and the identity of the radionuclide contained in the source and its activity, the date of the test, the results of the test, the instrument settings, the identity of the individual performing the test, and the signature of the radiation safety officer;

(3) For 41.2(17)“b”(3), the model and serial number of the dose calibrator, the calculated activities, the measured activities, the date of the test, the identity of the individual performing the test, and the signature of the radiation safety officer; and

(4) For 41.2(17)“b”(4), the model and serial number of the dose calibrator, the configuration calibrated activity of the source measured, the activity of the source, the activity measured and the instrument setting for each volume measured, the date of the test, the identity of the individual performing the test, and the signature of the radiation safety officer.

41.2(18) Calibration and check of survey instruments.

a. A licensee shall ensure that the survey instruments used to show compliance with this rule have been calibrated before first use, annually, and following repair.

b. To satisfy the requirements of 41.2(18)“a,” the licensee shall:

(1) Calibrate all required scale readings up to 1000 millirems (10 mSv) per hour with a radiation source;

(2) For each scale that shall be calibrated, calibrate two readings separated by at least 50 percent of scale rating; and

(3) Conspicuously note on the instrument the apparent dose rate from a dedicated check source as determined at the time of calibration, and the date of calibration.

c. To satisfy the requirements of 41.2(18)”b,” the licensee shall consider a point as calibrated if the indicated exposure rate differs from the calculated exposure rate by not more than 20 percent and shall conspicuously attach a correction chart or graph to the instrument. A licensee may not use survey instruments if the difference between the indicated exposure rate and the calculated exposure rate is more than 20 percent.

d. A licensee shall check each survey instrument for proper operation with the dedicated check source before each use. The licensee is not required to keep records of these checks.
e. The licensee shall retain a record of each calibration required in 41.2(18)“a” for three years. The record shall include:
   (1) A description of the calibration procedure; and
   (2) A description of the source used and the certified dose rates from the source, the rates indicated by the instrument being calibrated, the correction factors deduced from the calibration data, the signature of the individual who performed the calibration, and the date of calibration.

f. To meet the requirements of 41.2(18)“a,” “b,” and “c,” the licensee may obtain the services of individuals licensed by the agency, the U.S. Nuclear Regulatory Commission, an agreement state, or a licensing state to perform calibrations of survey instruments. Records of calibrations which contain information required by 41.2(18)“e” shall be maintained by the licensee.

41.2(19) Assay of radiopharmaceutical dosages. A licensee shall:
   a. Assay, prior to medical use, the activity of each radiopharmaceutical dosage that contains a photon-emitting radionuclide;
   b. Measure, by direct measurement or by combination of measurements and calculations, the activity of each dosage of an alpha- or beta-emitting radionuclide prior to medical use, except for unit dosages obtained from a manufacturer or preparer licensed pursuant to 641—paragraph 39.4(29)“j” or equivalent NRC or agreement state requirements;
   c. Not use a dosage if the dosage does not fall within the prescribed dosage range or if the dosage differs from the prescribed dosage by more than 20 percent unless otherwise directed by the authorized user; and
   d. Retain a record of the assays required by 41.2(18)“a” for three years. To satisfy this requirement, the record shall contain the:
      (1) Generic name, trade name, or abbreviation of the radiopharmaceutical, its lot number, and expiration dates and the radionuclide;
      (2) Patient’s or human research subject’s name and identification number if one has been assigned;
      (3) Prescribed dosage and activity of the dosage at the time of assay, or a notation that the total activity is less than 30 microcuries (1.1 megabecquerels);
      (4) Date and time of the assay and administration; and
      (5) Initials of the individual who performed the assay.

41.2(20) Authorization for calibration and reference sources.
   a. Any person authorized by 41.2(3) for medical use of byproduct material may receive, possess, and use the following byproduct material for check, calibration and reference use:
      (1) Sealed sources manufactured and distributed by persons specifically licensed pursuant to 641—Chapter 39 or equivalent provisions of the NRC, agreement state or licensing state and that do not exceed 30 millicuries (1.1 GBq) each;
      (2) Any byproduct material listed in 41.2(31) or 41.2(33) with a half-life of 120 days or less in individual amounts not to exceed 15 millicuries (555 MBq);
      (3) Any byproduct material listed in 41.2(31) or 41.2(33) with a half-life greater than 120 days in individual amounts not to exceed 200 microcuries (7.4 MBq) or 1,000 times quantities in Appendix C of 641—Chapter 40 each; and
      (4) Technetium-99m amounts as needed.
   b. Byproduct material in sealed sources authorized by this provision shall not be:
      (1) Used for medical use as defined in 641—38.2(136C) except in accordance with the requirements in 41.2(41); or
      (2) Combined (i.e., bundled or aggregated) to create an activity greater than the maximum activity of any single sealed source authorized under this subrule.
   c. A licensee using calibration, transmission, and reference sources in accordance with the requirements in 41.2(20)“a” or “b” need not list these sources on a specific medical use license.

41.2(21) Requirements for possession of sealed sources and brachytherapy sources.
   a. A licensee in possession of any sealed source or brachytherapy source shall follow the radiation safety and handling instructions supplied by the manufacturer or equivalent instructions approved by the
agency and shall maintain the instructions for the duration of source use in a legible form convenient to users.

b. A licensee in possession of a sealed source shall ensure that:
   
   (1) The source is tested for leakage before its first use unless the licensee has a certificate from the supplier indicating that the source was tested within six months before transfer to the licensee; and
   
   (2) The source is tested for leakage at intervals not to exceed six months or at intervals approved by the agency, another agreement state, a licensing state or the U.S. Nuclear Regulatory Commission.

c. To satisfy the leak test requirements of 41.2(21)“b,” the licensee shall ensure that:
   
   (1) Leak tests are capable of detecting the presence of 0.005 microcurie (185 Bq) of radioactive material on the test sample or, in the case of radium, the escape of radon at the rate of 0.001 microcurie (37 Bq) per 24 hours;
   
   (2) Test samples are taken from the source or from the surfaces of the device in which the source is mounted or stored on which radioactive contamination might be expected to accumulate; and
   
   (3) Test samples are taken when the source is in the “off” position.

d. A licensee shall retain leak test records for five years. The records shall contain the model number, and serial number, if assigned, of each source tested, the identity of each source radionuclide and its estimated activity, the measured activity of each test sample expressed in microcuries (becquerels), a description of the method used to measure each test sample, the date of the test, the signature of the radiation safety officer and the signature of the individual performing the leak test.

e. If the leak test reveals the presence of 0.005 microcurie (185 Bq) or more of removable contamination, the licensee shall:
   
   (1) Immediately withdraw the sealed source from use and store it in accordance with the requirements of these rules; and
   
   (2) File a report with the agency within five days of receiving the leak test results. The report shall describe the equipment involved, the model and serial number of the leaking source, the radionuclide and its estimated activity, the test results, the date of the test, and the action taken.

f. A licensee need not perform a leak test on the following sources:
   
   (1) Sources containing only radioactive material with a half-life of less than 30 days;
   
   (2) Sources containing only radioactive material as a gas;
   
   (3) Sources containing 100 microcuries (3.7 MBq) or less of beta or photon-emitting material or 10 microcuries (370 kBq) or less of alpha-emitting material; [and]
   
   (4) Seeds of iridium-192 encased in nylon ribbon; and
   
   (5) Sources stored and not being used. The licensee shall, however, test each such source for leakage before any use or transfer unless it has been tested for leakage within six months before the date of use or transfer.

g. A licensee in possession of a sealed source or brachytherapy source shall conduct a physical inventory of all such sources at 6-month intervals. The licensee shall retain each inventory record for five years. The inventory records shall contain the model number of each source, and serial number if one has been assigned, the identity of each source radionuclide and its estimated activity, the location of each source, date of the inventory, the signature of the radiation safety officer and the signature of the individual performing the physical inventory.

h. A licensee in possession of a sealed source or brachytherapy source shall survey with a radiation survey instrument at intervals not to exceed three months all areas where such sources are stored. This does not apply to teletherapy sources in teletherapy units or sealed sources in diagnostic devices.

i. A licensee shall retain a record of each survey required in 41.2(21)“h” for three years. The record shall include the date of the survey, a sketch of each area that was surveyed, the measured dose rate at several points in each area expressed in millirems (microsieverts) per hour, the model number and serial number of the survey instrument used to make the survey, and the signature of the radiation safety officer.

41.2(22) Syringe shields.

a. A licensee shall keep syringes that contain radioactive material to be administered in a radiation shield.
b. Unless otherwise approved by this agency, a licensee shall require each individual who prepares or administers radiopharmaceuticals to use a syringe radiation shield unless the use of the shield is contraindicated for that patient or human research subject.

41.2(23) Syringe labels. Unless utilized immediately, a licensee shall conspicuously label each syringe, or syringe radiation shield that contains a syringe with a radiopharmaceutical, with the radiopharmaceutical name or its abbreviation, the type of diagnostic study or therapy procedure to be performed, or the patient’s or human research subject’s name.

41.2(24) Vial shields. A licensee shall require each individual preparing or handling a vial that contains a radiopharmaceutical to keep the vial in a vial radiation shield.

41.2(25) Vial shield labels. A licensee shall conspicuously label each vial radiation shield that contains a vial of a radiopharmaceutical with the radiopharmaceutical name or its abbreviation.

41.2(26) Surveys for contamination and ambient radiation dose rate.

a. A licensee shall survey with a radiation detection survey instrument at the end of each day of use all areas where radiopharmaceuticals are routinely prepared for use or administered.

b. A licensee shall survey with a radiation detection survey instrument at least once each week all areas where radiopharmaceuticals or radioactive wastes are stored.

c. A licensee shall conduct the surveys required by 41.2(26) “a” and “b” so as to be able to measure dose rates as low as 0.1 millirem (1 µSv) per hour.

d. A licensee shall establish dose rate action levels for the surveys required by 41.2(26) “a” and “b” and shall require that the individual performing the survey immediately notify the radiation safety officer if a dose rate exceeds an action level.

e. A licensee shall survey for removable contamination each day of use all areas where radiopharmaceuticals are routinely prepared for use or administered and each week where radioactive materials are stored.

f. A licensee shall conduct the surveys required by 41.2(26) “e” so as to be able to detect contamination on each wipe sample of 2000 disintegrations per minute (33.3 Bq).

g. A licensee shall establish removable contamination action levels for the surveys required by 41.2(26) “e” and shall require that the individual performing the survey immediately notify the radiation safety officer if contamination exceeds action levels.

h. A licensee shall retain a record of each survey required by 41.2(26) “a,” “b,” and “e” for two years. The record must include the date of the survey, a sketch of each area surveyed, action levels established for each area, the measured dose rate at several points in each area expressed in millirems (microsieverts) per hour or the removable contamination in each area expressed in disintegrations per minute (becquerels) per 100 square centimeters, the serial number and the model number of the instrument used to make the survey or analyze the samples, and the initials of the individual who performed the survey.

i. A licensee does not need to perform the surveys required in this subrule in an area where the patient or human research subject is confined and cannot be released under 41.2(27).

41.2(27) Release of patients or human research subjects containing radiopharmaceuticals or permanent implants.

a. The licensee may authorize the release from its control of any individual who has been administered unsealed radioactive materials or permanent implants containing radioactive material if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 0.5 rem (5 mSv). (NUREG-1556, Vol. 9, “Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Medical Licenses,” describes methods for calculating doses to other individuals and contains tables of activities not likely to cause doses exceeding 0.5 rem (5 mSv)).

b. The licensee shall provide the released individual with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 0.1 rem (1 mSv). If the dose to a breast-feeding infant or child could exceed 0.1 rem (1 mSv) assuming there were no interruption of breast feeding, the instructions shall also include:
(1) Guidance on the interruption or discontinuation of breast feeding, and  
(2) Information on the consequences of failure to follow the guidance.  
   c. The licensee shall maintain a record of the basis for authorizing the release of an individual, for three years after the date of release, if the total effective dose equivalent is calculated by:
   (1) Using the retained activity rather than the activity administered,
   (2) Using an occupancy factor less than 0.25 at 1 meter,
   (3) Using the biological or effective half-life, or
   (4) Considering the shielding by tissue.
   d. The licensee shall maintain a record for three years after the date of release that instructions were provided to a breast-feeding woman if the radiation dose to the infant or child from continued breast feeding could result in a total effective dose equivalent exceeding 0.5 rem (5 mSv). IDPH Regulatory Guide, Release of Patients Administered Radioactive Materials describes methods for calculating doses to other individuals and contains tables of activities not likely to cause doses exceeding 0.5 rem (5 mSv).

41.2(28) Mobile nuclear medicine service technical requirements. A licensee providing mobile nuclear medicine service shall:
   a. Transport to each address of use only syringes or vials containing prepared radiopharmaceuticals or radiopharmaceuticals that are intended for reconstitution of radiopharmaceutical kits;
   b. Bring into each location of use all radioactive material to be used and, before leaving, remove all unused radioactive material and associated radioactive waste;
   c. Secure or keep under constant surveillance and immediate control all radioactive material when in transit or at a location of use;
   d. Check survey instruments and dose calibrators as required in 41.2(17)“b”(1)”d” and “e” and 41.2(18)”d” and check all other transported equipment for proper function before medical use at each location of use;
   e. Carry a calibrated survey meter in each vehicle that is being used to transport radioactive material and, before leaving a client location of use, survey all areas of radiopharmaceutical use with a radiation detection survey instrument to ensure that all radiopharmaceuticals and all associated radioactive waste have been removed; and
   f. Retain a record of each survey required by 41.2(28)”e” for three years. The record must include the date of the survey, a plan of each area that was surveyed, the measured dose rate at several points in each area of use expressed in millirems (microsieverts) per hour, the model and serial number of the instrument used to make the survey, and the initials of the individual who performed the survey.

41.2(29) Storage of volatiles and gases.
   a. A licensee shall store volatile radiopharmaceuticals and radioactive gases in the shippers’ radiation shield and container.
   b. A licensee shall store and use a multidose container in a properly functioning fume hood.

41.2(30) Decay-in-storage.
   a. A licensee may hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if the licensee:
      (1) Holds radioactive material for decay a minimum of ten half-lives;
      (2) Monitors radioactive material at the container surface before disposal as ordinary trash and determines that its radioactivity cannot be distinguished from the background radiation level with a radiation detection survey instrument set on its most sensitive scale and with no interposed shielding;
      (3) Removes or obliterates all radiation labels; and
      (4) Separates and monitors each generator column individually with all radiation shielding removed to ensure that its contents have decayed to background radiation level before disposal.
   b. For radioactive material disposed in accordance with 41.2(30)”a,” the licensee shall retain a record of each disposal for three years. The record must include the date of the disposal, the date on which the radioactive material was placed in storage, the radionuclides disposed, the model and serial
number of the survey instrument used, the background dose rate, the radiation dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.

41.2(31) Use of unsealed radioactive material for uptake, dilution, or excretion studies for which a written directive is not required. Except for quantities that require a written directive under 41.2(87), a licensee may use for uptake, dilution, or excretion studies any unsealed radioactive material prepared for medical use that:

a. Is obtained from a manufacturer or preparer licensed pursuant to 641—paragraph 39.4(29) “j” or equivalent NRC or agreement state requirements or from a PET radioactive drug producer licensed pursuant to 641—paragraph 39.4(24) “h” or equivalent NRC or agreement state requirements; or

b. Excludes production of PET radionuclides, prepared by:

(1) An authorized nuclear pharmacist;

(2) A physician who is an authorized user and who meets the requirements specified in 41.2(68) or 41.2(69) and has work experience in eluting generator systems appropriate for preparation of radioactive drugs for imaging and localization studies, measuring and testing the eluate for radionuclidic purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs; or

(3) An individual under the supervision, as specified in 41.2(11), of the authorized nuclear pharmacist in 41.2(31) “b’”(1) or the physician who is an authorized user in 41.2(31) “b’”(2); or

c. Is obtained from and prepared by an NRC or agreement state licensee for use in research in accordance with Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or

d. Is prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

41.2(32) Reserved.

41.2(33) Use of unsealed byproduct material for imaging and localization studies for which a written directive is not required. Except for quantities that require a written directive under 41.2(87), a licensee may use for imaging and localization studies any unsealed byproduct material prepared for medical use that:

a. Is obtained from a manufacturer or preparer licensed pursuant to 641—paragraph 39.4(29) “j” or equivalent NRC or agreement state requirements or a PET radioactive drug producer licensed pursuant to 641—paragraph 39.4(24) “h” or equivalent NRC or agreement state requirements; or

b. Excludes production of PET radionuclides, prepared by:

(1) An authorized nuclear pharmacist;

(2) A physician who is an authorized user and who meets the requirements specified in 41.2(68) or 41.2(69);

(3) An individual under the supervision, as specified in 41.2(11), of the authorized nuclear pharmacist in 41.2(33) “b’”(1) or the physician who is an authorized user in 41.2(33) “b’”(2); or

c. Is obtained from and prepared by an NRC or agreement state licensee for use in research in accordance with Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or

d. Is prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

41.2(34) Permissible molybdenum-99, strontium-82, and strontium-85 concentrations.

a. A licensee shall not administer to humans a radiopharmaceutical that contains:

(1) More than 0.15 microcurie of molybdenum-99 per millicurie of technetium-99m (0.15 kilobecquerel of molybdenum-99 per megabecquerel of technetium-99m); or

(2) More than 0.02 microcurie of strontium-82 per millicurie of rubidium-82 chloride injection (0.02 kilobecquerel strontium-82 per megabecquerel rubidium-82 chloride); or more than 0.2 microcurie of strontium-85 per millicurie of rubidium-82 chloride injection (0.2 kilobecquerel strontium-85 per megabecquerel rubidium-82 chloride).

b. A licensee that uses molybdenum-99/technetium-99m generators for preparing a technetium-99m radiopharmaceutical shall measure the molybdenum-99 concentration in each eluate from a generator to demonstrate compliance with 41.2(34)”a.”
c. A licensee that uses a strontium-82/rubidium-82 generator for preparing a rubidium-82 radiopharmaceutical shall, before the first patient use of the day, measure the concentration of radionuclides strontium-82 and strontium-85 to demonstrate compliance with 41.2(34)“a.”

d. A licensee who must measure molybdenum-99, strontium-82, or strontium-85 concentration shall retain a record of each measurement for three years. The record shall include:

1. For each elution or extraction of technetium-99m, the ratio of the measures expressed as microcuries of molybdenum per millicurie of technetium (kilobecquerels of molybdenum per megabecquerel of technetium), the date of the test, and the initials of the individual who performed the test.

2. For each elution or extraction of rubidium-82, the ratio of the measures expressed as microcuries of strontium-82 per millicurie of rubidium-82 (kilobecquerels of strontium-82 per megabecquerel of rubidium-82), microcuries of strontium-85 per millicurie of rubidium-82 (kilobecquerels of strontium-85 per millicurie of rubidium-82), the date of the test, and the initials of the individual who performed the test.

e. A licensee shall report any measurement that exceeds the limits in 41.2(34)“a” at the time of generator elution, in accordance with the following:

1. The licensee shall notify by telephone the agency and the distributor of the generator within seven calendar days after discovery that an eluate exceeded the permissible concentration listed in 41.2(34)“a” at the time of generator elution. The telephone report to the agency must include the manufacturer, model number, and serial number (or lot number) of the generator; the results of the measurement; the date of the measurement; whether dosages were administered to patients or human research subjects; when the distributor was notified; and the action taken.

2. By an appropriate method listed in 641—38.7(136C), the licensee shall submit a written report to the agency within 30 calendar days after discovery of an eluate exceeding the permissible concentration at the time of generator elution. The written report must include the action taken by the licensee; the patient dose assessment; the methodology used to make this dose assessment if the eluate was administered to patients or human research subjects; and the probable cause and an assessment of failure in the licensee’s equipment, procedures or training that contributed to the excessive readings if an error occurred in the licensee’s breakthrough determination; and the information in the telephone report as required by 41.2(34)“a.”

41.2(35) Control of aerosols and gases.

a. A licensee who administers radioactive aerosols or gases shall do so with a system that will keep airborne concentrations within the limits prescribed by 641—40.15(136C) and 641—40.26(136C) of these rules.

b. The system shall either be directly vented to the atmosphere through an exhaust or provide for collection and decay or disposal of the aerosol or gas in a shielded container.

c. A licensee shall only administer radioactive gases in rooms that are at negative pressure compared to surrounding rooms.

d. Before receiving, using, or storing a radioactive gas, the licensee shall calculate the amount of time needed after a release to reduce the concentration in the area of use to the occupational limit listed in Appendix B of 641—Chapter 40. The calculation shall be based on the highest activity of gas handled in a single container and the measured available air exhaust rate.

e. A licensee shall post the time calculated in 41.2(35)“a” at the area of use and require that, in case of a gas spill, individuals evacuate the room until the posted time has elapsed.

f. A licensee shall check the operation of collection systems monthly and measure the ventilation rates in areas of use at intervals not to exceed six months. Records of these checks and measurements shall be maintained for three years.

g. A copy of the calculations required in 41.2(35)“d” shall be recorded and retained for the duration of the license.

41.2(36) Reserved.
41.2(37) Use of unsealed byproduct material for which a written directive is required. A licensee may use any unsealed byproduct material identified in 41.2(69)“b”(1)“2,” seventh bulleted paragraph, prepared for medical use and for which a written directive is required that:

a. Is obtained from:
(1) A manufacturer or preparer licensed under 641—paragraph 39.4(29)”j” or equivalent NRC or agreement state requirements; or
(2) A PET radioactive drug producer licensed under 641—paragraph 39.4(24)”h” or equivalent NRC or agreement state requirements; or

b. Excludes production of PET radionuclides, prepared by:
(1) An authorized nuclear pharmacist;
(2) A physician who is an authorized user and who meets the requirements of 41.2(68) or 41.2(69); or

(3) An individual under the supervision, as specified in 41.2(11), of the authorized nuclear pharmacist in 41.2(37)“b”(1) or the physician who is an authorized user in 41.2(37)“b”(2); or

c. Is obtained from and prepared by an NRC or agreement state licensee for use in research in accordance with the Investigational New Drug (IND) protocol accepted by FDA; or

d. Is prepared by the licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA.

41.2(38) Safety instruction for radiopharmaceutical therapy and hospitalization.

a. A licensee shall provide oral and written radiation safety instruction for all personnel caring for patients or human research subjects undergoing radiopharmaceutical therapy and hospitalized for compliance with 41.2(27). Refresher training shall be provided initially and at 12-month intervals or as required for patient care.

b. To satisfy 41.2(38)”a,” the instruction shall describe the licensee’s procedures for:
   (1) Patient or human research subject control;
   (2) Visitor control;
   (3) Contamination control;
   (4) Waste control;
   (5) Notification of the radiation safety officer, radiation safety officer designee, or authorized user in case of the patient’s or human research subject’s death or medical emergency; and
   (6) Training requirements specified in 641—40.110(136C) and 641—40.116(136C) and adopted by reference and included herein.

c. A licensee shall maintain a record of safety instructions required by 41.2(38) for three years. The records must include a description of the instruction, the date of instruction, and the name of the individual who gave the instruction. Such record shall be maintained for inspection by the agency for three years.

41.2(39) Safety precautions for radiopharmaceutical therapy and hospitalization.

a. For each patient or human research subject receiving radiopharmaceutical therapy and hospitalized for compliance with 41.2(27), a licensee shall:
   (1) Provide a private room with a private sanitary facility or a room, with a private sanitary facility, with another individual who also has received therapy with unsealed radioactive material and who also cannot be released under 41.2(27);
   (2) Post the patient’s or human research subject’s door with a “Caution: Radioactive Material” sign and note on the door or on the patient’s or human research subject’s chart where and how long visitors may stay in the patient’s or human research subject’s room;
   (3) Authorize visits by individuals under 18 years of age only on a case-by-case basis with the approval of the authorized user after consultation with the radiation safety officer;
   (4) Promptly after administration of the dosage, measure the dose rates in contiguous restricted and unrestricted areas with a radiation measurement survey instrument to demonstrate compliance with the requirements of 641—subrule 40.26(1) which is adopted by reference and included herein and retain for three years a record of each survey that includes the time and date of the survey, a plan of the area or list
of points surveyed, the measured dose rate at several points expressed in millirems (μSv) per hour, the instrument used to make the survey, and the initials of the individual who made the survey;

(5) Either monitor material and items removed from the patient’s or human research subject’s room to determine that any contamination cannot be distinguished from the natural background radiation level with a radiation detection survey instrument set on its most sensitive scale and with no interposed shielding, or handle these materials and items as radioactive waste;

(6) Provide the patient or human research subject with radiation safety guidance that will help to keep radiation dose to household members and the public as low as reasonably achievable before authorizing release of the patient or human research subject;

(7) Survey the patient’s or human research subject’s room and private sanitary facility for removable contamination with a radiation detection survey instrument before assigning another patient or human research subject to the room. The room must not be reassigned until removable contamination is less than 200 disintegrations per minute (3.33 Bq) per 100 square centimeters; and

b. A licensee shall notify the radiation safety officer or the authorized user immediately if the patient or human research subject dies or has a medical emergency.

41.2(40) Reserved.

41.2(41) Use of sealed sources for diagnosis.

a. A licensee must use only sealed sources that are not in medical devices for diagnostic medical uses if the sealed sources are approved in the Sealed Source and Device Registry for diagnostic medicine. The sealed sources may be used for diagnostic medical uses that are not explicitly listed in the Sealed Source and Device Registry but must be used in accordance with the radiation safety conditions and limitations described in the Sealed Source and Device Registry.

b. A licensee must only use medical devices containing sealed sources for diagnostic medical uses if both the sealed sources and medical devices are approved in the Sealed Source and Device Registry for diagnostic medical uses. The diagnostic medical devices may be used for diagnostic medical uses that are not explicitly listed in the Sealed Source and Device Registry but must be used in accordance with the radiation safety conditions and limitations described in the Sealed Source and Device Registry.

c. Sealed sources and devices for diagnostic medical uses may be used in research in accordance with an active Investigational Device Exemption (IDE) application accepted by the FDA provided the requirements in 41.2(15)”a” are met.

41.2(42) Reserved.

41.2(43) Use of sources for manual brachytherapy. A licensee shall use only brachytherapy sources:

a. As approved in the Sealed Source and Device Registry for manual brachytherapy medical use. The manual brachytherapy sources may be used for manual brachytherapy uses that are not explicitly listed in the Sealed Source and Device Registry but must be used in accordance with the radiation safety conditions and limitations described in the Sealed Source and Device Registry; or

b. In research to deliver therapeutic doses for medical use in accordance with an active Investigational Device Exemption (IDE) application accepted by the FDA provided the requirements of 41.2(15) are met.

41.2(44) Safety instruction for manual brachytherapy.

a. The licensee shall provide oral and written radiation safety instruction to all personnel caring for a patient or human research subject receiving manual brachytherapy and cannot be released under 41.2(27). Refresher training shall be provided initially and at 12-month intervals or as required for patient care.

b. To satisfy 41.2(44)”a,” the instruction shall describe:

1. Size and appearance of the brachytherapy sources;
2. Safe handling and shielding instructions in case of a dislodged source;
3. Procedures for patient or human research subject control;
4. Procedures for visitor control, to include routine visitation of hospitalized individuals in accordance with 641—40.26(136C) and visitation authorized in accordance with 641—40.26(136C);
5. Procedures for notification of the radiation safety officer, radiation safety officer designee, or authorized user if the patient or human research subject dies or has a medical emergency; and
(6) Training requirements specified in 641—40.110(136C) and 40.116(136C) as adopted by reference and included herein.

   c. A licensee shall maintain a record of safety instructions required by 41.2(44) for three years. The records must include a description of the instruction, the date of instruction, the name of the attendee(s), and the name of the individual who gave the instruction for three years.

41.2(45) Safety precautions for manual brachytherapy.

   a. For each patient or human research subject receiving manual brachytherapy a licensee shall:

      (1) Not place the patient or human research subject in the same room with a patient who is not receiving radiation therapy unless the licensee can demonstrate compliance with the requirement of 641—40.26(136C) as adopted by reference and included herein at a distance of 1 meter from the implant;

      (2) Post the patient’s or human research subject’s door with a “Caution: Radioactive Materials” sign and note on the door or the patient’s or human research subject’s chart where and how long visitors may stay in the patient’s or human research subject’s room;

      (3) Authorize visits by individuals under 18 years of age only on a case-by-case basis with the approval of the authorized user after consultation with the radiation safety officer;

      (4) Promptly after implanting the sources, survey the dose rates in contiguous restricted and unrestricted areas with a radiation measurement survey instrument to demonstrate compliance with 641—40.26(136C) as adopted by reference and included herein; and retain for three years a record of each survey that includes the time and date of the survey, a sketch of the area or list of points surveyed, the measured dose rate at several points expressed in millirems (mSv) per hour, the instrument used to make the survey, and the initials of the individual who made the survey;

      (5) Provide the patient or human research subject with radiation safety guidance that will help keep the radiation dose to household members and the public as low as reasonably achievable before releasing the patient or human research subject if the patient or human research subject was administered a permanent implant; and

      (6) Have applicable emergency response equipment available near each treatment room to respond to a source dislodged from the patient or lodged within the patient following removal of the source applicators.

   b. A licensee shall notify the radiation safety officer, radiation safety officer designee, or authorized user immediately if the patient or human research subject dies or has a medical emergency.

41.2(46) Brachytherapy sources inventory.

   a. Each time brachytherapy sources are returned to an area of storage from an area of use, the licensee shall immediately count or otherwise verify the number returned to ensure that all sources taken from the storage area have been returned.

   b. A licensee shall make a record of brachytherapy source utilization which includes:

      (1) The names of the individuals permitted to handle the sources;

      (2) The number and activity of sources removed from storage, the room number of use and patient’s or human research subject’s name, the time and date they were removed from storage, the number and activity of sources in storage after the removal, and the initials of the individual who removed the sources from storage; and

      (3) The number and activity of sources returned to storage, the room number of use and patient’s or human research subject’s name, the time and date they were returned to storage, the number and activity of sources in storage after the return, and the initials of the individual who returned the sources to storage.

   c. Immediately after implanting sources in a patient or human research subject and immediately after removal of sources from a patient or human research subject, the licensee shall make a radiation survey of the patient or human research subject and the area of use to confirm that no sources have been misplaced. The licensee shall make a record of each survey.

   d. A licensee shall maintain the records required in 41.2(46) “b” and “c” for three years.

   e. A licensee shall maintain accountability at all times for all brachytherapy sources in storage or use. As soon as possible after removing sources from a patient or a human research subject, a licensee shall return brachytherapy sources to a secure storage area.

41.2(47) Release of patients or human research subjects treated with temporary implants.
a. Immediately after removing the last temporary implant source from a patient or human research subject, the licensee shall perform a radiation survey of the patient or human research subject with a radiation detection survey instrument to confirm that all sources have been removed and, for remote afterloaders, returned to the safe shielded position. The licensee shall not release from confinement for medical care a patient or human research subject treated by temporary implant until all sources have been removed.

b. A licensee shall maintain a record of patient or human research subject surveys which demonstrate compliance with 41.2(47)“a” for three years. Each record shall include the date of the survey, the name of the patient or human research subject, the dose rate from the patient or human research subject expressed as millirems (microsieverts) per hour and measured within 1 meter from the patient or human research subject, and the initials of the individual who made the survey.

41.2(48) Reserved.

41.2(49) Use of a sealed source in a remote afterloader unit, teletherapy unit, or gamma stereotactic radiosurgery unit.

a. A licensee must only use sealed sources:

(1) Approved and as provided for in the Sealed Source and Device Registry in photon emitting remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units to deliver therapeutic doses for medical uses; or

(2) In research involving photon emitting remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units in accordance with an active Investigational Device Exemption (IDE) application accepted by the FDA provided the requirements of 41.2(15)“a” are met.

b. A licensee must use photon emitting remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units:

(1) Approved in the Sealed Source and Device Registry to deliver a therapeutic dose for medical use. These devices may be used for therapeutic medical treatments that are not explicitly provided for in the Sealed Source and Device Registry but must be used in accordance with radiation safety conditions and limitations described in the Sealed Source and Device Registry; or

(2) In research in accordance with an active Investigational Device Exemption (IDE) application accepted by the FDA provided the requirements of 41.2(15)“a” are met.

41.2(50) Installation, maintenance, adjustment, and repair.

a. Only a person specifically licensed by the NRC or an agreement state shall install, maintain, adjust, or repair a remote afterloader unit, teletherapy unit, or gamma stereotactic radiosurgery unit that involves work on the source shielding, the source(s) driving unit, or other electronic or mechanical component that could expose the source(s), or reduce the shielding around the source(s), or compromise the radiation safety of the unit or the source(s).

b. Except for low-dose-rate remote afterloader units, only a person specifically licensed by the NRC or an agreement state shall install, replace, relocate, or remove a sealed source or source contained in other remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units.

c. For low-dose-rate remote afterloader units, only a person specifically licensed by the NRC or an agreement state or an authorized medical physicist shall install, replace, relocate, or remove a sealed source(s) contained in the unit.

d. A licensee shall retain a record of the installation, maintenance, adjustment, and repair of remote afterloader units, teletherapy units and gamma stereotactic radiosurgery units for three years. The record must include the date, description of the service, and the name of the individual who performed the work.

41.2(51) Amendments. In addition to the requirements specified in 41.2(4), a licensee shall apply for and receive a license amendment before:

a. Making any change in the treatment room shielding;

b. Making any change in the location of the teletherapy unit within the treatment room;

c. Using the teletherapy unit in a manner that could result in increased radiation levels in areas outside the teletherapy treatment room;

d. Relocating the teletherapy unit; or
e. Allowing an individual not listed on the licensee’s license to perform the duties of the teletherapy physicist.

41.2(52) Safety procedures and instructions for remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.

a. A licensee shall:
   (1) Secure the unit, the console, the console keys, and the treatment room when not in use or unattended;
   (2) Permit only individuals approved by the authorized user, radiation safety officer, or authorized medical physicist to be present in the treatment room during treatment with the source;
   (3) Prevent dual operation of more than one radiation producing device in a treatment room, if applicable; and
   (4) Develop, implement, and maintain written procedures for responding to an abnormal situation when the operator is unable to place the source in the shielded position, or to remove the patient or human research subject from the radiation field with controls from outside the treatment room. These procedures must include:
      1. Instructions for responding to equipment failures and the names of the individuals responsible for implementing corrective actions;
      2. The process for restricting access to and posting of the treatment area to minimize the risk of inadvertent exposure; and
      3. The names and telephone numbers of the authorized users, the authorized medical physicist, and the radiation safety officer to be contacted if the unit or console operates abnormally.

b. A copy of the procedures required by 41.2(52)“a”(4) must be physically located at the unit console.

c. A licensee shall post instructions at the unit console to inform the operator of:
   (1) The location of the procedures required by 41.2(52)“a”(4); and
   (2) The names and telephone numbers of the authorized users, the authorized medical physicist, and the radiation safety officer to be contacted if the unit or console operates abnormally.

d. A licensee shall:
   (1) Ensure that vendor operational and safety training is provided to all individuals who will operate the unit prior to the first use for patient treatment of a new unit or an existing unit with a manufacturer upgrade that affects the operation and safety of the unit. The vendor operational and safety training must be provided by the device manufacturer or by an individual certified by the device manufacturer to provide the operational and safety training.
   (2) Provide operational and safety instruction, initially and at least annually, to all individuals who operate the unit, appropriate to the individual’s assigned duties, in:
      1. The procedures identified in 41.2(52)“a”(4); and
      2. The operating procedures for the unit.
      e. The licensee shall ensure that operators, authorized medical physicists, and authorized users participate in drills of emergency procedures, initially and at least annually.

f. A licensee shall retain a record for three years of individuals receiving instruction required by 41.2(52), a description of the instruction, the date of instruction, the name of the attendee(s), and the name of the individual who gave the instruction.

g. A copy of the procedures required in 41.2(52)“d”(2) shall be retained until the licensee no longer possesses the remote afterloader, teletherapy unit, or gamma stereotactic radiosurgery unit.

41.2(53) Safety precautions for remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.

a. A licensee shall control access to the teletherapy room by a door at each entrance.

b. A licensee shall equip each entrance to the teletherapy room with an electrical interlock system that shall:
   (1) Prevent the operator from turning the primary beam of radiation “on” unless each treatment room entrance door is closed;
   (2) Turn the beam of radiation “off” immediately when an entrance door is opened; and
(3) Prevent the primary beam of radiation from being turned “on” following an interlock interruption until all treatment room entrance doors are closed and the beam “on-off” control is reset at the console.

c. A licensee shall require any individual entering the treatment room to ensure, through the use of appropriate monitors, that radiation levels have returned to ambient levels.

d. Except for low-dose-rate remote afterloader units, a licensee shall construct or equip each treatment room with viewing and intercom systems to permit continuous observation of the patient or human research subject from the treatment console during irradiation.

e. For licensed activities where sources are placed within the patient’s or human research subject’s body, the licensee shall only conduct treatments which allow for expeditious removal of a decoupled or jammed source.

f. In addition to the requirements specified in 41.2(53)”a” through “e,” a licensee shall:

(1) For medium-dose-rate and pulsed-dose-rate remote afterloader units, require:

1. An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who have been trained in the operation of and emergency response for the unit to be physically present during the initiation of all patient treatments involving the unit; and

2. An authorized medical physicist and either an authorized user or an individual, under the supervision of an authorized user, who have been trained to remove the source applicator in the event of an emergency involving the unit to be immediately available during continuation of all patient treatments involving the unit.

(2) For high-dose-rate remote afterloader units, require:

1. An authorized user and an authorized medical physicist to be physically present during the initiation of all patient treatments involving the unit; and

2. An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who have been trained in the operation and emergency response for the unit, to be physically present during the continuation of all patient treatments involving the unit.

(3) For gamma stereotactic radiosurgery units, require an authorized user and an authorized medical physicist to be physically present throughout all patient treatments involving the unit. As used in this subparagraph, “physically present” means to be within hearing distance of normal voice.

(4) Notify the radiation safety officer, or the radiation safety officer designee, and an authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.

g. A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source remaining in the unshielded position or lodged within the patient following completion of the treatment.

41.2(54) Reserved.

41.2(55) Radiation monitoring device.

a. A licensee shall have in each teletherapy room a permanent radiation monitor capable of continuously monitoring beam status.

b. Each radiation monitor shall be capable of providing visible notice of a teletherapy unit malfunction that results in an exposed or partially exposed source. The visible indicator of high radiation levels shall be observable by an individual entering the teletherapy room.

c. Each radiation monitor shall be equipped with a backup power supply separate from the power supply to the teletherapy unit. This backup power supply may be a battery system.

d. A radiation monitor shall be checked with a dedicated check source for proper operation each day before the teletherapy unit is used for treatment of patients or human research subjects.

e. A licensee shall maintain a record of the check required by 41.2(55)”d” for three years. The record shall include the date of the check, notation that the monitor indicates when the source is exposed, and the initials of the individual who performed the check.

f. If a radiation monitor is inoperable, the licensee shall require any individual entering the teletherapy room to use a survey instrument or audible alarm personal dosimeter to monitor for any malfunction of the source exposure mechanism. The instrument or dosimeter shall be checked with a
dedicated check source for proper operation at the beginning of each day of use. The licensee shall keep a record as described in 41.2(55) “e.”

g. A licensee shall promptly repair or replace the radiation monitor if it is inoperable.

41.2(56) **Viewing system.** A licensee shall construct or equip each teletherapy room to permit continuous observation of the patient or human research subject from the teletherapy unit console during irradiation.

41.2(57) **Dosimetry equipment.**

a. Except for low-dose-rate remote afterloader sources where the source output or activity is determined by the manufacturer, a licensee shall have a calibrated dosimetry system available for use. To satisfy this requirement, one of the following two conditions shall be met:

1. The system must have been calibrated using a system or source traceable to the National Institute of Standards and Technology and published protocols accepted by nationally recognized bodies, or by a calibration laboratory accredited by the American Association of Physicists in Medicine. The calibration must have been performed within the previous two years and after any servicing that may have affected system calibration; or

2. The system must have been calibrated within the previous four years; 18 to 30 months after that calibration, the system must have been intercompared with another dosimetry system that was calibrated within the past 24 months by the National Institute of Standards and Technology or by a calibration laboratory accredited by the American Association of Physicists in Medicine. The results of the intercomparison must indicate that the calibration factor of the licensee’s system has not changed by more than 2 percent. The licensee may not use the intercomparison result to change the calibration factor. When intercomparing dosimetry systems to be used for calibrating sealed sources for therapeutic units, the licensee shall use a comparable unit with beam attenuators or collimators, if applicable, and sources of the same radionuclide as the source used at the licensee’s facility.

b. The licensee shall have available for use a dosimetry system for spot-check measurements. To meet this requirement, the system may be compared with a system that has been calibrated in accordance with 41.2(57) “a.” This comparison must have been performed within the previous year and after each servicing that may have affected system calibration. The spot-check system may be the same system used to meet the requirement in 41.2(57) “a.”

c. The licensee shall maintain a record of each calibration, intercomparison, and comparison for the duration of the license. For each calibration, intercomparison, or comparison, the record shall include the date, the model numbers and serial numbers of the instruments that were calibrated, intercompared, or compared as required by 41.2(57) “a” and “b.” the correction factors that were determined, the names of the individuals who performed the calibration, intercomparison, or comparison, and evidence that the intercomparison meeting was sanctioned by a calibration laboratory or radiologic physics center accredited by the American Association of Physicists in Medicine.

41.2(58) **Full calibration measurements on teletherapy units, remote afterloader units, and gamma stereotactic radiosurgery units.**

a. **Teletherapy units.**

1. A licensee authorized to use a teletherapy unit for medical use shall perform full calibration measurements for each teletherapy unit:
   1. Before the first medical use of the unit; and
   2. Before medical use under the following conditions:
      ● Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output of the last full calibration corrected mathematically for radioactive decay;
      ● Following replacement of the source or following reinstallation of the teletherapy unit in a new location;
      ● Following any repair of the teletherapy unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
   3. At intervals not exceeding one year.

2. To satisfy the requirements of 41.2(58) “a”(1), full calibration measurements must include determination of:
1. The output within ±3 percent for the range of field sizes and for the distance or range of distances used for medical use;
2. The coincidence of the radiation field and the field indicated by the light beam localizing device;
3. The uniformity of the radiation field and its dependence on the orientation of the useful beam;
4. Timer accuracy and linearity over the range of use;
5. On-off error; and
6. The accuracy of all distance measuring and localization devices in medical use.

(3) A licensee shall use the dosimetry system described in 41.2(57) to measure the output for one set of exposure conditions. The remaining radiation measurements required in 41.2(58) “a”(1) may be made using the dosimetry system that indicates relative dose rates.

(4) A licensee shall make full calibration measurements required by 41.2(58) “a” in accordance with published protocols accepted by nationally recognized bodies.

(5) A licensee shall mathematically correct the outputs determined in 41.2(58) “a”(2) for physical decay for intervals not exceeding one month for cobalt-60, six months for cesium-137, or at intervals consistent with 1 percent of all other radionuclides.

(6) Full calibration measurements required by 41.2(58) “a”(1) and physical decay corrections required in 41.2(58) “a”(5) must be performed by the authorized medical physicist.

(7) A licensee shall maintain a record of each calibration for the duration of the license. The record shall include the date of the calibration; the manufacturer’s name, model number, and serial number for both the unit and the source; tables that describe the output of the unit over the range of field sizes and for the range of distances used in radiation therapy; a determination of the coincidence of the radiation field and the field indicated by the light beam localizing device; the measured timer accuracy for a typical treatment time; the calculated “on-off” error; the estimated accuracy of each distance measuring or localization device; and the signature of the authorized medical physicist.

b. Remote afterloader units.

(1) A licensee authorized to use a remote afterloader unit for medical use shall perform full calibration measurements for each unit:
   1. Before the first medical use of the unit; and
   2. Before medical use under the following conditions:
      • Following replacement of the source or following reinstallation of the unit in a new location outside the facility; and
      • Following any repair of the unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
   3. At intervals not exceeding one quarter of a year for high-dose-rate, medium-dose-rate, and pulsed-dose-rate remote afterloader units with sources whose half-life exceeds 75 days; and
   4. At intervals not exceeding one year for low-dose-rate remote afterloader units.

(2) To satisfy the requirements of 41.2(58) “b”(1), full calibration measurements must include, as applicable, determination of:
   1. The output within ±5 percent;
   2. Source positioning accuracy to within ±1 millimeter;
   3. Source retraction with backup battery upon power failure;
   4. Length of the source transfer tubes;
   5. Timer accuracy and linearity over the typical range of use;
   6. Length of the applicators; and
   7. Function of the source transfer tubes, applicators, and transfer tube-applicator interfaces.

(3) A licensee shall use the dosimetry system described in 41.2(57) to measure the output.

(4) A licensee shall make full calibration measurements required by 41.2(58) “b”(1) in accordance with published protocols accepted by nationally recognized bodies.

(5) In addition to the requirements for full calibrations for low-dose-rate remote afterloader units in 41.2(58) “b”(2), a licensee shall perform an autoradiograph of the source to verify inventory and source arrangement at intervals not exceeding one quarter of a year.
(6) For low-dose-rate remote afterloader units, a licensee may use measurements provided by the source manufacturer that are made in accordance with 41.2(58)“b.”

(7) A licensee shall mathematically correct the outputs determined in 41.2(58)“b”(2)“1” for physical decay intervals consistent with 1 percent physical decay.

(8) Full calibration measurements required by 41.2(58)“b”(1) and physical decay corrections required by 41.2(58)“b”(7) must be performed by the authorized medical physicist.

(9) A licensee shall retain a record of each calibration in accordance with 41.2(58)“a”(7).

   c. **Gamma stereotactic radiosurgery units.**

   (1) A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform full calibration measurements on each unit:

   1. Before the first medical use of the unit;
   2. Before medical use under the following conditions:
      - Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output obtained at the last full calibration corrected mathematically for radioactive decay;
      - Following replacement of the sources or following reinstallation of the gamma stereotactic radiosurgery unit in a new location; and
      - Following any repair of the gamma stereotactic radiosurgery unit that includes removal of the sources or major repair of the components associated with the source assembly; and
   3. At intervals not exceeding one year, with the exception that relative helmet factors need only be determined before the first medical use of a helmet and following any damage to a helmet.

   (2) To satisfy the requirement of 41.2(58)“c”(1), full calibration measurements must include determination of:

   1. The output within ±3 percent;
   2. Relative helmet factors;
   3. Isocenter coincidence;
   4. Timer accuracy and linearity over the range of use;
   5. On-off error;
   6. Trunnion centricity;
   7. Treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;
   8. Helmet microswitches;
   9. Emergency timing circuits; and
   10. Stereotactic frames and localizing devices (trunnions).

   (3) A licensee shall use the dosimetry system described in 41.2(57) to measure the output for one set of exposure conditions. The remaining radiation measurements required in 41.2(58)“c”(2)“1” may be made using a dosimetry system that indicates relative dose rates.

   (4) A licensee shall make full calibration measurements required by 41.2(58)“c”(1) in accordance with published protocols accepted by nationally recognized bodies.

   (5) A licensee shall mathematically correct the outputs determined in 41.2(58)“c”(2)“1” at intervals not exceeding one month for cobalt-60 and at intervals consistent with 1 percent physical decay for all other radionuclides.

   (6) Full calibration measurements required by 41.2(58)“c”(1) and physical decay corrections required in 41.2(58)“c”(5) must be performed by the authorized medical physicist.

   (7) A licensee shall retain a record of each calibration in accordance with 41.2(58)“a”(7).

**41.2(59) Periodic spot checks for teletherapy units, remote afterloader units, and gamma stereotactic radiosurgery units.**

   a. **Teletherapy units.**

   (1) A licensee authorized to use teletherapy units for medical use shall perform output spot checks on each teletherapy unit once in each calendar month that include determination of:

   1. Timer accuracy and timer linearity over the range of use;
   2. On-off error;
   3. The coincidence of the radiation field and the field indicated by the light beam localizing device;
4. The accuracy of all distance measuring and localization devices used for medical use;
5. The output for one typical set of operating conditions measured with the dosimetry system described in 41.2(57); and
6. The difference between the measurement made in 41.2(59) “a”(1)“5” and the anticipated output expressed as a percentage of the anticipated output (i.e., the value obtained at last full calibration corrected mathematically for physical decay).

(2) A licensee shall perform measurements required by 41.2(59) “a”(1) in accordance with written procedures established by the authorized medical physicist. That individual need not actually perform the spot-check measurements.

(3) A licensee shall have the authorized medical physicist review the results of each spot check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the result of each spot check.

(4) A licensee authorized to use a teletherapy unit for medical use shall perform safety spot checks of each teletherapy facility once in each calendar month and after each source installation to ensure proper operation of:
   1. Electrical interlocks at each teletherapy room entrance;
   2. Electrical or mechanical stops installed for the purpose of limiting use of the primary beam of radiation (restriction of source housing angulation or elevation, carriage or stand travel and operation of the beam on-off mechanism);
   3. Source exposure indicator lights on the teletherapy unit, on the control console, and in the facility;
   4. Viewing and intercom systems;
   5. Treatment room doors from inside and outside the treatment room; and
   6. Electrically assisted treatment room doors with the teletherapy unit electrical power turned off.

(5) If the results of the spot checks required in 41.2(59)“a”(4) indicate the malfunction of any system, the licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

(6) A licensee shall retain for three years a record of each spot check required in 41.2(59)“a.” The record must include:
   1. The date of the spot check;
   2. The manufacturer’s name, model number, and serial number of the teletherapy unit, source and instrument used to measure the output of the teletherapy unit;
   3. An assessment of timer linearity and constancy;
   4. The calculated on-off error;
   5. A determination of the coincidence of the radiation field and the field indicated by the light beam localization device;
   6. The determined accuracy of each distance measuring and localization device;
   7. The difference between the anticipated output and the measured output;
   8. Notations indicating the operability of each entrance door electrical interlock, each electrical or mechanical source exposure indicator light, and the viewing and intercom system and doors; and
   9. The name of the individual who performed the periodic spot check and the signature of the authorized medical physicist who reviewed the record of the spot check.

(7) A licensee shall retain a copy of the procedures required by 41.2(59)“a”(2) until the licensee no longer possesses the teletherapy unit.

b. Remote afterloader units.
   1. A licensee authorized to use a remote afterloader unit for medical use shall perform spot checks of each remote afterloader facility and on each unit:
      1. Before the first use of a high-dose-rate, medium-dose-rate, or pulsed-dose-rate remote afterloader unit on a given day;
      2. Before each patient treatment with a low-dose-rate remote afterloader unit; and
      3. After each source installation.
(2) A licensee shall perform the measurements required by 41.2(59)“b”(1) in accordance with written procedures established by the authorized medical physicist. That individual need not actually perform the spot-check measurements.

(3) A licensee shall have the authorized medical physicist review the results of each spot check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot check.

(4) To satisfy the requirements of 41.2(59)“b”(1), spot checks must, at a minimum, ensure proper operation of:
   1. Electrical interlocks at each remote afterloader unit room entrance;
   2. Source exposure indicator lights on the remote afterloader unit, on the control console, and in the facility;
   3. Viewing and intercom systems in each high-dose-rate, medium-dose-rate, and pulsed-dose-rate remote afterloader facility;
   4. Emergency response equipment;
   5. Radiation monitors used to indicate the source position;
   6. Timer accuracy;
   7. Clock (date and time) in the unit’s computer; and
   8. Decayed source(s) activity in the unit’s computer.

(5) If the results of the spot checks required in 41.2(59)“b”(4) indicate the malfunction of any system, the licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or spot check the malfunctioning system.

(6) A licensee shall retain for three years a record of each spot check required in 41.2(59)“b”(4). The record must include:
   1. The date of the spot check;
   2. The manufacturer’s name, model number, and serial number for the remote afterloader unit and source;
   3. An assessment of timer accuracy;
   4. Notations indicating the operability of each entrance door electrical interlock, radiation monitors, source exposure indicator lights, viewing and intercom systems, and clock and decayed source activity in the unit’s computer; and
   5. The name of the individual who performed the periodic spot check and the signature of the authorized medical physicist who reviewed the record of the spot check.

(7) A licensee shall retain a copy of the procedures required in 41.2(59)“b”(2) until the licensee no longer possesses the remote afterloader unit.

c. Gamma stereotactic radiosurgery units.

(1) A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform spot checks for the gamma stereotactic radiosurgery facility and on each unit:
   1. Monthly;
   2. Before the first use of the unit on a given day; and
   3. After each source installation.

(2) A licensee shall:
   1. Perform the measurements required by 41.2(59)“c”(1) in accordance with written procedures established by the authorized medical physicist. That individual need not actually perform the spot-check measurements.
   2. Have the authorized medical physicist review the results of each spot check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot check.

(3) To satisfy the requirements of 41.2(59)“c”(1)“1,” spot checks must, at a minimum:
   1. Ensure proper operation of treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off; helmet microswitches; emergency timing circuits; and stereotactic frames and localizing devices (trunnions).
   2. Determine:
The output for one typical set of operating conditions measured with the dosimetry system described in 41.2(57);
- The difference between the measurement made in the above bulleted point and the anticipated output expressed as a percentage of the anticipated output (i.e., the value obtained at last full calibration corrected mathematically for physical decay);
- Source output against computer calculation;
- Timer accuracy and linearity over the range of use;
- On-off error; and
- Trunnion centricity.

(4) To satisfy the requirements of 41.2(59) “c”(1)“2” and “3,” spot checks must ensure proper functioning of:
1. Electrical interlocks at each gamma stereotactic radiosurgery room entrance;
2. Source exposure indicator lights on the gamma stereotactic radiosurgery unit, on the control console, and in the facility;
3. Viewing and intercom systems;
4. Timer termination;
5. Radiation monitors used to indicate room exposures; and

(5) A licensee shall arrange as soon as possible for the repair of any system identified in 41.2(59) “c”(3) that is not operating properly.

(6) If the results of the spot checks required in 41.2(59) “c”(4) indicate the malfunction of any system, the licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

(7) A licensee shall retain for three years a record of each spot check required by 41.2(59) “c”(3) and (4). The record must include:
1. The date of the spot check;
2. The manufacturer’s name, model number, and serial number for the gamma stereotactic radiosurgery unit and the survey instrument used to measure the output of the unit;
3. An assessment of timer linearity and accuracy;
4. The calculated on-off error;
5. A determination of trunnion centricity;
6. The difference between the anticipated output and the measured output;
7. An assessment of source output against computer calculations;
8. Notations indicating the operability of radiation monitors, helmet microswitches, emergency timing circuits, on-off buttons, electrical interlocks, source exposure indicator lights, viewing and intercom systems, timer termination, treatment table retraction mechanism, and stereotactic frames and localizing devices (trunnions); and
9. The name of the individual who performed the periodic spot check and the signature of the authorized medical physicist who reviewed the record of the spot check.

(8) A licensee shall retain a copy of the procedures required in 41.2(59) “c”(2) until the licensee no longer possesses the gamma stereotactic radiosurgery unit.

41.2(60) Radiation surveys for teletherapy facilities.

a. In addition to the survey requirements in 641—40.36(136C), a person licensed under 641—41.2(136C) shall make surveys to ensure that the maximum radiation levels and average radiation levels from the surface of the main source safe with the source in the shielded position do not exceed the levels stated in the Sealed Source and Device Registry.

b. The licensee shall make the survey required in 41.2(60)“a” at installation of a new source, and following repairs to the source shielding, the source driving unit, or other electronic or mechanical component that could expose the source, reduce the shielding around the source, or compromise the radiation safety of the source.

c. A licensee shall maintain a record of the radiation measurements made following installation of a source for the duration of the license. The record shall include the date of the measurements, the reason
the survey is required, the manufacturer’s name, model number and serial number of the teletherapy unit, the source, and the instrument used to measure radiation levels, each dose rate measured around the teletherapy source while in the “off” position and the average of all measurements, a plan of the areas surrounding the treatment room that were surveyed, the measured dose rate at several points in each area expressed in millirems (\(\mu\text{Sv}\)) per hour, the calculated maximum level of radiation over a period of one week for each restricted and unrestricted area, and the signature of the radiation safety officer.

**41.2(61) Safety spot checks for teletherapy facilities.**

a. A licensee shall promptly check all systems listed in 41.2(59) “g” for proper function after each installation of a teletherapy source and after making any change for which an amendment is required by 41.2(51).

b. If the results of the safety spot checks required in 41.2(61) “a” indicate the malfunction of any system specified in 41.2(59), the licensee shall lock the control console in the “off” position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

c. A licensee shall maintain a record of the safety spot checks following installation of a source for three years. The record shall include notations indicating the operability of each entrance door interlock, each electrical or mechanical stop, each beam condition indicator light, the viewing system, doors, and the signature of the radiation safety officer.

**41.2(62) Modification of teletherapy unit or room before beginning a treatment program.** If the survey required by 41.2(60) indicates that any individual member of the public is likely to receive a dose greater than those permitted by 641—40.26(136C) before beginning the treatment program, the licensee shall:

a. Either equip the unit with stops or add additional radiation shielding to ensure compliance with 641—40.26(136C);

b. Perform the survey required by 41.2(60) again; and

c. Include in the report required by 41.2(63) the results of the initial survey, a description of the modification made to comply with 41.2(62) “a” and the results of the second survey; or

d. Request and receive a license amendment under 641—40.26(136C) that authorizes radiation levels in unrestricted areas greater than those permitted by 641—40.26(136C).

**41.2(63) Reports of teletherapy surveys, checks, tests, and measurements.** A licensee shall furnish a copy of the records required in 41.2(60), 41.2(61), and 41.2(62) and the output from the teletherapy source expressed as rems (sieverts) per hour at 1 meter from the source as determined during the full calibration required in 41.2(58) to the agency within 30 days following completion of the action that initiated the record requirement.

**41.2(64) Full-inspection servicing for teletherapy and gamma stereotactic radiosurgery units.**

a. A licensee shall have each teletherapy unit and gamma stereotactic radiosurgery unit fully inspected and serviced during each source replacement to assure proper functioning of the source exposure mechanism and other safety components. The interval between each full inspection shall not exceed five years for each teletherapy unit and shall not exceed seven years for each gamma stereotactic radiosurgery unit.

b. This inspection and servicing shall be performed only by persons specifically licensed to do so by the NRC or an agreement state.

c. A licensee shall maintain a record of the full inspection and servicing for the duration of the use of the unit. The record shall contain the inspector’s name, the inspector’s license number, the date of inspection, the manufacturer’s name and model number and serial number for both the teletherapy unit and gamma stereotactic radiosurgery unit and source, a list of components inspected, a list of components serviced and the type of service, a list of components replaced, and the signature of the inspector.

**41.2(65) Training for radiation safety officer.** Except as provided in 41.2(75), the licensee shall require an individual fulfilling the responsibilities of the radiation safety officer or an individual assigned duties and tasks as an associate radiation safety officer as provided in 41.2(8) to be an individual who:

a. Is certified by a specialty board whose certification process has been recognized by the NRC or an agreement state and who meets the requirements in 41.2(65) “d.” The names of the board certifications
that have been recognized by the NRC or an agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page. To have its certification process recognized, a specialty board shall:

(1) Require all candidates for certification to:
   1. Hold a bachelor’s or graduate degree from an accredited college or university in physical science or engineering or biological science with a minimum of 20 college credits in physical science;
   2. Have five or more years of professional experience in health physics (graduate training may be substituted for no more than two years of the required experience) including at least three years in applied health physics; and
   3. Pass an examination administered by diplomats of the specialty board, which evaluates knowledge and competence in radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology, and radiation dosimetry; or

(2) Require all candidates for certification to:
   1. Hold a master’s or doctor’s degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
   2. Have two years of either full-time practical training or supervised experience in medical physics under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the NRC or an agreement state, or in clinical nuclear medicine facilities providing either diagnostic or therapeutic services under the direction of physicians who meet the requirements for authorized users in 41.2(68), 41.2(69), or 41.2(75); and
   3. Pass an examination administered by diplomats of the specialty board that assesses knowledge and competence in clinical diagnostic radiological or nuclear medicine physics and in radiation safety; or

b. Has:
   (1) Completed a structured educational program consisting of both:
      1. 200 hours of classroom and laboratory training in the following areas:
         ● Radiation physics and instrumentation;
         ● Radiation protection;
         ● Mathematics pertaining to the use and measurement of radioactivity;
         ● Radiation biology; and
         ● Radiation dosimetry; and
      2. One year of full-time radiation safety experience under the supervision of the individual identified as the radiation safety officer on an NRC or agreement state license or permit issued by the NRC master material licensee that authorizes similar types of use of byproduct material. An associate radiation safety officer may provide supervision for those areas for which the associate radiation safety officer is authorized on an NRC or agreement state license or permit issued by an NRC master material licensee. The full-time radiation safety experience must involve the following:
         ● Shipping, receiving, and performing related radiation surveys;
         ● Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides;
         ● Securing and controlling byproduct material;
         ● Using administrative controls to avoid mistakes in the administration of byproduct material;
         ● Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures;
         ● Using emergency procedures to control byproduct material; and
         ● Disposing of byproduct material; and
   (2) This individual must obtain a written attestation signed by a preceptor radiation safety officer or associate radiation safety officer who has experience with the radiation safety aspects of similar types of use of byproduct material for which the individual is seeking approval as a radiation safety officer or an associate radiation safety officer. The written attestation must state that the individual has satisfactorily completed the requirements in 41.2(65)"b"(1) and 41.2(65)"d" and is able to independently fulfill the radiation safety-related duties as a radiation safety officer or as an associate radiation safety officer for a medical use license; or
c. (1) Is a medical physicist who has been certified by a specialty board whose certification process has been recognized by the NRC or an agreement state under 41.2(74)\textsuperscript{“a,”} has experience in radiation safety aspects of similar types of use of byproduct material for which the licensee is seeking the approval of the individual as a radiation safety officer or an associate radiation safety officer, and meets the requirements in 41.2(65)\textsuperscript{“d,”}; or

(2) Is an authorized user, authorized medical physicist, or authorized nuclear pharmacist identified on an NRC or agreement state license, a permit issued by an NRC master material licensee, a permit issued by an NRC or agreement state licensee of broad scope, or a permit issued by an NRC master material license broad scope permittee, has experience with the radiation safety aspects of similar types of use of byproduct material for which the licensee seeks the approval of the individual as the radiation safety officer or associate radiation safety officer and meets the requirements in 41.2(65)\textsuperscript{“d,”}; or

(3) Has experience with the radiation safety aspects of the types of use of byproduct material for which the individual is seeking simultaneous approval both as the radiation safety officer and the authorized user on the same new medical use license or new medical use permit issued by an NRC master material licensee. The individual must also meet the requirements in 41.2(65)\textsuperscript{“d,”}; and

d. Has training in the radiation safety, regulatory issues, and emergency procedures for the types of use for which the licensee seeks approval. This training requirement may be satisfied by completing training that is supervised by a radiation safety officer, associate radiation safety officer, authorized medical physicist, authorized nuclear pharmacist, or authorized user, as appropriate, who is authorized for the type of use for which the licensee is seeking approval.

41.2(66) Reserved.

41.2(67) \textit{Training for uptake, dilution, and excretion studies.} Except as provided in 41.2(75), the licensee shall require an authorized user of unsealed byproduct material for the uses authorized under 41.2(31) to be a physician who:

a. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an agreement state. The names of board certifications that have been recognized by the NRC or agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page. To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Complete 60 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies as described in 41.2(67)\textsuperscript{“c,”}(1)”1” and “2”; and

(2) Pass an examination administered by diplomats of the specialty board that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or

b. Is an authorized user under 41.2(68) or 41.2(69) or meets equivalent NRC or agreement state requirements; or

c. (1) Has completed 60 hours of training and experience, including a minimum of 8 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for uptake, dilution, and excretion studies. The training and experience must include:

1. Classroom and laboratory training in radiation physics and instrumentation; radiation protection; mathematics pertaining to the use and measurement of radioactivity, chemistry of radioactive material for medical use, and radiation biology; and

2. Work experience, under the supervision of an authorized user who meets the requirements in 41.2(67), 41.2(68), 41.2(69) or 41.2(75) or equivalent NRC or agreement state requirements, involving:

- Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
- Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
- Calculating, measuring, and safely preparing patient or human research subject dosages;
- Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
• Using procedures to contain spilled radioactive material safely and using proper decontamination procedures;

• Administering dosages of radioactive drugs to patients or human research subjects; and

(2) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(67) “c”(1) and is able to independently fulfill the radiation safety-related duties as an authorized user under 41.2(31). The attestation must be obtained from either:

1. A preceptor authorized user who meets the requirements in 41.2(67), 41.2(68), 41.2(69), or 41.2(75) or equivalent NRC or agreement state requirements; or

2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(67), 41.2(68), 41.2(69), or 41.2(75), or equivalent NRC or agreement state requirements, and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in 41.2(67) “c”(1).

41.2(68) Training for imaging and localization studies. Except as provided in 41.2(75), the licensee shall require the authorized user of unsealed byproduct material for the uses authorized under 41.2(33) to be a physician who:

a. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an agreement state. The names of board certifications that have been recognized by the NRC or agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page. To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for imaging and localization studies as described in 41.2(68) “c”(1)“1” and “2”; and

(2) Pass an examination administered by diplomats of the specialty board, which assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or

b. Is an authorized user under 41.2(69) and meets the requirements in 41.2(68) “c”(1)“2,” seventh bulleted paragraph, or equivalent NRC or agreement state requirements; or

c. (1) Has completed 700 hours of training and experience, including a minimum of 80 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for imaging and localization studies. The training and experience must include, at a minimum:

1. Classroom and laboratory training in the following areas:
   • Radiation physics and instrumentation;
   • Radiation protection;
   • Mathematics pertaining to the use and measurement of radioactivity;
   • Chemistry of radioactive material for medical use;
   • Radiation biology, and

2. Work experience, under the supervision of an authorized user who meets the requirements in 41.2(68); 41.2(69) and 41.2(68) “c”(1)“2,” seventh bulleted paragraph; 41.2(75); or equivalent NRC or agreement state requirements. An authorized nuclear pharmacist who meets the requirements in 41.2(75) or 41.2(78) may provide the supervised work experience for the seventh bulleted paragraph of 41.2(68) “c”(1)“2.” Work experience must involve:
   • Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
   • Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
   • Calculating, measuring, and safely preparing patient or human research subject dosages;
   • Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
• Using procedures to contain spilled radioactive material safely and using proper decontamination procedures;
• Administering dosages of radioactive drugs to patients or human research subjects; and
• Eluting generator systems appropriate for preparation of radioactive drugs for imaging and localization studies, measuring and testing the eluate for radionuclidic purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs; and

(2) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(68) ‘‘c’’(1) and is able to independently fulfill the radiation safety-related duties as an authorized user for the medical uses authorized under 41.2(31) and 41.2(33). The attestation must be obtained from either:

1. A preceptor authorized user who meets the requirements in 41.2(68); 41.2(69) and 41.2(68) ‘‘c’’(1)‘‘2,’’ seventh bulleted paragraph; or 41.2(75), or equivalent NRC or agreement state requirements; or

2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(68); 41.2(69) and 41.2(68) ‘‘c’’(1)‘‘2,’’ seventh bulleted paragraph; or 41.2(75); or equivalent NRC or agreement state requirements, and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postgraduate Training of the American Osteopathic Association and must include training and experience specified in 41.2(68) ‘‘c’’(1).

41.2(69) Training for use of unsealed byproduct material for which a written directive is required. Except as provided in 41.2(75), the licensee shall require an authorized user of unsealed byproduct material for the uses authorized under 41.2(37) to be a physician who:

a. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an agreement state and who meets the requirements in 41.2(69) ‘‘b’’(1)‘‘2,’’ seventh bulleted paragraph. The names of the board certificates that have been recognized by the NRC or agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page. To be recognized, a specialty board shall require all candidates for certification to:

1. Successfully complete residency training in a radiation therapy or nuclear medicine training program or a program in a related medical specialty. These residency training programs must include 700 hours of training and experience as described in 41.2(69) ‘‘b’’(1)‘‘1’’ through 41.2(69) ‘‘b’’(1)‘‘2,’’ fifth bulleted paragraph. Eligible training programs must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and Surgeons of Canada, or the Committee on Post-Graduate Training of the American Osteopathic Association; and

2. Pass an examination, administered by diplomats of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, quality assurance, and clinical use of unsealed radioactive material for which a written directive is required; or

b. (1) Has completed 700 hours of training and experience, including a minimum of 200 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material requiring a written directive. The training and experience must include:

1. Classroom and laboratory training in the following areas:
• Radiation physics and instrumentation;
• Radiation protection;
• Mathematics pertaining to the use and measurement of radioactivity;
• Chemistry of radioactive material for medical use; and
• Radiation biology; and

2. Work experience, under the supervision of an authorized user who meets the requirements in 41.2(69) or 41.2(75) or equivalent NRC or agreement state requirements. A supervising authorized user who meets the requirements in 41.2(69) ‘‘b’’ must also have experience in administering dosages
in the same dosage category or categories (i.e., 41.2(69)“b”(1)“2,” seventh bulleted paragraph) as the individual requesting authorized user status. The work experience must involve:

- Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
- Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
- Calculating, measuring, and safely preparing patient or human research subject dosages;
- Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
- Using procedures to contain spilled radioactive material safely and using proper decontamination procedures;

- Reserved.

- Administering dosages of radioactive drugs to patients or human research subjects from the three categories in this bulleted paragraph. Radioactive drugs containing radionuclides in categories not included are regulated under 41.2(88). This work experience must involve a minimum of three cases in each of the following categories for which the individual is requesting authorized user status:
  - Oral administration of less than or equal to 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131, for which a written directive is required;
  - Oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131 (experience with at least three cases in this category also satisfies the requirement in the above category);
  - Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emissions, beta radiation characteristics, alpha radiation characteristics, or photon energy less than 150 keV for which a written directive is required; and

(2) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(69)“b”(1) and is able to independently fulfill the radiation safety-related duties as an authorized user for the medical uses authorized under 41.2(37) for which the individual is requesting authorized user status. The attestation must be obtained from either:

1. A preceptor authorized user who meets the requirements in 41.2(69), 41.2(75) or equivalent NRC or agreement state requirements and has experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status; or

2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(69), 41.2(75) or equivalent NRC or agreement state requirements, has experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status, and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in 41.2(69)“b”(1).

c. For training only for oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 33 millicuries (1.22 gigabecquerels) or quantities greater than 33 millicuries (1.22 gigabecquerels), see 41.2(81) or 41.2(82).

41.2(70) Training for use of manual brachytherapy sources. Except as provided in 41.2(75), the licensee shall require an authorized user of a manual brachytherapy source for the uses authorized under 41.2(43) to be a physician who:

a. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an agreement state. The names of the board certifications that have been recognized by the NRC or agreement state must be posted on the NRC’s Medical Uses Licensee Toolkit web page. To have its certification process recognized, a specialty board shall require all candidates for certification to:

   (1) Successfully complete a minimum of three years of residency training in a radiation oncology program approved by the Residency Review Committee of the Accreditation Council for Graduate
Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and

(2) Pass an examination, administered by diplomats of the specialty board, that tests knowledge and competence in radiation safety, radionuclide handling, treatment planning, quality assurance, and clinical use of manual brachytherapy; or

b. (1) Has completed a structured educational program in basic radionuclide handling techniques applicable to the use of manual brachytherapy sources that includes:

1. 200 hours of classroom and laboratory training in the following areas:
   - Radiation physics and instrumentation;
   - Radiation protection;
   - Mathematics pertaining to the use and measurement of radioactivity; and
   - Radiation biology; and

2. 500 hours of work experience, under the supervision of an authorized user who meets the requirements in 41.2(70) or 41.2(75) or equivalent NRC or agreement state requirements at a medical facility authorized to use byproduct materials under 41.2(43), involving:
   - Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
   - Checking survey meters for proper operation;
   - Preparing, implanting, and removing brachytherapy sources;
   - Maintaining running inventories of material on hand;
   - Using administrative controls to prevent a medical event involving the use of radioactive material; and
   - Using emergency procedures to control radioactive material; and

(2) Has completed three years of supervised clinical experience in radiation oncology under an authorized user who meets the requirements in 41.2(70) or 41.2(75) or equivalent NRC or agreement state requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Postdoctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required in 41.2(70)“b”(1)“2”; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(70)“b”(1) and (2) and is able to independently fulfill the radiation safety-related duties as an authorized user of manual brachytherapy sources for the medical uses authorized under 41.2(43). The attestation must be obtained from either:

1. A preceptor authorized user who meets the requirements in 41.2(70), 41.2(75), or equivalent NRC or agreement state requirements; or

2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(70), 41.2(75), or equivalent NRC or agreement state requirements, and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in 41.2(70)“b”(1) and (2).

41.2(71) Training for ophthalmic use of strontium-90. Except as provided in 41.2(75), the licensee shall require the authorized user of strontium-90 for ophthalmic radiotherapy to be a physician who:

a. Is an authorized user under 41.2(70) or equivalent NRC or agreement state requirements; or

b. (1) Has completed 24 hours of classroom and laboratory training applicable to the medical use of strontium-90 for ophthalmic radiotherapy. The training must include:

1. Radiation physics and instrumentation;
2. Radiation protection;
3. Mathematics pertaining to the use and measurement of radioactivity; and
4. Radiation biology; and
   (2) Has completed supervised clinical training in ophthalmic radiotherapy under the supervision of an authorized user at a medical institution, clinic, or private practice that includes the use of strontium-90 for the ophthalmic treatment of five individuals. This supervised clinical training must involve:
      1. Examination of each individual to be treated;
      2. Calculation of the dose to be administered;
      3. Administration of the dose; and
      4. Follow-up and review of each individual’s case history; and
   (3) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in 41.2(70), 41.2(71) or 41.2(75) or equivalent NRC or agreement state requirements, that the individual has satisfactorily completed the requirements in 41.2(71) “b”(1) and (2) and is able to independently fulfill the radiation safety-related duties as an authorized user of strontium-90 for ophthalmic use.

41.2(72) Training for use of sealed sources for diagnosis. Except as provided in 41.2(75), the licensee shall require the authorized user of a diagnostic sealed source or a device authorized under 41.2(41) to be a physician, dentist, or podiatrist who:
   a. Is certified by a specialty board whose certification process includes all of the requirements in 41.2(72) “c” and “d” and whose certification has been recognized by the NRC or an agreement state. The names of the board certificates that have been recognized by the NRC or agreement state must be posted on the NRC’s Medical Uses Licensee Toolkit web page; or
   b. Is an authorized user for uses listed in 41.2(33) or equivalent NRC or agreement state requirements; or
   c. Has completed eight hours of classroom and laboratory training in basic radionuclide handling techniques specifically applicable to the use of the device. The training must include:
      (1) Radiation physics and instrumentation;
      (2) Radiation protection;
      (3) Mathematics pertaining to the use and measurement of radioactivity; and
      (4) Radiation biology; and
   d. Has completed training in the use of the device for the uses requested.

41.2(73) Training for use of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units. Except as provided in 41.2(75), the licensee shall require an authorized user of a sealed source for use authorized under 41.2(49) to be a physician who:
   a. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an agreement state and who meets the requirements in 41.2(73) “c.” The names of board certification that have been recognized by the NRC or agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page. To have its certification process recognized, a specialty board shall require all candidates for certification to:
      (1) Successfully complete a minimum of three years of residency training in a radiation therapy program approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and
      (2) Pass an examination, administered by diplomats of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, treatment planning, quality assurance, and clinical use of stereotactic radiosurgery, remote afterloaders, and external beam therapy; or
   b. (1) Has completed a structured educational program in basic radionuclide techniques applicable to the use of a sealed source in a therapeutic medical unit that includes:
      1. 200 hours of classroom and laboratory training in the following areas:
         ● Radiation physics and instrumentation;
         ● Radiation protection;
         ● Mathematics pertaining to the use and measurement of radioactivity; and
         ● Radiation biology; and
2. 500 hours of work experience, under the supervision of an authorized user who meets the requirements in 41.2(73) or 41.2(75) or equivalent NRC or agreement state requirements at a medical facility that is authorized to use byproduct material in 41.2(49), involving:
   ● Reviewing full calibration measurements and periodic spot checks;
   ● Preparing treatment plans and calculating treatment doses and times;
   ● Using administrative controls to prevent a medical event involving the use of radioactive material;
   ● Implementing emergency procedures to be followed in the event of the abnormal operation of the medical unit or console;
   ● Checking and using survey meters; and
   ● Selecting the proper dose and how it is to be administered; and

(2) Has completed three years of supervised clinical experience in radiation therapy under an authorized user who meets the requirements in 41.2(73) or 41.2(75) or equivalent NRC or agreement state requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Postdoctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by 41.2(73)“b”(1)”2; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(73)“b”(1) and (2) and 41.2(73)“c” and is able to independently fulfill the radiation safety-related duties as an authorized user of each type of therapeutic medical unit for which the individual is requesting authorized user status. The attestation must be obtained from either:

1. A preceptor authorized user who meets the requirements in 41.2(73) or 41.2(75) or equivalent NRC or agreement state requirements for an authorized user for each type of therapeutic medical unit for which the individual is requesting authorized user status; or

2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(73), 41.2(75), or equivalent NRC or agreement state requirements, for the type(s) of therapeutic medical unit for which the individual is requesting authorized user status, and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in 41.2(73)“b”(1) and (2); and

   c. Has received training in device operation, safety procedures, and clinical use for the type of use for which authorization is sought. This training requirement may be satisfied by satisfactory completion of a training program provided by the vendor for new users or by receiving training supervised by an authorized user or authorized medical physicist, as appropriate, who is authorized for the type of use for which the individual is seeking authorization.

41.2(74) Training for an authorized medical physicist. Except as provided in 41.2(75), the licensee shall require the authorized medical physicist to be an individual who:

   a. Is certified by a specialty board whose certification process has been recognized by the agency, NRC, or an agreement state and who meets the requirements in 41.2(74)“c.” The names of the board certifications that have been recognized by the NRC or agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page. To have its certification process recognized, a specialty board shall require all candidates for certification to:

      (1) Hold a master’s or doctor’s degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;
      (2) Have two years of either full-time practical training or supervised experience in medical physics:

         1. Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized under this rule by the NRC or an agreement state; or
2. In clinical radiation facilities providing high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services under the direction of physicians who meet the requirements for authorized users in 41.2(70), 41.2(73), or 41.2(75); and

(3) Pass an examination, administered by diplomats of the specialty board, that assesses knowledge and competence in clinical radiation therapy, radiation safety, calibration, quality assurance, and treatment planning for external beam therapy, brachytherapy, and stereotactic radiosurgery; or

b. (1) Holds a master’s or doctor’s degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university; and has completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of an individual who meets the requirements for an authorized medical physicist for the type of use for which the individual is seeking authorization. This training and work experience must be conducted in clinical radiation facilities that provide high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services and must include:

1. Performing sealed source leak tests and inventories;
2. Performing decay corrections;
3. Performing full calibration and periodic spot checks of external beam treatment units, stereotactic radiosurgery units, and remote afterloading units, as applicable; and
4. Conducting radiation surveys around external beam treatment units, stereotactic radiosurgery units, and remote afterloading units, as applicable; and

(2) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(74)”b”(1) and “c” and is able to independently fulfill the radiation safety-related duties as an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status. The written attestation must be signed by a preceptor authorized medical physicist who meets the requirements in 41.2(74) or 41.2(75) or equivalent NRC or agreement state requirements for an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status.

c. Has training for the type of use for which authorization is sought that includes hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system. This training requirement may be satisfied by satisfactorily completing either a training program provided by the vendor or by training supervised by an authorized medical physicist who is authorized for the type of use for which the individual is seeking authorization.

41.2(75) Training for experienced radiation safety officer, authorized medical physicist, nuclear pharmacist, authorized nuclear pharmacist, authorized users and teletherapy or medical physicists.

a. (1) An individual identified on an NRC or agreement state license, on a permit issued by the NRC or agreement state broad scope licensee, on a master material license permit, or by a master material license permittee of broad scope as a radiation safety officer, a teletherapy or medical physicist, an authorized medical physicist, a nuclear pharmacist or an authorized nuclear pharmacist on or before July 22, 2020, need not comply with the training requirements of 41.2(65), 41.2(74), or 41.2(78), respectively, except the radiation safety officers and authorized medical physicists identified in this paragraph must meet the training requirements in 41.2(65)”d” or 41.2(74)”c,” as appropriate, for any material or uses for which they were not authorized prior to this date.

(2) Any individual certified by the American Board of Health Physics in comprehensive health physics; American Board of Radiology; American Board of Nuclear Medicine; American Board of Science in Nuclear Medicine; Board of Pharmaceutical Specialties in Nuclear Pharmacy; American Board of Medical Physics in radiation oncology physics; Royal College of Physicians and Surgeons of Canada in nuclear medicine; American Osteopathic Board of Radiology; or American Osteopathic Board of Nuclear Medicine on or before October 24, 2005, need not comply with the training requirements of 41.2(65) to be identified as a radiation safety officer or as an associate radiation safety officer on an NRC or an agreement state license or NRC master material license permit for those materials and uses that these individuals performed on or before October 24, 2005.
3. Any individual certified by the American Board of Radiology in therapeutic radiological physics, roentgen ray and gamma ray physics, X-ray and radium physics, or radiological physics, or certified by the American Board of Medical Physics in radiation oncology physics, on or before October 24, 2005, need not comply with the training requirements for an authorized medical physicist described in 41.2(74), for those materials and uses that these individuals performed on or before October 24, 2005.

b. (1) Physicians, dentists, or podiatrists identified as authorized users for the medical use of byproduct material on a license issued by the NRC or agreement state, a permit issued by an NRC master material licensee, a permit issued by an NRC broad scope licensee, or a permit issued by an NRC master material license broad scope permittee before July 22, 2020, who perform only those medical uses for which they were authorized before that date need not comply with the training requirements of 41.2(67), 41.2(68), 41.2(69), 41.2(70), 41.2(71), 41.2(72), 41.2(73), 41.2(81), 41.2(82), or 41.2(89).

(2) Physicians, dentists, or podiatrists not identified as authorized users for the medical use of byproduct material issued by the NRC or agreement state, a permit issued by an NRC master material licensee, a permit issued by an NRC broad scope licensee, or a permit issued by an NRC master material license broad scope permittee who perform only those medical uses for which they were authorized on or before October 24, 2005, need not comply with the training requirements of 41.2(67), 41.2(68), 41.2(69), 41.2(70), 41.2(71), 41.2(72), 41.2(73), 41.2(81), 41.2(82), or 41.2(89) for those materials and uses that these individuals performed on or before October 24, 2005, as follows:

1. For uses authorized under 41.2(31) or 41.2(33), or oral administration of sodium iodide I-131 requiring a written directive for imaging and localization purposes, a physician who was certified on or before October 24, 2005, in nuclear medicine by the American Board of Nuclear Medicine; diagnostic radiology by the American Board of Radiology; diagnostic radiology or radiology by the American Osteopathic Board of Radiology; nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or American Osteopathic Board of Nuclear Medicine in nuclear medicine;

2. For uses authorized under 41.2(37), a physician who was certified on or before October 24, 2005, by the American Board of Nuclear Medicine; the American Board of Radiology in radiology, therapeutic radiology, or radiation oncology; nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or the American Osteopathic Board of Radiology after 1984;

3. For uses authorized under 41.2(43) or 41.2(49), a physician who was certified on or before October 24, 2005, in radiology, therapeutic radiology or radiation oncology by the American Board of Radiology; radiation oncology by the American Osteopathic Board of Radiology; radiology, with specialization in radiotherapy, as a British “Fellow of the Faculty of Radiology” or “Fellow of the Royal College of Radiology”; or therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; and

4. For uses authorized under 41.2(41), a physician who was certified on or before October 24, 2005, in radiology, diagnostic radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology; nuclear medicine by the American Board of Nuclear Medicine; diagnostic radiology or radiology by the American Osteopathic Board of Radiology; or nuclear medicine by the Royal College of Physicians and Surgeons of Canada.

(3) Physicians, dentists, or podiatrists who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses performed at a government agency or federally recognized Indian tribe before November 30, 2007, or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC, need not comply with the training requirements of 41.2(67), 41.2(68), 41.2(69), 41.2(70), 41.2(71), 41.2(72), 41.2(73), 41.2(81), 41.2(82), or 41.2(89) when performing the same medical uses. A physician, dentist, or podiatrist, who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses at the locations and time period identified in this paragraph, qualifies as an authorized user for those materials and uses performed before these dates, for the purposes of this rule.

c. Individuals who need not comply with training requirements as described in this subrule may serve as preceptors for, and supervisors of, applicants seeking authorization on an agency license for the same uses for which these individuals are authorized.

41.2(76) Reserved.
41.2(77) Recentness of training. The training and experience specified in 41.2(65) to 41.2(78) and 41.2(81), 41.2(82), 41.2(85), and 41.2(89) shall have been obtained within the seven years preceding the date of application or the individual shall have had related continuing education and continuing applicable experience since the required training and experience were completed.

41.2(78) Training for an authorized nuclear pharmacist. Except as provided in 41.2(75), the licensee shall require the authorized nuclear pharmacist to be a pharmacist who:

a. Is certified by a specialty board whose certification process has been recognized by the NRC or an agreement state. The names of board certifications that have been recognized by the NRC or an agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page. To have its certification process recognized, a specialty board shall require all candidates for certification to:
   (1) Have graduated from a pharmacy program accredited by the American Council on Pharmaceutical Education (ACPE) or have passed the Foreign Pharmacy Graduate Examination Committee (FPGEC) examination;
   (2) Hold a current, active license to practice pharmacy;
   (3) Provide evidence of having acquired at least 4,000 hours of combined training and experience in nuclear pharmacy practice. Academic training may be substituted for no more than 2,000 hours of the required training and experience; and
   (4) Pass an examination in nuclear pharmacy administered by diplomats of the specialty board that assesses knowledge and competency in procurement, compounding, quality assurance, dispensing, distribution, health and safety, radiation safety, provision of information and consultation, monitoring patient outcomes, research and development; or
b. Has completed 700 hours in a structured education program consisting of both:
   (1) 200 hours of classroom and laboratory training in the following areas:
      1. Radiation physics and instrumentation;
      2. Radiation protection;
      3. Mathematics pertaining to the use and measurement of radioactivity;
      4. Chemistry of radioactive material for medical use; and
      5. Radiation biology; and
   (2) Supervised practical experience in a nuclear pharmacy involving:
      1. Shipping, receiving, and performing related radiation surveys;
      2. Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides;
      3. Calculating, assaying, and safely preparing dosages for patients or human research subjects;
      4. Using administrative controls to avoid medical events in the administration of byproduct material; and
      5. Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures; and
c. Has obtained written attestation, signed by a preceptor authorized nuclear pharmacist, that the individual satisfactorily completed the requirements in 41.2(78) “b” and is able to independently fulfill the radiation safety-related duties as an authorized nuclear pharmacist.

41.2(79) and 41.2(80) Reserved.

41.2(81) Training for the oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 33 millicuries (1.22 gigabecquerels). Except as provided in 41.2(75), the licensee shall require an authorized user for the oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 33 millicuries (1.22 gigabecquerels) to be a physician who:

a. Is certified by a medical specialty board whose certification process includes all of the requirements in 41.2(81) “c”(1) and (2) and whose certification process has been recognized by the NRC or an agreement state. The names of the board certifications that have been recognized by the NRC or agreement state are posted on the NRC’s Medical Uses Licensee Toolkit web page; or
b. Is an authorized user under 41.2(69) “a” or “b” for uses in the oral administration of less than or equal to 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131 for which a written directive is required, or oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131 or 41.2(82) or equivalent NRC or agreement state requirements; or

c. (1) Has successfully completed 80 hours of classroom and laboratory training, applicable to the medical use of sodium iodide I-131 for procedures requiring a written directive. The training must include:

1. Radiation physics and instrumentation;
2. Radiation protection;
3. Mathematics pertaining to the use and measurement of radioactivity;
4. Chemistry of radioactive material for medical use; and
5. Radiation biology; and

(2) Has work experience, under the supervision of an authorized user who meets the requirements in 41.2(69) “a” or “b,” 41.2(75), 41.2(81) or 41.2(82) or equivalent NRC or agreement state requirements. A supervising authorized user who meets the requirements in 41.2(69) “b” must also have experience in administering dosages as follows: oral administration of less than or equal to 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131, for which a written directive is required; or oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131. The work experience must involve:

1. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
2. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
3. Calculating, measuring, and safely preparing patient or human research subject dosages;
4. Using administrative controls to prevent a medical event involving the use of radioactive material;
5. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
6. Administering dosages to patients or human research subjects that include at least three cases involving the oral administration of less than or equal to 33 millicuries (1.22 Gigabecquerels) of sodium iodide I-131; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(81) “c” (1) and (2) and is able to independently fulfill the radiation safety-related duties as an authorized user for oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide (I-131) for medical uses authorized under 41.2(37). The attestation must be obtained from either:

1. A preceptor authorized user who meets the requirements in 41.2(69), 41.2(75), 41.2(81) or 41.2(82) or equivalent NRC or agreement state requirements and has experience in administering dosages as follows: oral administration of less than or equal to 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131, for which a written directive is required; or oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131; or

2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(69), 41.2(75), 41.2(81), 41.2(82), or equivalent NRC or agreement state requirements; has experience in administering dosages orally as specified in 41.2(69) “b” (1)”2,” seventh bulleted paragraph; and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in 41.2(81) “c” (1) and (2).

41.2(82) Training for the oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 33 millicuries (1.22 gigabecquerels). Except as provided in 41.2(75), the licensee
shall require an authorized user for the oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 33 millicuries (1.22 gigabecquerels) to be a physician who:

a. Is certified by a medical specialty board whose certification process includes all of the requirements in 41.2(82)“c”(1) and (2), and whose certification has been recognized by the NRC or agreement state. The names of the board certifications that have been recognized by the NRC or agreement state must be posted on the NRC’s Medical Uses Licensee Toolkit web page; or

b. Is an authorized user under 41.2(69)“a” or “b” for oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131 or meets equivalent NRC or agreement state requirements; or

c. (1) Has successfully completed 80 hours of classroom and laboratory training, applicable to the medical use of sodium iodide I-131 for procedures requiring a written directive. The training must include:

1. Radiation physics and instrumentation;
2. Radiation protection;
3. Mathematics pertaining to the use and measurement of radioactivity;
4. Chemistry of radioactive material for medical use; and
5. Radiation biology; and

(2) Has work experience, under the supervision of an authorized user who meets the requirements in 41.2(69)“a” or “b,” 41.2(75) or 41.2(82) or equivalent NRC or agreement state requirements. A supervising authorized user who meets the requirements in 41.2(69)“b” must also have experience in oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131. The work experience must involve:

1. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
2. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
3. Calculating, measuring, and safely preparing patient or human research subject dosages;
4. Using administrative controls to prevent a medical event involving the use of radioactive material;
5. Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
6. Administering dosages to patients or human research subjects that include at least three cases involving the oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(82)“c”(1) and (2) and is able to independently fulfill the radiation safety-related duties as an authorized user for oral administration of greater than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide (I-131) for medical uses authorized in 41.2(37). The attestation must be obtained from either:

1. A preceptor authorized user who meets the requirements in 41.2(69), 41.2(75) or 41.2(82) or equivalent NRC or agreement state requirements and has experience in oral administration of greater than 33 millicuries (1.22 gigabecquerels) of sodium iodide I-131; or

2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(69), 41.2(75), 41.2(82), or equivalent NRC or agreement state requirements; has experience in administering dosages orally with greater than 33 millicuries of sodium iodide I-131, as specified in 41.2(69)“b”(1)“2,” seventh bulleted paragraph; and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in 41.2(82)“c”(1) and (2).

41.2(83) Provisions for the protection of human research subjects.
a. A licensee may conduct research involving human research subjects only if the licensee uses the radioactive materials authorized on its specific license for the uses authorized on its license.

b. If the research is conducted, funded, supported, or regulated by another federal agency that has implemented Federal Policy for the Protection of Human Subjects (Federal Policy), the licensee shall, before conducting research:
   (1) Obtain review and approval of the research from an “Institutional Review Board,” as defined and described in the Federal Policy; and
   (2) Obtain “informed consent,” as defined and described in the Federal Policy, from the human research subjects.

c. If the research will not be conducted, funded, supported, or regulated by another federal agency that has implemented the Federal Policy, the licensee shall, before conducting research, apply for and receive a specific amendment to its medical use license. The amendment request must include a written commitment that the licensee will, before conducting research:
   (1) Obtain review and approval of the research from an “Institutional Review Board,” as defined and described in the Federal Policy; and
   (2) Obtain “informed consent,” as defined and described in the Federal Policy, from the human research subjects.

d. Nothing in this subrule relieves a licensee from complying with the other requirements of these rules.

41.2(84) Calibration measurements of brachytherapy sources.

a. Before the first medical use of a brachytherapy source on or after January 1, 2003, a licensee shall have:
   (1) Determined the source output or activity using a dosimetry system that meets the requirements of 41.2(57);
   (2) Determined the source positioning accuracy within applicators; and
   (3) Used published protocols currently accepted by nationally recognized bodies to meet the requirements of 41.2(84) “a.”

b. A licensee may use measurements that are provided by the source manufacturer or by a calibration laboratory accredited by the American Association of Physicists in Medicine and that are made in accordance with 41.2(84) “a” (1) and (2).

c. A licensee shall mathematically correct the outputs or activities determined in 41.2(84) “a” for physical decay at intervals consistent with 1 percent physical decay.

d. A licensee shall retain a record of each calibration for three years after the last use of the source.

The record must include:
   (1) The date of the calibration;
   (2) The manufacturer’s name, model number, and serial number for the source and the instruments used to calibrate the source;
   (3) The source output or activity;
   (4) The source positioning accuracy within the applicators; and
   (5) The signature of the authorized medical physicist.

41.2(85) Strontium-90 sources for ophthalmic treatment.

a. Licensees who use strontium-90 for ophthalmic treatments must ensure that certain activities as specified in 41.2(85) “b” are performed by either:
   (1) An authorized medical physicist; or
   (2) An individual who:
      1. Is identified as an ophthalmic physicist on a specific medical use license issued by the NRC or an agreement state, permit issued by an NRC or agreement state broad scope medical use licensee, medical use permit issued by an NRC master material licensee, or permit issued by an NRC master material licensee broad scope medical use permittee; and
      2. Holds a master’s or doctor’s degree in physics, medical physics, other physical sciences, engineering, or applied mathematics from an accredited college or university; and
3. Has successfully completed one year of full-time training in medical physics and an additional year of full-time work experience under the supervision of a medical physicist; and
4. Has documented training in:
   a. The creation, modification, and completion of written directives;
   b. Procedures for administrations requiring a written directive; and
   c. Performing the calibration measurements of brachytherapy sources as detailed in 41.2(84).
   b. The individuals who are identified in 41.2(85) “a” must:
      1. Calculate the activity of each strontium-90 source that is used to determine the treatment times for ophthalmic treatments. The decay must be based on the activity determined under 41.2(84); and
      2. Assist the licensee in developing, implementing, and maintaining written procedures to provide high confidence that the administration is in accordance with the written directive. These procedures must include the frequencies that the individual meeting the requirements in 41.2(85) “a” will observe treatments, review the treatment methodology, calculate treatment time for the prescribed dose, and review records to verify that the administrations were in accordance with the written directives.
   c. A licensee shall retain a record of the activity of each strontium-90 source for the life of the source. The record must include:
      1. The date and initial activity of the source under 41.2(84); and
      2. For each decay calculation, the date and the source activity as determined under this subrule.

41.2(86) Therapy-related computer systems. The licensee shall perform acceptance testing on the treatment planning system of therapy-related computer systems in accordance with published protocols accepted by nationally recognized bodies. At a minimum, the acceptance must include, as applicable, verification of:
   a. The source-specific input parameters required by the dose calculation algorithm;
   b. The accuracy of dose, dwell time, and treatment time calculations at representative points;
   c. The accuracy of isodose plots and graphic displays;
   d. The accuracy of the software used to determine sealed source positions from radiographic images; and
   e. The accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.

41.2(87) Written directives. Each licensee or registrant shall meet the following objectives:
   a. A written directive must be dated and signed by an authorized user before the administration of I-131 sodium iodide greater than 30 microcuries, any therapeutic dosage of unsealed byproduct material or any therapeutic dose of radiation from byproduct material.
      1. If, because of the emergent nature of the patient’s condition, a delay in order to provide a written directive would jeopardize the patient’s health, an oral directive is acceptable.
      2. The information contained in the oral directive must be documented as soon as possible in writing in the patient’s record. A written directive must be prepared within 48 hours of the oral directive.
   b. Prior to administration, a written directive must contain the patient’s or human research subject’s name and the following information:
      1. For any administration of quantities greater than 30 microcuries of sodium iodide I-131: the dosage;
      2. For a therapeutic administration of a radiopharmaceutical other than sodium iodide I-131: the radiopharmaceutical, dosage, and route of administration;
      3. For gamma stereotactic radiosurgery: the total dose, treatment site, and values for the target coordinate setting per treatment for each anatomically distinct treatment site;
      4. For teletherapy: the total dose, dose per fraction, number of fractions, treatment site, and overall treatment period;
      5. For high-dose-rate remote afterloading brachytherapy: the radionuclide, treatment site, dose per fraction, number of fractions and total dose;
      6. For permanent implant brachytherapy:
         1. Before implantation: the treatment site, the radionuclide, and the total source strength; and
2. After implantation but before the patient leaves the post-treatment recovery area: the treatment site, the number of sources implanted, the total source strength implanted, and the date; or

7. For all other brachytherapy, including low-, medium-, and pulsed-dose-rate remote afterloaders:
   a. Prior to implantation: treatment site, the radionuclide, and dose; and
   b. After implantation but prior to completion of the procedure: the radionuclide, treatment site, number of sources, total source strength and exposure time (or, equivalently, the total dose), and date;

8. For therapeutic use of radiation machines, see 41.3(14).
   c. Prior to each administration, the patient’s or human research subject’s identity is verified by more than one method as the individual named in the written directive.
   d. The final plans of treatment and related calculations for brachytherapy, teletherapy, and gamma stereotactic radiosurgery are in accordance with the respective written directives.
   e. Each administration is in accordance with the written directive through checking both manual and computer-generated dose calculations and verifying that any computer-generated dose calculations are correctly transferred into the consoles of the medical units authorized by 641—Chapter 41.
   f. Determine if a reportable medical event, as described in 641—38.2(136C), has occurred.
   g. Determine, for a permanent implant brachytherapy, within 60 calendar days from the date the implant was performed, the total source strength administered outside of the treatment site compared to the total source strength documented in the postimplantation portion of the written directive, unless a written justification of patient unavailability is documented.
   h. A written revision to an existing written directive may be made if the revision is dated and signed by an authorized user before the administration of the dosage of unsealed byproduct material, the brachytherapy dose, the gamma stereotactic radiosurgery dose, the teletherapy dose, or the next fractional dose.

1. If, because of the patient’s condition, a delay in order to provide a written revision to an existing written directive would jeopardize the patient’s health, an oral revision to an existing written directive is acceptable.

2. The oral revision must be documented as soon as possible in the patient’s record. A revised written directive must be signed by the authorized user within 48 hours of the oral revision.

i. A copy of the written directive in auditable form shall be retained for three years after the date of administration.

41.2(88) Other medical uses of byproduct material or radiation from byproduct material. A licensee may use byproduct material or a radiation source approved for medical use which is not specifically addressed in 641—41.2(136C) (e.g., Y-90 microspheres, liquid brachytherapy, intravascular brachytherapy) if:

a. The applicant or licensee has submitted the information required by the agency; and
b. The applicant or licensee has received written approval from the agency in a license or license amendment and uses the material in accordance with the regulations and specific conditions the agency considers necessary for the medical use of the material.

41.2(89) Training for the parenteral administration of unsealed byproduct material requiring a written directive.

a. Except as provided in 41.2(75), the licensee shall require an authorized user for the parenteral administration requiring a written directive to be a physician who:

1. Is an authorized user under 41.2(69) for parenteral administration uses listed in 41.2(69)“b”(1)"2,” seventh bulleted paragraph, or equivalent NRC or agreement state requirements; or
2. Is an authorized user under 41.2(70) or 41.2(73) or equivalent NRC or agreement state requirements, and who meets the requirements in 41.2(89)“b”"; or
3. Is certified by a medical specialty board whose certification process has been recognized by the NRC or an agreement state under 41.2(70) or 41.2(73) and who meets the requirements in 41.2(89)“b”; or

b. The physician:
(1) Has successfully completed 80 hours of classroom and laboratory training, applicable to parenteral administrations listed in 41.2(69) “b”(1)”2,” seventh bulleted paragraph. The training must include:
   1. Radiation physics and instrumentation;
   2. Radiation protection;
   3. Mathematics pertaining to the use and measurement of radioactivity;
   4. Chemistry of radioactive material for medical use; and
   5. Radiation biology; and

(2) Has work experience, under the supervision of an authorized user who meets the requirements in 41.2(69), 41.2(75) or 41.2(89) or equivalent NRC or agreement state requirements, in the parenteral administration listed in 41.2(69) “b”(1)”2,” seventh bulleted paragraph. A supervising authorized user who meets the requirements in 41.2(69), 41.2(89), or equivalent NRC or agreement state requirements must have experience in administering dosages in the same category or categories as the individual requesting authorized user status. The work experience must involve:
   1. Ordering, receiving, and unpacking radioactive materials safely, and performing the related radiation surveys;
   2. Performing quality control procedures on instruments used to determine the activity of dosages, and performing checks for proper operation of survey meters;
   3. Calculating, measuring, and safely preparing patient or human research subject dosages;
   4. Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;
   5. Using procedures to contain spilled byproduct material safely, and using proper decontamination procedures; and
   6. Administering dosages to patients or human research subjects, that include at least three cases involving the parenteral administration as specified in 41.2(69) “b”(1)”2,” seventh bulleted paragraph; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in 41.2(89) “b”(1) or (2), and is able to independently fulfill the radiation safety-related duties as an authorized user for the parenteral administration of unsealed byproduct material requiring a written directive. The attestation must be obtained from either:
   1. A preceptor authorized user who meets the requirements in 41.2(69), 41.2(75) or 41.2(89) or equivalent NRC or agreement state requirements. A preceptor authorized user who meets the requirements in 41.2(69), 41.2(89) or equivalent NRC or agreement state requirements must have experience in administering dosages in the same category or categories as the individual requesting authorized user status; or
   2. A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in 41.2(69), 41.2(75), 41.2(89), or equivalent NRC or agreement state requirements; has experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status; and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in 41.2(89) “b”(1) and (2).

641—41.3(136C) Therapeutic use of radiation machines.
   41.3(1) Scope and applicability.
   a. This subrule establishes requirements, for which the registrant is responsible, for use of therapeutic radiation machines.
b. The use of therapeutic radiation machines shall be by, or under the supervision of, a physician who meets the training/experience criteria established by 41.3(5).

c. Unless specifically required otherwise by 641—41.3(136C), all registrants are subject to the requirements of 641—Chapters 38 to 40.

41.3(2) Definitions. In addition to the definitions provided in 641—38.2(136C) and 641—40.2(136C), the following definitions are specific to 641—41.3(136C).

“Accessible surface” means surface of equipment or of an equipment part that can be easily or accidentally touched by persons without the use of a tool.

“Added filtration” means any filtration which is in addition to the inherent filtration.

“Beam-limiting device” means a field defining collimator, integral to the therapeutic radiation machine, which provides a means to restrict the dimensions of the useful beam.

“Beam-scattering foil” means a thin piece of material (usually metallic) placed in the beam to scatter a beam of electrons in order to provide a more uniform electron distribution in the useful beam.

“Bent beam linear accelerator” means a linear accelerator geometry in which the accelerated electron beam must change direction by passing through a bending magnet.

“Contact therapy system” means a therapeutic radiation machine with a short target-to-skin distance (TSD), usually less than 5 centimeters.

“Dose monitor unit (DMU)” means a unit response from the beam monitoring system from which the absorbed dose can be calculated.

“External beam radiation therapy” means therapeutic irradiation in which the source of radiation is at a distance from the body.

“Field flattening filter” means a filter used to homogenize the absorbed dose rate over the radiation field.

“Filter” means material placed in the useful beam to change beam quality or its intensity profile in therapeutic radiation machines.

“Gantry” means that part of a radiation therapy system supporting and allowing movements of the radiation head around a center of rotation.

“ Interruption of irradiation” means the stopping of irradiation with the possibility of continuing irradiation without resetting of operating conditions at the control panel.

“Isocenter” means the center of the sphere through which the useful beam axis passes while the gantry moves through its full range of motions.

“Megavolt (MV) (mega electron volt (MeV))” means the energy equal to that acquired by a particle with one electron charge in passing through a potential difference of 1 million volts in a vacuum. (Note: Current convention is to use MV for photons and MeV for electrons.)

“Monitor unit (MU).” See “Dose monitor unit.”

“Moving beam radiation therapy” means radiation therapy with continuous displacement of one or more mechanical axes relative to the patient during irradiation. It includes arc therapy, skip therapy, conformal therapy, intensity modulation, and rotational therapy.

“Nominal treatment distance” means:

1. For electron irradiation, the distance from the scattering foil, virtual source, or exit window of the electron beam to the entrance surface of the irradiated object along the central axis of the useful beam.

2. For X-ray irradiation, the virtual source or target to isocenter distance along the central axis of the useful beam. For nonisocentric equipment, this distance shall be that specified by the manufacturer.

“Periodic quality assurance check” means a procedure which is performed to ensure that a previous calibration continues to be valid.

“Practical range of electrons” corresponds to classical electron range where the only remaining contribution to dose is from bremsstrahlung X-rays. A further explanation may be found in “Clinical Electron Beam Dosimetry: Report of AAPM Radiation Therapy Committee Task Group 25” (Medical Physics 18(1): 73-109, Jan/Feb 1991) and ICRU Report 35, “Radiation Dosimetry: Electron Beams with Energies Between 1 and 50 MeV,” International Agency on Radiation Units and Measurements, September 15, 1984.
“Radiation field.” See “Useful beam.”
“Radiation head” means the structure from which the useful beam emerges.
“Radiation therapy physicist” means an individual qualified in accordance with 41.3(6).
“Redundant beam monitoring system” means a combination of two dose monitoring systems in which each system is designed to terminate irradiation in accordance with a preselected number of dose monitor units.
“Shadow tray” means a device attached to the radiation head to support auxiliary beam blocking material.
“Stationary beam radiation therapy” means radiation therapy without displacement of one or more mechanical axes relative to the patient during irradiation.
“Target” means that part of an X-ray tube or accelerator onto which is directed a beam of accelerated particles to produce ionizing radiation or other particles.
“Tenth-value layer (TVL)” means the thickness of a specified material which attenuates X-radiation or gamma radiation to an extent such that the air kerma rate, exposure rate or absorbed dose rate is reduced to one-tenth of the value measured without the material at the same point.
“Therapeutic radiation machine” means X-ray or electron-producing equipment designed and used for external beam radiation therapy.
“Virtual source” means a point from which radiation appears to originate.

41.3(3) Registration or license requirements. No person shall receive, possess, use, transfer, own, or acquire therapeutic radiation machines except as authorized in a registration issued pursuant to 641—39.1(136C) to 641—39.4(136C).

41.3(4) General administrative requirements for facilities using therapeutic radiation machines.

a. Administrative controls. The registrant shall be responsible for directing the operation of the therapeutic radiation machines which have been registered with the agency. The registrant or the registrant’s agent shall ensure that the requirements of 641—41.3(136C) are met in the operation of the therapeutic radiation machine(s).

b. A therapeutic radiation machine which does not meet the provisions of these regulations shall not be used for irradiation of patients unless authorized by the agency.

41.3(5) Training for external beam radiation therapy authorized users. The registrant for any therapeutic radiation machine subject to 41.3(17) or 41.3(18) shall require the authorized user to be a physician who:

a. Is certified in:
   (1) Radiology or therapeutic radiology by the American Board of Radiology; or
   (2) Radiation oncology by the American Osteopathic Board of Radiology; or
   (3) Radiology, with specialization in radiotherapy, as a British “Fellow of the Faculty of Radiology” or “Fellow of the Royal College of Radiology”; or
   (4) Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or

b. Is in the active practice of therapeutic radiology, and has completed 200 hours of instruction in basic radiation techniques applicable to the use of an external beam radiation therapy unit, 500 hours of supervised work experience, and a minimum of three years of supervised clinical experience.

c. To satisfy the requirement for instruction in 41.3(5)“b” above, the classroom and laboratory training shall include:
   (1) Radiation physics and instrumentation;
   (2) Radiation protection;
   (3) Mathematics pertaining to the use and measurement of ionization radiation; and
   (4) Radiation biology.

d. To satisfy the requirement for supervised work experience in 41.3(4)“b” above, training shall be under the supervision of an authorized user and shall include:
   (1) Reviewing the full calibration measurements and periodic quality assurance checks;
   (2) Evaluating prepared treatment plans and calculation of treatment times/patient treatment settings;
   (3) Using administrative controls to prevent misadministrations;
(4) Implementing emergency procedures to be followed in the event of the abnormal operation of an external beam radiation therapy unit or console; and
(5) Checking and using radiation survey meters.

e. To satisfy the requirement for a period of supervised clinical experience, training shall include one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user. The supervised clinical experience shall include:

(1) Examining individuals and reviewing their case histories to determine their suitability for external beam radiation therapy treatment, and any limitations/contraindications;
(2) Selecting proper dose and how it is to be administered;
(3) Calculating the external beam radiation therapy doses and collaborating with the authorized user in the review of patients’ progress; consideration of the need to modify originally prescribed doses or treatment plans as warranted by patients’ reaction to radiation; and
(4) Postadministration follow-up and review of case histories.

f. Notwithstanding the requirements of 41.3(5) “h,” the registrant for any therapeutic radiation machine subject to 41.3(17) and 41.3(18) may also submit the training of the prospective authorized user physician for agency review.

g. A physician shall not act as an authorized user for any therapeutic radiation machine until such time as said physician’s training has been reviewed and approved by the registrant.

41.3(6) Training for radiation therapy physicist. The registrant for any therapeutic radiation machine subject to 41.3(17) or (18) shall require the radiation therapy physicist to:

a. Be registered with the agency, under the provisions of 641—subrule 39.3(3) of these regulations, as a provider of radiation services in the area of calibration and compliance surveys of external beam radiation therapy units; and
b. Be certified by the American Board of Radiology in:
   (1) Therapeutic radiological physics; or
   (2) Roentgen-ray and gamma-ray physics; or
   (3) X-ray and radium physics; or
   (4) Radiological physics; or
   (5) Therapeutic medical physics; or
c. Be certified by the American Board of Medical Physics in radiation oncology physics; or
d. Be certified by the Canadian College of Physicists in Medicine; or
e. Hold a master’s or doctor’s degree in physics, biophysics, radiological physics, or health physics, and have completed one year of full-time training in therapeutic radiological physics and also one year of full-time work experience under the supervision of a radiation therapy physicist at a medical institution. To meet this requirement, the individual shall have performed the tasks listed in 41.3(16) “a,” 41.3(17) “c” and “d,” and 41.3(18) “e” and “f” under the supervision of a radiation therapy physicist during the year of work experience.

41.3(7) Qualifications of operators. Individuals who will be operating a therapeutic radiation machine for medical use shall be adequately instructed in the safe operating procedures and hold a current permit to practice in radiation therapy as a radiation therapist under the provisions of 641—Chapter 42. The permit holder shall make the permit available at the individual’s place of employment. If the permit holder works at more than one facility, a duplicate of the permit shall be kept at each facility.

41.3(8) Written safety procedures and rules shall be developed by a radiation therapy physicist and shall be available in the control area of a therapeutic radiation machine, including any restrictions required for the safe operation of the particular therapeutic radiation machine. The operator shall be able to demonstrate familiarity with these rules. All individuals associated with the operation of a therapeutic radiation machine shall be instructed in and shall comply with procedures for maintaining written directives.
41.3(9) Individuals shall not be exposed to the useful beam except for medical therapy purposes and unless such exposure has been ordered in writing by a physician. This provision specifically prohibits deliberate exposure of an individual for training, demonstration or other non-healing arts purposes.

41.3(10) Records of visiting authorized users. Notwithstanding the provisions of 41.3(5), a registrant may permit any physician to act as a visiting authorized user for up to 60 days per calendar year under the following conditions:

a. The visiting authorized user has the prior written permission of the registrant’s management and, if the use occurs on behalf of an institution, the institution’s radiation safety committee;

b. The visiting authorized user meets the requirements of 41.3(5); and

c. The registrant maintains copies of all records specified in 41.3(5) for five years from the date of the last visit.

41.3(11) Information and maintenance record and associated information. The registrant shall maintain the following information in a separate file or package for each therapeutic radiation machine for inspection by the agency:

a. Report of acceptance testing;

b. Records of all surveys, calibrations, and periodic quality assurance checks of the therapeutic radiation machine required by 641—41.3(136C), as well as the name(s) of person(s) who performed such activities;

c. Records of maintenance or modifications, or both, performed on the therapeutic radiation machine after July 9, 1997, as well as the name(s) of person(s) who performed such services;

d. Signature of person authorizing the return of therapeutic radiation machine to clinical use after service, repair, or upgrade.

e. Records of training specified in 41.3(5) and 41.3(6).

41.3(12) Records retention. All records required by 641—41.3(136C) shall be retained until disposal is authorized by the agency unless another retention period is specifically authorized in 641—41.3(136C). All required records shall be retained in an active file from at least the time of generation until the next agency inspection. Any required record generated before the last agency inspection may be microfilmed or otherwise archived as long as a complete copy can be retrieved until such time the agency authorizes final disposal.

41.3(13) Reserved.

41.3(14) Written directives. Each registrant shall meet the following:

a. A written directive must be dated and signed by an authorized user prior to the administration of radiation.

1) If, because of the patient’s condition, a delay in the order to provide a written revision to an existing directive would jeopardize the patient’s health, an oral revision to an existing written directive will be acceptable, provided that the oral revision is documented as soon as possible in writing in the patient’s record and a revised written directive is signed by an authorized user within 48 hours of the oral revision.

2) The written directive must contain the patient or human research subject’s name, the type and energy of the beam, the total dose, dose per fraction, treatment site, and number of fractions.

3) A written revision to an existing written directive may be made provided that the revision is dated and signed by an authorized user prior to the administration of the external beam dose, or the next fractional dose.

4) The registrant shall retain a copy of the written directive for three years.

b. Procedures for administration. The registrant shall have written procedures that provide the following information:

1) Prior to the administration of each course of radiation treatment, the patient’s or human research subject’s identity is verified by more than one method as the individual named in the written directive;

2) Each administration is in accordance with the written directive;

3) External beam radiation therapy final plans of treatment and related calculations are in accordance with the respective written directives by:
1. Checking both manual and computer-generated dose calculations to verify that they are correct and in accordance with the written directive; and
2. Verifying that any computer-generated calculations are correctly transferred into the consoles of authorized therapeutic medical units;
   (4) Any unintended deviation from the written directive is identified, evaluated and appropriate action is taken; and
   (5) The registrant retains a copy of the procedures for administrations for the duration of the registration.

41.3(15) Reports and notifications of misadministrations.
   a. A registrant shall report any event resulting from intervention of a patient or human research subject in which the administration of external beam radiation results, or will result, in unintended permanent functional damage to an organ or a physiological system as determined by a physician.
   b. Other than events that result from intervention by a patient or human research subject, a registrant shall report any event in which the administration of an external beam radiation therapy dose results in:
      (1) A dose that differs from the prescribed dose by more than 5 rem (0.05 sievert) effective dose equivalent, 50 rem (0.5 sievert) to an organ or tissue, or 50 rem (0.5 sievert) shallow dose equivalent to the skin, and either:
         1. The total dose delivered differs from the prescribed dose by 20 percent or more; or
         2. The fractionated dose delivered differs from the prescribed dose for a single fraction by 50 percent or more.
      (2) A dose that exceeds 5 rem (0.05 sievert) effective dose equivalent, 50 rem (0.5 sievert) to an organ or tissue, or 50 rem (0.5 sievert) shallow dose equivalent to the skin from either of the following:
         1. An administration of the wrong treatment modality;
         2. An administration to the wrong individual or human research subject.
      (3) A dose to the skin or an organ or tissue other than the treatment site that exceeds by 50 rem (0.5 sievert) to an organ or tissue and 50 percent or more of the dose expected from the administration defined in the written directive.
   c. The registrant shall notify the agency by telephone no later than the next calendar day after the discovery of a misadministration.
   d. The registrant shall submit a written report to the agency within 15 days after the discovery of a misadministration. The written report shall include:
      (1) The registrant’s name;
      (2) The name of the prescribing physician;
      (3) A brief description of the event;
      (4) Why the event occurred;
      (5) The effect, if any, on the individual or individuals who received the misadministration;
      (6) Actions, if any, that have been taken, or are planned, to prevent recurrence;
      (7) Certification that the registrant notified the individual or the individual’s responsible relative or guardian, and if not, why not.
   e. The report to the agency shall not contain the individual’s name or any other information that could lead to the identification of the individual.
   f. The registrant shall provide notification of the event to the referring physician and also notify the individual who is the subject of the misadministration no later than 24 hours after its discovery, unless the referring physician personally informs the registrant either that the referring physician will inform the individual or that, based on medical judgment, the physician’s telling the individual would be harmful. The registrant is not required to notify the individual without first consulting the referring physician. If the referring physician or the affected individual cannot be reached within 24 hours, the registrant shall notify the individual as soon as possible thereafter. The registrant may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the misadministration, because of any delay in notification. To meet the requirements of this paragraph, the notification of the individual who is the subject of the misadministration may be made instead to that
individual’s responsible relative or guardian. If a verbal notification is made, the registrant shall inform the individual, or appropriate responsible relative or guardian, that a written description of the event may be obtained from the registrant upon request. The registrant shall provide such a written description if requested.

g. Aside from the notification requirement, nothing in this subrule affects any rights or duties of registrants and physicians in relation to each other, to individuals affected by the misadministration, or to individuals’ responsible relatives or guardians.

h. A copy of the record required in this subrule shall be provided to the referring physician, if other than the registrant, within 15 days after discovery of the misadministration.

i. Records of misadministrations. A registrant shall retain a record of misadministrations reported in this subrule for three years. The record must contain the following:

   1. The registrant’s name and the names of the individuals involved;
   2. The social security number or other identification number, if one has been assigned, of the individual who is the subject of the misadministration;
   3. A brief description of the event; why it occurred; and the effect, if any, on the individual;
   4. The actions, if any, taken or planned to prevent recurrence; and
   5. Whether the registrant notified the individual or the individual’s responsible relative or guardian, and, if not, whether such failure to notify was based on guidance from the referring physician.

**41.3(16)** General technical requirements for facilities using therapeutic radiation machines.

a. Protection surveys.

   1. The registrant shall ensure that radiation protection surveys of all new facilities, and existing facilities not previously surveyed, are performed with an operable radiation measurement survey instrument calibrated within the past 12 months. The radiation protection survey shall be performed by, or under the direction of, a radiation therapy physicist or a certified health physicist and shall verify that, with the therapeutic radiation machine in a “BEAM-ON” condition, with the largest clinically available treatment field and with a scattering phantom in the useful beam of radiation:
   
   1. Radiation levels in restricted areas are not likely to cause personnel exposures in excess of the limits specified in 641—subrule 40.15(1); and
   2. Radiation levels in unrestricted areas do not exceed the limits specified in 641—paragraphs 40.26(1) “a” and “b.”

   2. In addition to the requirements of 41.3(16) “a”(1), a radiation protection survey shall also be performed prior to any subsequent medical use and:

   1. After making any change in the treatment room shielding;
   2. After making any change in the location of the therapeutic radiation machine within the treatment room;
   3. After relocating the therapeutic radiation machine; or
   4. Before using the therapeutic radiation machine in a manner that could result in increased radiation levels in areas outside the external beam radiation therapy treatment room.

   3. The survey record shall indicate all instances where the facility, in the opinion of the radiation therapy physicist or a certified health physicist, is in violation of applicable regulations. The survey record shall also include the date of the measurements, the reason the survey is required, the manufacturer’s name, model number and serial number of the therapeutic radiation machine, the instrument(s) used to measure radiation levels, a plan of the areas surrounding the treatment room that were surveyed, the measured dose rate at several points in each area expressed in microsieverts or millirems per hour, the calculated maximum level of radiation over a period of one week for each restricted and unrestricted area, and the signature of the individual responsible for conducting the survey.

   4. If the results of the surveys required by 41.3(16) “a”(1) or (2) indicate any radiation levels in excess of the respective limit specified in 41.3(16) “a”(1), the registrant shall lock the control in the “OFF” position and not use the unit:

   1. Except as may be necessary to repair, replace, or test the therapeutic radiation machine, the therapeutic radiation machine shielding, or the treatment room shielding; or
2. Until the registrant has received a specific exemption in writing from the agency.
   b. Modification of radiation therapy unit or room before beginning a treatment program. If the
   survey required by 41.3(16)“a” indicates that an individual in an unrestricted area may be exposed
   to levels of radiation greater than those permitted by 641—paragraphs 40.26(1)“a” and “b,” before
   beginning the treatment program the registrant shall:
   (1) Either equip the unit with beam direction interlocks or add additional radiation shielding to
   ensure compliance with 641—paragraphs 40.26(1)“a” and “b”;
   (2) Perform the survey required by 41.3(16)“a” again; and
   (3) Include in the report required by 41.3(16)“d” the results of the initial survey, a description
   of the modification made to comply with 41.3(5)“b”(1), and the results of the second survey; or
   (4) Request and receive written authorization from the agency that authorizes radiation levels in
   unrestricted areas greater than those permitted by 641—paragraphs 40.26(1)“a” and “b.”
   c. Dosimetry equipment.
   (1) The registrant shall have a calibrated dosimetry system available for use. The system shall
   have been calibrated by the National Institute for Standards and Technology (NIST) or by an American
   Association of Physicists in Medicine (AAPM) Accredited Dosimetry Calibration Laboratory (ADCL).
   The calibration shall have been performed within the previous 24 months and after any servicing that
   may have affected system calibration.
      1. For beams with energies greater than 1 MV (1 MeV), the dosimetry system shall have been
         calibrated for Cobalt-60.
      2. For beams with energies equal to or less than 1 MV (1 MeV), the dosimetry system shall have
         been calibrated at an energy (energy range) appropriate for the radiation being measured.
   (2) The registrant shall have available for use a dosimetry system for quality assurance check
   measurements. To meet this requirement, the system may be compared with a system that has been
   calibrated in accordance with 41.3(16)“c”(1). This comparison shall have been performed within the
   previous 12 months and after each servicing that may have affected system calibration. The quality
   assurance check system may be the same system used to meet the requirement in 41.3(16)“c”(1).
   (3) The registrant shall maintain a record of each dosimetry system calibration, intercomparison,
   and comparison for the duration of the license or registration. For each calibration, intercomparison,
   or comparison, the record shall include the date, the model numbers and serial numbers of the
   instruments that were calibrated, intercompared, or compared as required by 41.3(16)“c”(1) and (2),
   the correction factors that were determined, the names of the individuals who performed the calibration,
   intercomparison, or comparison, and evidence that the intercomparison was performed by, or under
   the direct supervision and in the physical presence of, a radiation therapy physicist.
   d. Reports of external beam radiation therapy surveys and measurements. The registrant for any
   therapeutic radiation machine subject to 41.3(17) or 41.3(18) shall furnish a copy of the records required
   in 41.3(16)“a” and “b” to the agency within 30 days following completion of the action that initiated
   the record requirement.
   41.3(17) Therapeutic radiation machines of less than 500 kV.
   a. Equipment requirements.
      (1) Leakage radiation. When the X-ray tube is operated at its maximum rated tube current for the
      maximum kV, the leakage air kerma rate shall not exceed the value specified at the distance specified
      for that classification of therapeutic radiation machine:
         1. 5-50 kV systems. The leakage air kerma rate measured at any position 5 centimeters from the
             tube housing assembly shall not exceed 100 mrad (1 mGy) in any one hour.
         2. >50 and <500 kV systems. The leakage air kerma rate measured at a distance of one meter
             from the target in any direction shall not exceed 1 rad (1 cGy) in any one hour. This air kerma rate
             measurement may be averaged over areas no larger than 100 square centimeters. In addition, the air
             kerma rate at a distance of 5 centimeters from the surface of the tube housing assembly shall not exceed
             30 rad (30 cGy) per hour.
         3. For each therapeutic machine, the registrant shall determine, or obtain from the manufacturer,
             the leakage radiation existing at positions specified in 41.3(17)“a”(1)“1” and 41.3(17)“a”(1)“2” for the
specified operating conditions. Records on leakage radiation measurements shall be maintained at the facility for inspection by the agency.

(2) Permanent beam-limiting devices. Permanent diaphragms or cones used for limiting the useful beam shall provide at least the same degree of attenuation as required for the tube housing assembly.

(3) Adjustable or removable beam-limiting devices.
   1. All adjustable or removable beam-limiting devices, diaphragms, cones or blocks shall not transmit more than 5 percent of the useful beam for the most penetrating beam used;
   2. When adjustable beam-limiting devices are used, the position and shape of the radiation field shall be indicated by a light beam.

(4) Filter system. The filter system shall be so designed that:
   1. Filters cannot be accidentally displaced at any possible tube orientation;
   2. For equipment installed after July 9, 1997, an interlock system prevents irradiation if the proper filter is not in place;
   3. The air kerma rate escaping from the filter slot shall not exceed 1 rad (1 cGy) per hour at one meter under any operating conditions; and
   4. Each filter shall be marked as to its material of construction and its thickness.

(5) Tube immobilization.
   1. The X-ray tube shall be so mounted that it cannot accidentally turn or slide with respect to the housing aperture; and
   2. The tube housing assembly shall be capable of being immobilized for stationary portal treatments.

(6) Source marking. The tube housing assembly shall be so marked that it is possible to determine the location of the source to within 5 millimeters, and such marking shall be readily accessible for use during calibration procedures.

(7) Beam block. Contact therapy tube housing assemblies shall have a removable shield of material, equivalent in attenuation to 0.5 millimeters of lead at 100 kV, which can be positioned over the entire useful beam exit port during periods when the beam is not in use.

(8) Timer. A suitable irradiation control device shall be provided to terminate the irradiation after a preset time interval.
   1. A timer which has a display shall be provided at the treatment control panel. The timer shall have a preset time selector and an elapsed time or time remaining indicator;
   2. The timer shall be a cumulative timer which activates with an indication of “BEAM-ON” and retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to reset the elapsed time indicator;
   3. The timer shall terminate irradiation when a preselected time has elapsed, if any dose monitoring system present has not previously terminated irradiation;
   4. The timer shall permit accurate presetting and determination of exposure times as short as one second;
   5. The timer shall not permit an exposure if set at zero;
   6. The timer shall not activate until the shutter is opened when irradiation is controlled by a shutter mechanism unless calibration includes a timer error correction to compensate for mechanical lag; and
   7. Timer shall be accurate to within 1 percent of the selected value or one second, whichever is greater.

(9) Control panel functions. The control panel, in addition to the displays required by other provisions in 41.3(6), shall have:
   1. An indication of whether electrical power is available at the control panel and if activation of the X-ray tube is possible;
   2. An indication of whether X-rays are being produced;
   3. Means for indicating X-ray tube potential and current;
   4. The means for terminating an exposure at any time;
   5. A locking device which will prevent unauthorized use of the therapeutic radiation machine; and
6. For therapeutic radiation machines manufactured after July 9, 1997, a positive display of specific filter(s) in the beam.
   (10) Multiple tubes. When a control panel may energize more than one X-ray tube:
   1. It shall be possible to activate only one X-ray tube at any time;
   2. There shall be an indication at the control panel identifying which X-ray tube is activated; and
   3. There shall be an indication at the tube housing assembly when that tube is energized.
   (11) Target-to-skin distance (TSD). There shall be a means of determining the central axis TSD to within one centimeter and of reproducing this measurement to within two millimeters thereafter.
   (12) Shutters. Unless it is possible to bring the X-ray output to the prescribed exposure parameters within five seconds after the X-ray “ON” switch is energized, the beam shall be attenuated by a shutter(s) having a lead equivalency not less than that of the tube housing assembly. In addition, after the unit is at operating parameters, the shutter(s) shall be controlled by the operator from the control panel. An indication of shutter position shall appear at the control panel.
   (13) Low filtration X-ray tubes. Each therapeutic radiation machine equipped with a beryllium or other low-filtration window shall be clearly labeled as such upon the tube housing assembly and shall be provided with a permanent warning device on the control panel that is activated when no additional filtration is present, to indicate that the dose rate is very high.
    b. Facility design requirements for therapeutic radiation machines capable of operating in the range 50 kV to 500 kV. In addition to shielding adequate to meet requirements of 41.3(19), the treatment room shall meet the following design requirements:
       (1) Aural communication. Provision shall be made for continuous two-way aural communication between the patient and the operator at the control panel.
       (2) Viewing systems. Provision shall be made to permit continuous observation of the patient during irradiation and the viewing system shall be so located that the operator can observe the patient from the control panel. The therapeutic radiation machine shall not be used for patient irradiation unless at least one viewing system is operational.
       (3) Additional requirements. Treatment rooms which contain a therapeutic radiation machine capable of operating above 150 kV shall meet the following additional requirements:
          1. All protective barriers shall be fixed except for entrance doors or beam interceptors;
          2. The control panel shall be located outside the treatment room or in a totally enclosed booth, which has a ceiling, inside the room;
          3. Interlocks shall be provided such that all entrance doors, including doors to any interior booths, shall be closed before treatment can be initiated or continued. If the radiation beam is interrupted by any door opening, it shall not be possible to restore the machine to operation without closing the door and reinitiating irradiation by manual action at the control panel; and
          4. When any door referred to in 41.3(17)“b”(3)“3” is opened while the radiation machine is activated, the air kerma rate at a distance of one meter from the source shall be reduced to less than 1 mGy (100 mrad) per hour.
    c. Full calibration measurements.
       (1) Full calibration of a therapeutic radiation machine subject to 41.3(17) shall be performed by, or under the direct supervision of, a radiation therapy physicist:
          1. Before the first medical use following installation or reinstallation of the therapeutic radiation machine;
          2. At intervals not exceeding one year; and
          3. Before medical use under the following conditions:
             • Whenever quality assurance check measurements indicate that the radiation output differs by more than 5 percent from the value obtained at the last full calibration and the difference cannot be reconciled; and
             • Following any component replacement, major repair, or modification of components that could significantly affect the characteristics of the radiation beam.
        4. Notwithstanding the requirements of 41.3(17)“c”(1):
Full calibration of therapeutic radiation machines with multienergy capabilities is required only for those modes or energies that are not within their acceptable range; and

If the repair, replacement or modification does not affect all energies, full calibration shall be performed on the affected energy that is in most frequent clinical use at the facility. The remaining energies may be validated with quality assurance check procedures against the criteria in 41.3(17)“b”(3).

(2) To satisfy the requirement of 41.3(17)“c”(1), full calibration shall include all measurements recommended for annual calibration by NCRP Report 69, “Dosimetry of X-ray and Gamma Ray Beams for Radiation Therapy in the Energy Range 10 keV to 50 MeV” (1981).

(3) The registrant shall maintain a record of each calibration for the duration of the registration. The record shall include the date of the calibration, the manufacturer’s name, model number, and serial number for both the therapeutic radiation machine and the X-ray tube, the model numbers and serial numbers of the instruments used to calibrate the therapeutic radiation machine, and the signature of the radiation therapy physicist responsible for performing the calibration.

4. Periodic quality assurance checks.

   (1) Periodic quality assurance checks shall be performed on therapeutic radiation machines, subject to 41.3(17), which are capable of operation at greater than or equal to 50 kV.

   (2) To satisfy the requirement of 41.3(17)“d”(1), quality assurance checks shall meet the following requirements:

      1. The registrant shall perform quality assurance checks in accordance with written procedures established by the radiation therapy physicist; and

      2. The quality assurance check procedures shall specify the frequency at which tests or measurements are to be performed. The quality assurance check procedures shall specify that the quality assurance check shall be performed during the calibration specified in 41.3(17)“c”(1). The acceptable tolerance for each parameter measured in the quality assurance check, when compared to the value for that parameter determined in the calibration specified in 41.3(17)“c”(1), shall be stated.

      3. The cause for a parameter exceeding a tolerance set by the radiation therapy physicist shall be investigated and corrected before the system is used for patient or human research subject irradiation;

      4. Whenever a quality assurance check indicates a significant change in the operating characteristics of a system, as specified in the radiation therapy physicist’s quality assurance check procedures, the system shall be recalibrated as required in 41.3(17)“c”(1);

      5. The registrant shall use the dosimetry system described in 41.3(16)“c”(2) to make the quality assurance check required in 41.3(17)“d”;

      6. The registrant shall have the radiation therapy physicist review and sign the results of each radiation output quality assurance check within one month of test completion;

      7. The registrant shall ensure that safety quality assurance checks of therapeutic radiation machines subject to 41.3(17) are performed at intervals not to exceed one month;

      8. Notwithstanding the requirements of 41.3(17)“d”(6) and (7), the registrant shall ensure that no therapeutic radiation machine is used to administer radiation to humans unless the quality assurance checks required by 41.3(17)“d”(6) and (7) have been performed within the 30 days prior to administration;

      9. To satisfy the requirement of 41.3(17)“d”(7), safety quality assurance checks shall ensure proper operation of:

         1. Electrical interlocks at each external beam radiation therapy room entrance;

         2. The “BEAM-ON” and termination switches;

         3. Beam condition indicator lights on the access door(s), control console, and in the radiation therapy room;

         4. Viewing systems;

         5. If applicable, electrically operated treatment room doors from inside and outside the treatment room.

      10. The registrant shall maintain a record of each quality assurance check required by 41.3(17)“d”(1) and (7) for three years. The record shall include the date of the quality assurance check, the manufacturer’s name, model number, and serial number for the therapeutic radiation machine,
the manufacturer’s name, model number and serial number of the instrument(s) used to measure the radiation output of the therapeutic radiation machine, and the signature of the individual who performed the periodic quality assurance check.

e. Operating procedures.
   (1) Therapeutic radiation machines shall not be left unattended unless secured by means identified in 41.3(17) “a”(9)”5”;
   (2) When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices shall be used;
   (3) The tube housing assembly shall not be held by an individual during operation unless the assembly is designed to require such holding and the peak tube potential of the system does not exceed 50 kV. In such cases, the holder shall wear protective gloves and apron of not less than 0.5 millimeters lead equivalency at 100 kV;
   (4) A copy of the current operating and emergency procedures shall be maintained at the therapeutic radiation machine control console; and
   (5) No individual other than the patient shall be in the treatment room during exposures from therapeutic radiation machines operating above 150 kV. At energies less than or equal to 150 kV, any individual, other than the patient, in the treatment room shall be protected by a barrier sufficient to meet the requirements of 641—40.26(136C).

f. Possession of survey instrument(s). Each facility location authorized to use a therapeutic radiation machine in accordance with 41.3(17) shall have at its disposal appropriately calibrated portable monitoring equipment. As a minimum, such equipment shall include a portable radiation measurement survey instrument capable of measuring dose rates over the range 1 mrem (10 μSv) per hour to 1000 mrem (10 mSv) per hour. The survey instrument(s) shall be operable and calibrated at intervals not to exceed 12 months for the radiation measured.

41.3(18) Therapeutic radiation machines—photon therapy systems (500 kV and above) and electron therapy systems (500 keV and above).

a. Equipment requirements.
   (1) Leakage radiation outside the maximum useful beam in photon and electron modes.
      1. The absorbed dose due to leakage radiation (excluding neutrons) at any point outside the maximum-sized useful beam, but within a circular plane of radius two meters which is perpendicular to and centered on the central axis of the useful beam at the nominal treatment distance (i.e., patient plane), shall not exceed a maximum of 0.2 percent and an average of 0.1 percent of the absorbed dose on the central axis of the beam at the nominal treatment distance. Measurements shall be averaged over an area not exceeding 100 square centimeters at a minimum of 16 points uniformly distributed in the plane;
      2. Except for the area defined in 41.3(18) “a”(1)”1,” the absorbed dose due to leakage radiation (excluding neutrons) at one meter from the electron path between the electron source and the target or electron window shall not exceed 0.5 percent of the absorbed dose on the central axis of the beam at the nominal treatment distance. Measurements shall be averaged over an area not exceeding 100 square centimeters;
      3. For equipment manufactured after July 9, 1997, the neutron absorbed dose outside the useful beam shall be in compliance with International Electrotechnical Agency (IEC) Document 601-2-1 (most current revision); and
      4. For each therapeutic radiation machine, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in 41.3(18) “a”(1)”1” to “3” for the specified operating conditions. Records of leakage radiation measurements shall be maintained for inspection by the agency.

   (2) Leakage radiation through beam-limiting devices.
      1. Photon radiation. All adjustable or interchangeable beam-limiting devices shall attenuate the useful beam such that at the nominal treatment distance, the maximum absorbed dose anywhere in the
area shielded by the beam-limiting device(s) shall not exceed 2 percent of the maximum absorbed dose on the central axis of the useful beam measured in a 10-centimeter by 10-centimeter radiation field;

2.  Electron radiation. All adjustable or interchangeable electron applicators shall attenuate the radiation including, but not limited to, photon radiation generated by electrons incident on the beam-limiting device and electron applicator and other parts of the radiation head, such that the absorbed dose in a plane perpendicular to the central axis of the useful beam at the nominal treatment distance shall not exceed:
   - A maximum of 2 percent and average of 0.5 percent of the absorbed dose on the central axis of the useful beam at the nominal treatment distance. This limit shall apply beyond a line seven centimeters outside the periphery of the useful beam; and
   - A maximum of 10 percent of the absorbed dose on the central axis of the useful beam at the nominal treatment distance. This limit shall apply beyond a line two centimeters outside the periphery of the useful beam.

   (3) Measurement of leakage radiation.
   1.  Photon radiation. Measurements of leakage radiation through the beam-limiting devices shall be made with the beam-limiting devices closed and any residual aperture blocked by at least two-tenth value layers of suitable absorbing material. In the case of overlapping beam-limiting devices, the leakage radiation through each set shall be measured independently at the depth of maximum dose. Measurements shall be made using a radiation detector with an area not exceeding ten square centimeters;

   2.  Electron radiation. Measurements of leakage radiation through the electron applicators shall be made with the electron beam directed into the air and using a radiation detector with an area up to but not exceeding one square centimeter suitably protected against radiation which has been scattered from material beyond the radiation detector. Measurements shall be made using one centimeter of water equivalent buildup material.

   (4) Filters/wedges.
   1.  Each wedge filter which is removable from the system shall be clearly marked with an identification number. For removable wedge filters, the nominal wedge angle shall appear on the wedge or wedge tray (if permanently mounted to the tray). If the wedge or wedge tray is significantly damaged, the wedge transmission factor shall be redetermined;

   2.  If the absorbed dose rate information required by 41.3(18)“a”(9) relates exclusively to operation with a field-flattening filter or beam-scattering foil in place, such filter or foil shall be removable only by the use of tools;

   3.  For equipment manufactured after July 9, 1997, which utilizes a system of wedge filters, interchangeable field-flattening filters, or interchangeable beam-scattering foils:
      - Irradiation shall not be possible until a selection of a filter or a positive selection to use “no filter” has been made at the treatment control panel, either manually or automatically;
      - An interlock system shall be provided to prevent irradiation if the filter selected is not in the correct position;
      - A display shall be provided at the treatment control panel showing the wedge filter(s), interchangeable field-flattening filter(s), and interchangeable beam-scattering foil(s) in use; and
      - An interlock shall be provided to prevent irradiation if any filter or beam-scattering foil selection operation carried out in the treatment room does not agree with the filter or beam-scattering foil selection operation carried out at the treatment control panel.

   (5) Stray radiation in the useful beam. For equipment manufactured after July 9, 1997, the registrant shall determine during acceptance testing, or obtain from the manufacturer, data sufficient to ensure that X-ray stray radiation in the useful electron beam, absorbed dose at the surface during X-ray irradiation and stray neutron radiation in the useful X-ray beam are in compliance with International Electrotechnical Agency (IEC) Document 601-2-1 (most current revision).

   (6) Beam monitors. All therapeutic radiation machines subject to 41.3(18) shall be provided with redundant beam monitoring systems. The sensors for these systems shall be fixed in the useful beam during treatment to indicate the dose monitor unit rate.
1. Equipment manufactured after July 9, 1997, shall be provided with at least two independently powered integrating dose meters. Alternatively, common elements may be used if the production of radiation is terminated upon failure of any common element.

2. Equipment manufactured on or before July 9, 1997, shall be provided with at least one radiation detector. This detector shall be incorporated into a useful beam monitoring system. The detector and the system into which that detector is incorporated shall meet the following requirements:
   - Each detector shall be removable only with tools and, if movable, shall be interlocked to prevent incorrect positioning;
   - Each detector shall form part of a beam monitoring system from whose readings in dose monitor units the absorbed dose at a reference point can be calculated;
   - Each beam monitoring system shall be capable of independently monitoring, interrupting, and terminating irradiation; and

3. For equipment manufactured after July 9, 1997, the design of the beam monitoring systems shall ensure that the:
   - Malfunctioning of one system shall not affect the correct functioning of the other system(s); and
   - Failure of any element common to both systems which could affect the correct function of both systems shall terminate irradiation or prevent the initiation of radiation.

4. Each beam monitoring system shall have a legible display at the treatment control panel. For equipment manufactured after July 9, 1997, each display shall:
   - Maintain a reading until intentionally reset;
   - Have only one scale and no electrical or mechanical scale multiplying factors;
   - Utilize a design such that increasing dose is displayed by increasing numbers; and
   - In the event of power failure, the beam monitoring information required in 41.3(18)"a"(6)"4" displayed at the control panel at the time of failure shall be retrievable in at least one system for a 20-minute period of time.

7) Beam symmetry.

1. Bent-beam linear accelerators with beam-flattening filter(s) subject to 41.3(18) shall be provided with auxiliary device(s) to monitor beam symmetry;

2. The device(s) referenced in 41.3(18)"a"(7)"1" shall be able to detect field asymmetry greater than 10 percent, and shall be configured to terminate irradiation if field asymmetry cannot be maintained at 10 percent or less.

8) Selection and display of dose monitor units.

1. The preselected number of dose monitor units shall be displayed at the treatment control panel until reset manually;

2. After termination of irradiation, it shall be necessary to reset the dosimeter display before subsequent treatment can be initiated; and

3. For equipment manufactured after July 9, 1997, after termination of irradiation, it shall be necessary for the operator to reset the preselected dose monitor units before irradiation can be initiated.

4. Irradiation shall not be possible until a new selection of a number of dose monitor units has been made at the treatment control panel.

9) Air kerma rate/absorbed dose rate. For equipment manufactured after July 9, 1997, a system shall be provided from whose readings the air kerma rate or absorbed dose rate at a reference point can be calculated. (The radiation detectors specified in 41.3(18)"a"(6) may form part of this system.) In addition:

1. The dose monitor unit rate shall be displayed at the treatment control panel;

2. If the equipment can deliver under any conditions an air kerma rate or absorbed dose rate at the nominal treatment distance more than twice the maximum value specified by the manufacturer, a device shall be provided which terminates irradiation when the air kerma rate or absorbed dose rate exceeds a value twice the specified maximum. The dose rate at which the irradiation will be terminated shall be a record maintained by the registrant;
3. If the equipment can deliver under any fault condition(s) an air kerma rate or absorbed dose rate at the nominal treatment distance more than ten times the maximum value specified by the manufacturer, a device shall be provided to prevent the air kerma rate or absorbed dose rate anywhere in the radiation field from exceeding twice the specified maximum value and to terminate irradiation if the excess absorbed dose at the nominal treatment distance exceeds 400 rad (4 GY); and

4. For each therapeutic radiation machine, the registrant shall determine, or obtain from the manufacturer, the maximum value(s) specified in 41.3(18) "a"(7)"2" and "3" for the specified operating conditions. Records of these maximum value(s) shall be maintained at the installation for inspection by the agency.

(10) Termination of irradiation by the beam monitoring system or systems during stationary beam radiation therapy:

1. Each primary system shall terminate irradiation when the preselected number of dose monitor units has been detected by the system;

2. If the original design of the equipment included a secondary dose monitoring system, that system shall be capable of terminating irradiation when not more than 15 percent or 40 dose monitor units above the preselected number of dose monitor units set at the control panel has been detected by the secondary dose monitoring system; and

3. For equipment manufactured after July 9, 1997, an indicator on the control panel shall show which monitoring system has terminated irradiation.

(11) Termination switches. It shall be possible to terminate irradiation and equipment movement or go from an interruption condition to termination condition at any time from the operator’s position at the treatment control panel.

(12) Interruption switches. If a therapeutic radiation machine has an interrupt mode, it shall be possible to interrupt irradiation and equipment movements at any time from the treatment control panel. Following an interruption it shall be possible to restart irradiation by operator action without any reselection of operating conditions. If any change of a preselected value is made during an interruption, irradiation and equipment movements shall be automatically terminated.

(13) Timer. A suitable irradiation control device shall be provided to terminate the irradiation after a preset time interval.

1. A timer shall be provided which has a display at the treatment control panel. The timer shall have a preset time selector and an elapsed time indicator;

2. The timer shall be a cumulative timer which activates with an indication of “BEAM-ON” and retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to reset the elapsed time indicator;

3. The timer shall terminate irradiation when a preselected time has elapsed, if the dose monitoring systems have not previously terminated irradiation.

(14) Selection of radiation type. Equipment capable of both X-ray therapy and electron therapy shall meet the following additional requirements:

1. Irradiation shall not be possible until a selection of radiation type (X-rays or electrons) has been made at the treatment control panel;

2. The radiation type selected shall be displayed at the treatment control panel before and during irradiation;

3. An interlock system shall be provided to ensure that the equipment can principally emit only the radiation type which has been selected;

4. An interlock system shall be provided to prevent irradiation with X-rays, except to obtain a verification image, when electron applicators are fitted;

5. An interlock system shall be provided to prevent irradiation with electrons when accessories specific for X-ray therapy are fitted; and

6. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel.
(15) Selection of energy. Equipment capable of generating radiation beams of different energies shall meet the following requirements:

1. Irradiation shall not be possible until a selection of energy has been made at the treatment control panel;
2. The nominal energy value selected shall be displayed at the treatment control panel until reset manually for the next irradiation. After termination of irradiation, it shall be necessary to reset the nominal energy value selected before subsequent treatment can be initiated; and
3. Irradiation shall not be possible until the appropriate flattening filter or scattering foil for the selected energy is in its proper location.

(16) Selection of stationary beam radiation therapy or moving beam radiation therapy. Therapeutic radiation machines capable of both stationary beam radiation therapy and moving beam radiation therapy shall meet the following requirements:

1. Irradiation shall not be possible until a selection of stationary beam radiation therapy or moving beam radiation therapy has been made at the treatment control panel;
2. The mode of operation shall be displayed at the treatment control panel;
3. An interlock system shall be provided to ensure that the equipment can operate only in the mode which has been selected;
4. An interlock system shall be provided to prevent irradiation if any selected parameter in the treatment room does not agree with the selected parameter at the treatment control panel;
5. Moving beam radiation therapy shall be controlled to obtain the selected relationships between incremental dose monitor units and incremental movement. For equipment manufactured after July 9, 1997:
   - An interlock system shall be provided to terminate irradiation if the number of dose monitor units delivered in any ten degrees of rotation or one centimeter of linear motion differs by more than 20 percent from the selected value;
   - Where angle terminates the irradiation in moving beam radiation therapy, the dose monitor units delivered shall differ by less than 5 percent from the dose monitor unit value selected;
   - An interlock shall be provided to prevent motion of more than five degrees or one centimeter beyond the selected limits during moving beam radiation therapy;
   - An interlock shall be provided to require that a selection of direction be made at the treatment control panel in all units which are capable of both clockwise and counterclockwise moving beam radiation therapy.
   - Moving beam radiation therapy shall be controlled with both primary position sensors and secondary position sensors to obtain the selected relationships between incremental dose monitor units and incremental movement.
6. Where the beam monitoring system terminates the irradiation in moving beam radiation therapy, the termination of irradiation shall be as required by 41.3(18) “a”(10); and
7. For equipment manufactured after July 9, 1997, an interlock system shall be provided to terminate irradiation if movement:
   - Occurs during stationary beam radiation therapy; or
   - Does not start or stops during moving beam radiation therapy unless such stoppage is a preplanned function.

b. Facility design requirements for therapeutic radiation machines operating above 500 kV. In addition to shielding adequate to meet requirements of 41.3(19), the following design requirements are made:

1. Protective barriers. All protective barriers shall be fixed, except for access doors to the treatment room or movable beam interceptors.
2. Control panel. In addition to other requirements specified in 641—41.3(136C), the control panel shall also:
   1. Be located outside the treatment room;
2. Provide an indication of whether electrical power is available at the control panel and if activation of the radiation is possible;
3. Provide an indication of whether radiation is being produced; and
4. Include an access control (locking) device which will prevent unauthorized use of the therapeutic radiation machine.

(3) Viewing systems. Windows, mirrors, closed-circuit television or an equivalent viewing system shall be provided to permit continuous observation of the patient following positioning and during irradiation and shall be so located that the operator may observe the patient from the treatment control panel. The therapeutic radiation machine shall not be used for patient irradiation unless at least one viewing system is operational.

(4) Aural communications. Provision shall be made for continuous two-way aural communication between the patient and the operator at the control panel. The therapeutic radiation machine shall not be used for irradiation of patients unless continuous two-way aural communication is possible.

(5) Room entrances. Treatment room entrances shall be provided with warning lights in a readily observable position near the outside of all access doors, which will indicate when the useful beam is “ON” and when it is “OFF”.

(6) Entrance interlocks. Interlocks shall be provided such that all access controls are activated before treatment can be initiated or continued. If the radiation beam is interrupted by any access control, it shall not be possible to restore the machine to operation without resetting the access control and reinitiating irradiation by manual action at the control panel.

(7) Beam interceptor interlocks. If the shielding material in any protective barrier requires the presence of a beam interceptor to ensure compliance with 641—paragraphs 40.26(1)“a” and “b,” interlocks shall be provided to prevent the production of radiation, unless the beam interceptor is in place, whenever the useful beam is directed at the designated barrier(s).

(8) Emergency cutoff switches. At least one emergency power cutoff switch shall be located in the radiation therapy room and shall terminate all equipment electrical power including radiation and mechanical motion. This switch is in addition to the termination switch required by 41.3(18)“a”(11). All emergency power cutoff switches shall include a manual reset so that the therapeutic radiation machine cannot be restarted from the unit’s control console without resetting the emergency cutoff switch.

(9) Safety interlocks. All safety interlocks shall be designed so that any defect or component failure in the safety interlock system prevents or terminates operation of the therapeutic radiation machine.

(10) Surveys for residual radiation. Surveys for residual activity shall be conducted on all therapeutic radiation machines capable of generating photon and electron energies above 10 MV prior to machining, removing, or working on therapeutic radiation machine components which may have become activated due to photoneutron production.

(11) Possession of survey instrument(s). Each facility location authorized to use a therapeutic radiation machine in accordance with 41.3(18) shall have at its disposal appropriately calibrated portable monitoring equipment. As a minimum, such equipment shall include a portable radiation measurement survey instrument capable of measuring dose rates over the range 1 mrem (10 μSv) per hour to 1000 mrem (10 mSv) per hour. The survey instrument(s) shall be operable and calibrated at intervals not to exceed 12 months for the radiation measured.

c. Radiation therapy physicist support.

(1) The services of a radiation therapy physicist shall be required in facilities having therapeutic radiation machines with energies of 500 kV and above. The radiation therapy physicist shall be responsible for:
1. Full calibration(s) required by 41.3(18)“e” and protection surveys required by 41.3(16)”a”;
2. Supervision and review of dosimetry;
3. Beam data acquisition and transfer for computerized dosimetry, and supervision of its use;
4. Quality assurance, including quality assurance check review required by 41.3(18)“f”(5) of these regulations;
5. Consultation with the authorized user in treatment planning, as needed; and
6. Performing calculations/assessments regarding misadministrations.
(2) If the radiation therapy physicist is not a full-time employee of the registrant, the operating procedures required by 41.3(18)‘d’ shall also specifically address how the radiation therapy physicist is to be contacted for problems or emergencies, as well as the specific actions, if any, to be taken until the radiation therapy physicist can be contacted.

d. Operating procedures.
   (1) No individual, other than the patient, shall be in the treatment room during treatment or during any irradiation for testing or calibration purposes;
   (2) Therapeutic radiation machines shall not be made available for medical use unless the requirements of 41.3(16)‘a,” 41.3(18)‘e,” and 41.3(18)‘f” have been met;
   (3) Therapeutic radiation machines, when not in operation, shall be secured to prevent unauthorized use;
   (4) When adjustable beam-limiting devices are used, the position and shape of the radiation field shall be indicated by a light field;
   (5) If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used; and
   (6) A copy of the current operating and emergency procedures shall be maintained at the therapeutic radiation machine control console.

e. Acceptance testing, commissioning, and full calibration measurements.
   (1) Acceptance testing, commissioning, and full calibration of a therapeutic radiation machine subject to 41.3(18) shall be performed by, or under the direct supervision of, a radiation therapy physicist:
      1. Acceptance testing and commissioning shall be performed in accordance with “AAPM Code of Practice for Radiotherapy Accelerators: AAPM Report No. 47,” prepared by Radiation Therapy Task Group 45, and the manufacturer’s contractual specifications and shall be conducted before the first medical use following installation or reinstallation of the therapeutic radiation machine;
      2. Full calibration shall include measurement of all parameters listed in Appendix D of 641—Chapter 41 and shall be performed in accordance with “AAPM Code of Practice for Radiotherapy Accelerators: AAPM Report No. 47,” prepared by Radiation Therapy Task Group 45. Although it shall not be necessary to complete all elements of a full calibration at the same time, all parameters (for all energies) shall be completed at intervals not to exceed 12 calendar months, unless a more frequent interval is required by this agency.
   3. The radiation therapy physicist shall perform all elements of a full calibration necessary to determine that all parameters are within acceptable limits:
      • Whenever quality assurance check measurements indicate that the radiation output differs by more than 5 percent from the value obtained at the last full calibration and the difference cannot be reconciled. Therapeutic radiation machines with multienergy or multimode capabilities or both shall only require measurements for those modes or energies that are not within their acceptable range; and
      • Following any component replacement, major repair, or modification of components that could significantly affect the characteristics of the radiation beam. If the repair, replacement or modification does not affect all modes or energies, measurements shall be performed on the affected mode/energy that is in most frequent clinical use at the facility. The remaining energies/modes may be validated with quality assurance check procedures against the criteria in 41.3(18)‘e”(1)“3.”
   (2) The registrant shall use the dosimetry system described in 41.3(16)‘e” to measure the radiation output for one set of exposure conditions.
   (3) The registrant shall maintain a record of each calibration in an auditable form for the duration of the registration. The record shall include the date of the calibration, the manufacturer’s name, model number, and serial number for the therapeutic radiation machine, the model numbers and serial numbers of the instruments used to calibrate the therapeutic radiation machine, and the signature of the radiation therapy physicist responsible for performing the calibration.

f. Periodic quality assurance checks.
   (1) Periodic quality assurance checks shall be performed on all therapeutic radiation machines subject to 41.3(18) at intervals as specified in Appendix D of 641—Chapter 41;
(2) To satisfy the requirement of 41.3(18)“(f)”(1), quality assurance checks shall include determination of central axis radiation output and a representative sampling of periodic quality assurance checks contained in Appendix D of 641—Chapter 41. Representative sampling shall include all referenced periodic quality assurance checks at intervals not to exceed 12 consecutive calendar months;

(3) The registrant shall use a dosimetry system which has been intercompared within the previous 12 months with the dosimetry system described in 41.3(16)“(c)”(1) to make the periodic quality assurance checks required in 41.3(18)“(f)”(2);

(4) The registrant shall perform periodic quality assurance checks required by 41.3(18)“(f)”(1) in accordance with procedures established by the radiation therapy physicist;

(5) The registrant shall review the results of each period radiation output check according to the following procedures:

1. The authorized user and radiation therapy physicist shall be immediately notified if any parameter is not within its acceptable tolerance. The therapeutic radiation machine shall not be made available for subsequent medical use until the radiation therapy physicist has determined that all parameters are within their acceptable tolerances;

2. If all quality assurance check parameters appear to be within their acceptable range, the quality assurance check shall be reviewed and signed by either the authorized user or radiation therapy physicist within three treatment days; and

3. The radiation therapy physicist shall review and sign the results of each radiation output quality assurance check at intervals not to exceed one month.

(6) Therapeutic radiation machines subject to 41.3(18) shall have safety quality assurance checks of each external beam radiation therapy machine performed at intervals not to exceed one week or at longer intervals as recommended by the manufacturer;

(7) To satisfy the requirement of 41.3(18)“(f)”(6), safety quality assurance checks shall ensure proper operation of:

1. Electrical interlocks at each external beam radiation therapy room entrance;

2. Proper operation of the “BEAM-ON,” interrupt and termination switches;

3. Beam condition indicator lights on the access doors, control console, and in the radiation therapy room;

4. Viewing systems;

5. Aural systems;

6. Electrically operated treatment room door(s) from inside and outside the treatment room;

7. At least one emergency power cutoff switch. If more than one emergency power cutoff switch is installed and not all switches are tested at once, each switch shall be tested on a rotating basis. Safety quality assurance checks of the emergency power cutoff switches may be conducted at the end of the treatment day in order to minimize possible stability problems with the therapeutic radiation machine;

8. Reserved.

9. The registrant shall promptly repair any system identified in 41.3(18)“(f)”(7) that is not operating properly; and

10. The registrant shall maintain a record of each quality assurance check required by 41.3(18)“(f)”(1) and 41.3(18)“(f)”(7) for three years. The record shall include the date of the quality assurance check, the manufacturer’s name, model number, and serial number for the therapeutic radiation machine, the manufacturer’s name, model number and serial number of the instrument(s) used to measure the radiation output of the therapeutic radiation machine, and the signature of the individual who performed the periodic quality assurance check.

41.3(19) Shielding and safety design requirements.

a. Each therapeutic radiation machine subject to 41.3(17) or 41.3(18) shall be provided with such primary or secondary barriers as are necessary to ensure compliance with 641—40.15(136C) and 641—40.26(136C).

b. Facility design information for all new installations of a therapeutic radiation machine or installations of a therapeutic radiation machine of higher energy into a room not previously approved
for that energy shall be submitted for agency approval prior to actual installation of the therapeutic radiation machine. The minimum facility design information that must be submitted is contained in Appendix E of 641—Chapter 41.

41.3(20) Calibration of survey instruments.

a. The registrant shall ensure that the survey instruments used to show compliance with 641—41.3(136C) have been calibrated before first use, at intervals not to exceed 12 months, and following repair.

b. To satisfy the requirements of 41.3(20), the registrant shall:
   (1) Calibrate all required scale readings up to 1000 mrem (10 mSv) per hour with an appropriate radiation source that is traceable to the National Institute of Standards and Technology (NIST);
   (2) Calibrate at least two points on each scale to be calibrated. These points should be at approximately 1/3 and 2/3 of full scale;
   (3) Consider a point as calibrated if the indicated dose rate differs from the calculated dose rate by not more than 10 percent; and
   (4) Consider a point as calibrated if the indicated dose rate differs from the calculated dose rate by not more than 20 percent if a correction factor or graph is conspicuously attached to the instrument.

c. The registrant shall retain a record of each calibration required in 41.3(20) for three years. The record shall include:
   (1) A description of the calibration procedure; and
   (2) A description of the source used and the certified dose rates from the source, and the rates indicated by the instrument being calibrated, the correction factors deduced from the calibration data, the signature of the individual who performed the calibration, and the date of calibration.

d. The registrant may obtain the services of individuals licensed by this agency, the U.S. Nuclear Regulatory Commission, an agreement state, or a licensing state to perform calibrations of survey instruments. Records of calibrations that contain information required in 41.3(20) shall be maintained by the registrant.

[ARC 0577C, IAB 2/6/13, effective 3/13/13; ARC 1639C, IAB 10/1/14, effective 11/5/14]

641—41.4 and 41.5 Reserved.

641—41.6(136C) X-ray machines used for screening and diagnostic mammography.

41.6(1) Definitions. In addition to the definitions provided in 641—38.2(136C), 641—40.2(136C), and 641—41.1(136C), the following definitions shall be applicable to this rule.

“Accreditation body” means an entity that has been approved by FDA to accredit mammography facilities.

“Acquisition workstation” or “AWS” means the soft copy display workstation used in conjunction with the mammography unit.

“Action limits” or “action levels” means the minimum and maximum values of a quality assurance measurement that can be interpreted as representing acceptable performance with respect to the parameter being tested. Values less than the minimum or greater than the maximum action limit or level indicate that corrective action must be taken by the facility. Action limits or levels are also sometimes called control limits or levels.

“Adverse event” means an undesirable experience associated with mammography activities. Adverse events include but are not limited to:

1. Poor image quality;
2. Failure to send mammography reports within 30 days to the referring physician or in a timely manner to the self-referred patient; and
3. Use of personnel who do not meet the applicable requirements of this chapter.

“Air kerma” means kerma in a given mass of air. The unit used to measure the quantity of air kerma is the Gray (Gy). For X-rays with energies less than 300 kiloelectronvolts (keV), 1 Gray of absorbed dose is delivered by 114 roentgens (R) of exposure.

“Annually” means within 10 to 14 months of previous occurrence.
“Artifact” means a substance or structure not naturally present in living tissue but of which an authentic image appears in a radiograph.

“Automatic exposure control systems” means automatic exposure control systems, often referred to as phototimers, which are designed to automatically determine and provide the exposure needed to produce an adequate density image by sampling the X-ray intensity after passage through the patient and image receptor.

“Average glandular dose” means the energy deposited per unit mass of glandular tissue averaged over all the glandular tissue in the breast, calculated from values of entrance exposure in air, the X-ray beam quality (half-value layer), and compressed breast thickness. For a 50 percent-50 percent adipose and glandular 4.2 centimeter breast, the average glandular dose shall not exceed 300 millirad (3 mGy). See also: “Dose.”

“Breast implant” means a prosthetic device implanted in the breast.

“Calendar quarter” means any one of the following time periods during a given year: January 1 through March 31, April 1 through June 30, July 1 through September 30, or October 1 through December 31.

“Category 1” means medical education activities that have been designated as Category 1 by the Accreditation Council for Continuing Medical Education (ACCME), the American Osteopathic Association (AOA), a state medical society, or an equivalent organization.

“Certificate” means the certificate described in 41.6(2)”(a”)(2).

“Certification” means the process of approval of a facility by the FDA or this agency to provide mammography services.

“Clinical image” means a mammogram.

“Compression device” means a firm plastic paddle used to help hold the breast stationary and eliminate blurring due to motion, to help separate structures within the breast, and to decrease the thickness of breast tissue, minimizing the amount of radiation used and the amount of scattered radiation reaching the film.

“Computed radiography mammography” means a type of digital mammography in which the digital image receptor must be removed from the X-ray unit for the image to be read and processed by a separate image receptor reader.

“Consumer” means an individual who chooses to comment or complain in reference to a mammography examination, including the patient or representative of the patient (e.g., family member or referring physician).

“Contact hour” means an hour of training received through direct instruction.

“Continuing education unit” or “continuing education credit” means one contact hour of training.

“Craniocaudal view” means one of two routine views for mammography. The detector system is placed caudad to (below) the breast and the vertical X-ray beam is directed from cranial to caudal (downward) through the breast.

“Dedicated mammography equipment” means X-ray systems designed specifically for breast imaging, providing optimum imaging geometry, a device for breast compression and low dose exposure that can generate reproducible images of high quality.

“Digital breast tomosynthesis” or “DBT” means mammography that uses reconstructions to create three-dimensional images of the breasts.

“Direct detector technology” means a digital mammogram captured using a material which converts the X-ray energies directly to an electric signal.

“Direct instruction” means:

1. Face-to-face interaction between instructor(s) and student(s), as when the instructor provides a lecture, conducts demonstrations, or reviews student performance; or

2. The administration and correction of student examinations by an instructor(s) with subsequent feedback to the student(s).

“Direct supervision” means that:
1. During joint interpretation of mammograms, the supervising interpreting physician reviews, discusses, and confirms the diagnosis of the physician being supervised and signs the resulting report before it is entered into the patient’s records; or

2. During the performance of a mammography examination or survey of the facility’s equipment and quality assurance program, the supervisor is present to observe and correct, as needed, the performance of the individual being supervised who is performing the examination or conducting the survey.

“Dose” means the amount of energy deposited per unit mass of tissue due to X-radiation. The newer unit of absorbed dose is the Gray: 1 Gray=1 Joule of energy deposited per kilogram of tissue. The older unit of absorbed dose is the rad: 1 rad=0.01 Gray, 1 centiGray, or 10 milliGray.

“EQUIP” means Enhancing Quality Using the Inspection Program and uses inspection questions related to the image quality regulations of MQSA to emphasize the significance of continuous clinical image quality.

“Exposure” means the amount of X-radiation, quantitated by measuring the amount of ionization in air caused by the radiation. The units of exposure are Coulombs of charge ionized per kilogram of air. The older unit of exposure is the Roentgen: 1 Roentgen=2.58 × 10E-4 Coulombs of charge per kilogram of air.

“Facility” means a hospital, outpatient department, clinic, radiology practice, mobile unit, office of a physician, or other facility that conducts mammography activities, including the following: operation of equipment to produce a mammogram, initial interpretation of the mammogram, and maintaining viewing conditions for that interpretation. This term does not include a facility of the Department of Veterans Affairs.

“FDA” means the Food and Drug Administration.

“First allowable time” means the earliest time a resident physician is eligible to take the diagnostic radiology boards from an FDA-designated certifying body. The “first allowable time” may vary with the certifying body.

“Full field digital mammography” or “FFDM” means radiographic imaging of the breast using a digital image receptor with minimum dimensions of 18×23 cm to allow imaging the average size breast in a single exposure.

“Grids” means a set of thin lead strips spaced close to one another, interspaced by carbon fiber for mammographic grids. The grid is placed between the breast and the screen-film image receptor to reduce scattered radiation reaching the image receptor.

“Image noise.” See “Radiographic noise.”

“Image receptor support device” means, for mammography X-ray systems, that part of the system designed to support the image receptor during a mammographic examination and to provide a primary protective barrier.

“Inspection” means to assess and determine compliance with regulations.

“Irterpreting physician” means a licensed radiologist who interprets mammograms and who meets the requirements set forth in 41.6(3) “a.”

“Kerma” means the sum of the initial energies of all the charged particles liberated by uncharged ionizing particles in a material of given mass.

“Laterality” means the designation of either the right or left breast.

“Lead interpreting physician” means the interpreting physician assigned the general responsibility for ensuring that a facility’s quality assurance program meets all of the requirements of this chapter. The administrative title and other supervisory responsibilities of the individual, if any, are left to the discretion of the facility.

“Mammogram” means a radiographic image produced through mammography.

“Mammographic modality” means a technology for radiography of the breast. Examples are screen-film mammography, full field digital mammography and digital breast tomosynthesis.

“Mammography” means radiography of the breast but, for the purposes of 641—41.6(136C), does not include:
1. Radiography of the breast performed during invasive interventions for localization or biopsy procedures; or
2. Radiography of the breast performed with an investigational mammography device as part of a scientific study conducted in accordance with FDA investigational device exemption regulations; or
3. Radiography of the breast performed as part of either a breast localization procedure or a post-stereotactic clip placement localization procedure.

"Mammography equipment evaluation" means an on-site assessment of the mammography unit or review workstation by a medical physicist for the purpose of making a preliminary determination as to whether the equipment meets all of the applicable standards.

"Mammography medical outcomes audit" means a systematic collection of mammography results and the comparison of those results with outcomes data.

"Mammography unit(s)" means an assemblage of components for the production of X-rays for use during mammography including, at a minimum: an X-ray generator, an X-ray control, a tube housing assembly, a beam limiting device, and the supporting structures for these components.

"Mean optical density" means the average of the optical densities measured using phantom thicknesses of 2, 4, and 6 centimeters with values of kilovolt peak (kVp) clinically appropriate for those thicknesses.

"Medical physicist" means a person trained in evaluating the performance of mammography equipment and facility quality assurance programs and who meets the qualifications for a medical physicist set forth in 41.6(3) "c."

"Mediolateral view" means one of the routine views for mammography in addition to the craniocaudal view. The detector system is placed lateral to the breast and the horizontal X-ray beam is directed from medial to lateral aspect through the breast.


"Multi-reading" means two or more physicians, at least one of whom is an interpreting physician, interpreting the same mammogram. A radiologist may count the current mammographic examination and one prior mammographic examination, provided the radiologist was not the interpreter of the prior mammographic examination. A separate tally shall be kept for the prior examinations.

"Oblique mediolateral view" means one of the standard two views of the breast. The detector system is angled 30-60 degrees from horizontal so that the detector system is parallel to the pectoral muscle and the corner of the detector system fits comfortably into the axilla. The X-ray beam is directed from the supero-medial to the infero-lateral aspect of the breast.

"Patient" means any individual who undergoes a mammography evaluation in a facility, regardless of whether the person is referred by a physician or is self-referred.

"Phantom" means an artificial test object used to simulate radiographic characteristics of compressed breast tissue and containing components that radiographically model aspects of breast disease and cancer.

"Phantom image" means a radiographic image of a phantom.

"Physical science" means physics, chemistry, radiation science (including medical physics and health physics), and engineering.

"Positive mammogram" means a mammogram that has an overall assessment of findings that are either "suspicious" or "highly suggestive of malignancy."

"Provisional certification" means the six-month certification time period in which a facility has to complete the accreditation/certification process.

"Qualified instructor" means individuals whose training and experience adequately prepare them to carry out specified training assignments. Interpreting physicians, radiologic technologists, or medical physicists who meet the requirements of 41.6(3) would be considered qualified instructors in their respective areas of mammography. Radiological technologists who meet the requirements of 41.6(3) and have passed a state-approved mammography examination such as the examination given by the American Registry of Radiography Technologists would be considered qualified instructors in their respective areas of mammography. The examination would include, but not necessarily be limited to: breast anatomy and physiology, positioning and compression, quality assurance/quality control
techniques, and imaging of patients with breast implants. Other examples of individuals who may be qualified instructors for the purpose of providing training to meet the regulations of this chapter include, but are not limited to, instructors in a post-high school training institution and manufacturers’ representatives.

“Quality control technologist” means an individual meeting the requirements of 41.6(5)“a”(4) who is responsible for those quality assurance responsibilities not assigned to the lead interpreting physician or to the medical physicist.

“Radiographic equipment” means X-ray equipment used for the production of static X-ray images.

“Radiologic technologist” means an individual specifically trained in the use of radiographic equipment and in the positioning of patients for radiographic examinations and who meets the requirements set forth in 41.6(3)“b.”

“Radiologist continuing experience” means the number of mammograms interpreted by a radiologist in the past 24-month period. For the purpose of counting, a radiologist may count the current mammographic examination and one prior mammographic examination, provided the radiologist was not the interpreter of the prior mammographic examination. A separate tally shall be kept for the prior examinations.

“Reinstatement” means the process of recertification of a facility that has lost or voluntarily given up previous accreditation/certification.

“Review workstation” or “RWS” means soft copy display device intended for use in mammography interpretations.

“Screen-film mammography” means mammography performed with high-detailed intensifying screen(s) in close contact with the film.

“Screening mammography” means X-ray breast examination of asymptomatic individuals in an attempt to detect breast cancer when it is small, nonpalpable, and confined to the breast.

“Serious adverse event” means an adverse event that may significantly compromise clinical outcomes or an adverse event for which a facility fails to take appropriate corrective action in a timely manner.

“Serious complaint” means a report of a serious adverse event.

“Standard breast” means a 4.2 centimeter (cm) thick compressed breast consisting of 50 percent glandular and 50 percent adipose tissue.

“Survey” means an on-site physics consultation and evaluation of a facility quality assurance program performed by a medical physicist.

“Time cycle” means the film development time.

“Traceable to a national standard” means an instrument is calibrated at either the National Institute of Standards and Technology (NIST) or at a calibration laboratory that participates in a proficiency program with NIST at least once every two years and the results of the proficiency test conducted within 24 months of calibration show agreement within ±3 percent of the national standard in the mammography energy range.

“Written report” means interpreting physician’s technical narrative of a mammography evaluation.

“Written statement” means interpreting physician’s description of a mammography examination written in lay terms.

41.6(2) Registration and application standards and requirements.

a. Registration and certificates.

(1) Each radiation machine used to perform mammography shall be registered according to 641—subrule 39.3(2).

(2) A certificate issued by the FDA or this agency is required for lawful operation of all mammography facilities subject to the provisions of this subrule. To obtain a certificate from the FDA or this agency, facilities are required to meet the quality standards in 641—41.6(136C) and to be accredited and approved by an approved accreditation body.

b. Each facility wishing to perform mammography shall apply for authorization by providing or verifying the following information for each mammography machine:
(1) The mammography unit meets the criteria for agency-approved mammography accreditation bodies.
(2) The mammography equipment and facility meet the general requirements of these rules for radiation machines.
(3) The radiation machine is specifically designed to perform mammography.
(4) The radiation machine is used according to these rules on patient radiation exposure and radiation dose levels.
(5) The radiation machine is operated by individuals meeting the requirements of this subrule.
(6) The entire mammography system is evaluated at least annually by a medical physicist.
(7) The equipment, personnel, procedures, and records are evaluated annually by a physician consultant.
(8) Provisional or reinstatement certification. A new facility beginning operation after September 30, 1994, is eligible to apply for provisional or reinstatement certification. This will enable the facility to perform mammography and to obtain the clinical images needed to complete the accreditation process. To apply for and receive provisional or reinstatement certification, a facility must meet the requirements of 641—173.31(17A). Provisional or reinstatement certification shall be effective for up to six months from the date of issuance and cannot be renewed. The facility may apply for one 90-day extension.
   c. Suspension, revocation, or denial of mammography certification.
      (1) Mammography certification may be suspended or revoked with cause if any facility or machine does not meet one or more of the standards of these rules, will not permit inspections or provide access to records or information in a timely fashion, or has been guilty of misrepresentation in obtaining the certification.
      (2) The facility shall have opportunity for a hearing in connection with a denial, suspension or revocation of mammography certification in accordance with 641—Chapter 173.
      (3) An emergency order suspending or revoking certification may be issued in accordance with 641—173.31(17A) if the agency finds the radiation unit or facility violates rules that seriously affect the health, safety, and welfare of the public. An opportunity for hearing shall be held within 20 working days after the issuance of the order. The order shall be effective during the proceedings.
      (4) If certification is revoked, the radiation machine shall not be used for mammography until reinstated.
   d. Reinstatement of mammography certification after revocation.
      (1) An application for reinstatement shall be submitted and processed as an initial application. Appropriate corrective actions must be submitted with the application.
      (2) The agency shall inspect the radiation machine within 60 days of the approved reinstatement application.
      (3) A full certificate shall be issued only after the agency has inspected the radiation machine and determined that it meets the requirements of these rules.
   e. Inspections. The agency shall conduct an inspection of each radiation machine no later than 14 months after initial mammography certification and at least annually thereafter.
   f. An application for authorization shall be submitted to the department and processed for agency approval. A mammography authorization is effective for three years.
   g. A phantom image taken with the authorized unit(s) shall be reviewed at the time of annual inspection by the agency.
   h. Federal mammography regulations. All Iowa facilities performing mammography shall comply with the applicable regulations found in 21 CFR Part 900 which has an effective date of April 28, 1999. Persons certified to perform mammography in Iowa shall be responsible for ensuring compliance with the appropriate CFR regulations or Iowa administrative rules, whichever are more stringent.
   i. Review workstation (RWS) requirements.
      (1) RWS used for final interpretation of mammogram images must meet the following criteria:
1. Have 5 megapixel resolution; or
2. Be approved by the United States Food and Drug Administration 510K process and be intended for digital mammography use.

(2) The workstation must have a quality control program substantially the same as that outlined by the mammography unit manufacturer’s quality control manual, that outlined by the RWS monitor manufacturer’s quality control manual or the quality control program outlined by an FDA-approved accrediting body.

41.6(3) Mammography personnel. The following requirements apply to all personnel involved in any aspect of mammography, including the production, processing, and interpretation of mammograms and related quality assurance activities:

a. Interpreting physicians. All radiologists interpreting mammograms shall meet the following qualifications:

(1) Initial qualifications. Unless the exemption in 41.6(3)“a”(3)“1” applies, before beginning to interpret mammograms independently, the interpreting radiologist shall:
   1. Be licensed to practice medicine in Iowa;
   2. Either:
      • Be certified in an appropriate specialty area by a body determined by FDA to have procedures and requirements adequate to ensure that physicians certified by the body are competent to interpret radiological procedures, including mammography; or
      • Have had at least three months of documented formal training in the interpretation of mammograms and in topics related to mammography. The training shall include instruction in radiation physics, including radiation physics specific to mammography, radiation effects, and radiation protection. The mammographic interpretation component shall be under the direct supervision of a radiologist who meets the requirements of 41.6(3)“a”; and
   3. Have a minimum of 60 hours of documented medical education in mammography, which shall include: instruction in the interpretation of mammograms and education in basic breast anatomy, pathology, and physiology, technical aspects of mammography, and quality assurance and quality control in mammography. All 60 of these hours shall be Category 1 and at least 15 of the Category 1 hours shall have been acquired within the 36 months immediately prior to the date that the radiologist qualifies as an interpreting physician. Hours spent in residency specifically devoted to mammography will be considered as equivalent to Category 1 continuing medical education credits and will be accepted if documented in writing by the appropriate representative of the training institution;
   4. Unless the exemption in 41.6(3)“a”(3)“2” applies, have interpreted or multi-read at least 240 mammographic examinations within the six-month period immediately prior to the date that the radiologist qualifies as an interpreting physician. This interpretation or multi-reading shall be under the direct supervision of an interpreting physician; and
   5. Before an interpreting physician may begin independently interpreting mammograms produced by a new mammographic modality other than the modality in which the initial training was received, the interpreting physician shall have at least eight hours of training in the new mammographic modality.

(2) Continuing experience and education. All interpreting physicians shall maintain their qualifications by meeting the following requirements:

1. Following the second anniversary date of the end of the calendar quarter in which the requirements of 41.6(3)“a”(1) were completed, the interpreting physician shall have read or multi-read at least 960 mammographic examinations during the 24 months immediately preceding the date of the facility’s annual MQSA inspection, during the 24-month period ending on the last day of the calendar quarter preceding the inspection, or during any 24-month period between the two. The facility will choose one of these dates to determine the 24-month period.
2. Following the third anniversary date of the end of the calendar quarter in which the requirements of 41.6(3)“a”(1) were completed, the interpreting physician shall have taught or completed at least 15 Category 1 continuing education units in mammography during the 36 months immediately preceding the date of the facility’s annual MQSA inspection, during the 36-month period ending on the last day
of the calendar quarter preceding the inspection, or during any 36-month period between the two. The facility will choose one of these dates to determine the 36-month period.

3. Units earned through teaching a specific course can be counted only once towards the 15 required by 41.6(3) “a” (2) “2” even if the course is taught multiple times during the previous 36 months.

4. A current state of Iowa medical license must be in effect whenever mammography interpretations are performed by the physician.

(3) Exemptions.

1. Those physicians who qualified as interpreting physicians under 41.6(3) “a” or FDA interim regulations prior to April 28, 1999, are considered to have met the initial requirements of 41.6(3) “a.” They may continue to interpret mammograms provided they continue to meet the licensure requirements of 41.6(3) “a” (1) “1” and the continuing experience and education requirements of this subrule.

2. Physicians who have interpreted or multi-read at least 240 mammographic examinations under the direct supervision of an interpreting physician in any six-month period during the last two years of a diagnostic radiology residency and who become appropriately board certified at the first allowable time, as defined by an eligible certifying body, are otherwise exempt from 41.6(3) “a” (1) “4.”

(4) Reestablishing qualifications. Interpreting physicians who fail to maintain the required continuing experience or continuing education requirements shall reestablish their qualifications before resuming the independent interpretation of mammograms, as follows:

1. Interpreting physicians who fail to meet the continuing experience requirements of 41.6(3) “a” (2) “1” shall:
   - Interpret or multi-read at least 240 mammographic examinations under the direct supervision of an interpreting physician, or
   - Interpret or multi-read a sufficient number of mammographic examinations, under the direct supervision of an interpreting physician, to bring the physician’s total to at least 960 examinations for the prior 24 months, whichever is less. The interpretations required under 41.6(3) “a” (4) “1” shall be done within the six months immediately prior to resuming independent interpretation. Consecutive or back-to-back requalification of mammography personnel, due to failure to meet continuing education or experience requirements, will be allowed once without proof of extenuating circumstances. This agency will determine the validity of such proof and render a decision after review of all pertinent information. Those individuals who are denied requalification will be allowed to resubmit for requalification following a 90-day waiting period.

2. Interpreting physicians who fail to meet the continuing education requirements of 41.6(3) “a” (2) “2” shall obtain a sufficient number of additional Category 1 continuing medical education credits in mammography to bring their total up to the required 15 credits in the previous 36 months before resuming independent interpretation.

b. Radiologic technologists. All mammographic examinations shall be performed by general radiographers who meet the following general requirements, mammography requirements, and continuing education and experience requirements:

(1) General requirements. Be permitted to operate as a general radiographer in Iowa; and

(2) Mammography requirements. Have qualified as a radiologic technologist under 41.6(3) “b” before April 28, 1999, or have completed at least 40 contact hours of documented training specific to mammography under the supervision of a qualified instructor after successful completion of a formal radiography training program. The hours of documented training shall include, but not necessarily be limited to:
   - Training in breast anatomy and physiology, positioning and compression, quality assurance/quality control techniques, and imaging of patients with breast implants;
   - The performance of a minimum of 25 examinations under the direct supervision of an individual qualified under 41.6(3) “b” ; and

3. Before a radiologic technologist may begin independently performing mammographic examinations using a mammographic modality other than one of those for which the technologist received training under 41.6(3) “b” (2) “3,” the technologist shall have at least eight hours of continuing
education units in the new modality. The eight hours may not be derived from the supervised examination of patients; and

(3) Continuing education requirements.
   1. Following the third anniversary date of the end of the calendar quarter in which the requirements of 41.6(3)“b”(1) and (2) were completed, the radiologic technologist shall have taught or completed at least 15 continuing education units in mammography during the 36 months immediately preceding the date of the facility’s annual MQSA inspection, during the 36-month period ending on the last day of the calendar quarter preceding the inspection, or during any 36-month period between the two. The facility will choose one of these dates to determine the 36-month period.
   2. Units earned through teaching a specific course can be counted only once towards the 15 required in 41.6(3)“b”(3)“1” even if the course is taught multiple times during the previous 36 months.
   3. Requalification. A radiologic technologist who fails to meet the continuing education requirements of 41.6(3)“b”(3)“1” shall obtain a sufficient number of continuing education units in mammography to bring the total up to at least 15 in the previous 36 months. The continuing education for requalification cannot be obtained by performing supervised mammography examinations. The technologist may not resume performing unsupervised mammography examinations until the continuing education requirements are completed.
   4. An Iowa permit to practice radiography must be in effect whenever mammogram procedures are performed by the radiologic technologist.
   5. Only 50 percent of the total required mammography continuing education hours may be obtained through presenting, or acting as a trainer for, a continuing education or training program.

(4) Continuing experience requirements.
   1. Following the second anniversary date on which the requirements of 41.6(3)“b”(1) and (2) were completed, the radiologic technologist shall have performed a minimum of 200 mammography examinations during the 24 months immediately preceding the date of the facility’s annual inspection, during the 24-month period ending on the last day of the calendar quarter preceding the inspection, or during any 24-month period between the two. The facility will choose one of these dates to determine the 24-month period.
   2. Requalification. Radiologic technologists who fail to meet the continuing experience requirements of this subrule shall perform a minimum of 25 mammography examinations under the direct supervision of a qualified radiologic technologist before resuming the performance of unsupervised mammography examinations.
   5. Consecutive or back-to-back requalification of mammography personnel, due to failure to meet continuing education or experience requirements, will be allowed once without proof of extenuating circumstances. This agency will determine the validity of such proof and render a decision after review of all pertinent information. Those individuals who are denied requalification will be allowed to resubmit for requalification following a 90-day waiting period.

   c. Medical physicists. All medical physicists conducting surveys of mammography facilities and providing oversight of the facility quality assurance program under 41.6(3)“c”(2) shall meet the following:
      (1) Initial qualifications.
         1. Be Iowa approved; and
         2. Have a master’s degree or higher in a physical science from an accredited institution, with no less than 20 semester hours or 30 quarter hours of college undergraduate or graduate level physics; and
         3. Have 20 contact hours of documented specialized training in conducting surveys of mammography facilities; and
         4. Have at least eight hours of training in surveying units of a new modality other than the one for which the physicist received training to qualify under 41.6(3)“c”(1)“3” before independently performing the new mammographic modality; and
         5. Have experience conducting surveys in at least one mammography facility and have a total of at least 10 mammography units. No more than one survey of a specific unit within a period of 60 days can be counted towards the total mammography unit survey requirement. After April 28, 1999, experience
conducting surveys must be acquired under the direct supervision of a medical physicist who meets all the requirements of this subrule; or

(2) Alternative initial qualifications.
   1. Have qualified as a medical physicist under FDA interim regulations and have retained that qualification by maintenance of the active status of any licensure, approval, or certification required under the interim regulations; and
   2. Prior to April 28, 1999, have:
      • A bachelor’s degree or higher in a physical science from an accredited institution with no less than 10 semester hours or equivalent of college undergraduate or graduate level physics.
      • Forty contact hours of documented specialized training in conducting surveys of mammography facilities.
      • Experience conducting surveys in at least one mammography facility and have a total of at least 20 mammography units. No more than one survey of a specific unit within a period of 60 days can be counted towards the total mammography unit survey requirement. The training and experience requirements must be met after fulfilling the degree requirement.
      • At least eight hours of training in surveying units of a new modality other than the one for which the physicist received training to qualify under 41.6(3)“c”(1)”3” before independently performing the new mammographic modality.

(3) Continuing qualifications.
   1. Continuing education. Following the third anniversary date on which the requirements of 41.6(3)“c”(1) or (2) were completed, the medical physicist shall have taught or completed at least 15 continuing education units in mammography during the prior 36 months, during the 36-month period ending on the last day of the previous calendar quarter, or during any 36-month period between the two. The facility shall choose one of these dates to determine the 36-month period. Units earned through teaching a specific course shall be counted only once towards the required 15 units in a 36-month period, even if the course is taught multiple times during the 36 months.
   2. Continuing experience. Following the second anniversary date on which the requirements of this subrule were completed, the medical physicist shall have surveyed at least two mammography facilities and a total of at least 6 mammography units during the prior 24 months, during the 24-month period ending on the last day of the previous calendar quarter, or during any 24-month period between the two. The facility shall choose one of these dates to determine the 24-month period. No more than one survey of a specific facility within a 10-month period or a specific unit within a period of 60 days shall be counted towards this requirement.
   3. Continuing qualifications must be met whenever medical physics services are provided by the medical physicist.

(4) Reestablishing qualifications. Medical physicists who fail to maintain the required continuing qualifications of this subrule may not perform the MQSA surveys without the supervision of a qualified medical physicist. Before independently surveying another facility, medical physicists must reestablish their qualifications as follows:
   1. Medical physicists who fail to meet the continuing education requirements of this subrule shall obtain a sufficient number of continuing education units to bring their total units up to the required 15 in the previous three years.
   2. Medical physicists who fail to meet the continuing experience requirements of this subrule shall complete a sufficient number of surveys under the direct supervision of a medical physicist who meets the qualifications of this subrule to bring their total surveys up to the required two facilities and 6 units in the previous 24 months. No more than one survey of a specific unit within a period of 60 days can be counted towards the total mammography unit survey requirement.

\[d. \textit{Retention of personnel records.}\] Facilities shall maintain records to document the qualifications of all personnel who worked at the facility as interpreting physicians, general radiographers, or medical physicists. These records must be available for review by the MQSA inspectors. Records of personnel no longer employed by the facility should not be discarded until the next annual inspection has been
completed and the agency has determined that the facility is in compliance with the MQSA personnel requirements.

41.6(4) Obtaining and preserving records.

a. The facility performing the current mammography examination must make all reasonable efforts to obtain the patient’s recent mammography records, including original images or films, copies of written reports prepared by interpreting physicians, and other relevant information pertinent to previous mammograms that might be available from other facilities, for comparison with the current mammography records.

b. The facility must make, for each patient, a written report of each mammography examination performed. This report shall include:

   (1) The date the mammography procedure was performed.
   (2) The date of the interpretation.
   (3) The name of the interpreting physician.
   (4) The name of the patient and an additional patient identifier.
   (5) A description of the procedures performed.
   (6) The name of the referring physician (if any) or other physician (if any) identified by the patient to receive the interpreting physician’s written report.
   (7) The date the interpreting physician’s written report was sent to the appropriate physician or patient.
   (8) A separate and distinct section entitled, “Assessment” with the appropriate assessment term. One of the following terms in quotations or an approved equivalent must be included in the assessment:
      1. “Negative”: Nothing to comment upon (if the interpreting physician is aware of clinical findings or symptoms, despite the negative assessment, these shall be explained).
      2. “Benign”: Also a negative assessment.
      3. “Probably benign”: Finding(s) has a high probability of being benign.
      4. “Suspicious”: Finding(s) without all the characteristic morphology of breast cancer but indicating a definite probability of being malignant.
      5. “Highly suggestive of malignancy”: Finding(s) has a high probability of being malignant.
      6. “Incomplete: Need additional imaging evaluation” shall be assigned as an assessment in cases where no final assessment category can be assigned due to incomplete workup, and reasons why no assessment can be made shall be stated by the interpreting physician.

   (9) Recommendations made to the health care provider about what additional actions, if any, should be taken. All clinical questions raised by the referring health care provider shall be addressed in the report to the extent possible, even if the assessment is negative or benign.

   (10) Information on a patient’s breast density, as categorized by an interpreting physician at the facility based on standards as defined in nationally recognized guidelines or systems for breast imaging reporting of mammography screening, including the breast imaging reporting and data system of the American College of Radiology.

   c. Preservation of records.

   (1) The facility must provide satisfactory assurances (as documented in its medical records) that the images or films of the first and subsequent mammography procedures and the related written reports of the interpreting physician for each patient are either placed in the patient’s medical record kept by the facility or sent for placement in the patient’s medical record as directed by the patient’s physician or the patient.

   (2) Records retained by the facility must be retained for at least 60 calendar months following the date of service, as long as the patient continues consecutive mammograms. If no additional mammograms of the patient are performed, the records must be retained for at least ten years.

   (3) If the facility should cease to exist before the end of the retention period, the records must be transferred to the patient or patient’s physician or other mammographic facility.

   (4) The facility shall upon request by, or on behalf of, the patient, permanently or temporarily, transfer the original mammograms and copies of the patient’s reports to a medical institution, or to a physician or health care provider of the patient, or to the patient directly.
(5) Any fee charged to the patient for providing the services in subparagraph (4) above shall not exceed the documented costs associated with this service.

d. Communication of results to the patient. Each facility shall maintain a system to ensure that the results of each mammographic examination are communicated in lay terms to each patient in a time period not to exceed 30 days from the date of the mammography examination. If assessments are “Suspicious” or “Highly suggestive of malignancy” and the patient has not named a health care provider, the facility shall make reasonable attempts to ensure that the results are communicated to the patient as soon as possible.

(1) As soon as possible, but no later than 30 days from the date of the mammography examination, patients who do not name a health care provider to receive the mammography report shall be sent the report described in 41.6(4)“e”(1) in addition to a written notification of results in lay terms.

(2) Each facility that accepts patients who do not have a primary care provider shall maintain a system for referring such patients to a health care provider when clinically indicated.

(3) The breast density information as designated in the report pursuant to 41.6(4)“b”(10) shall be included in the patient lay letter with a reference to a department-accepted site or document where the patient can obtain more information about breast density. For patients categorized as having heterogeneously dense breasts or extremely dense breasts, or an equivalent determination by another nationally recognized density gradient system, the notification to the patient shall include evidence-based information on dense breast tissue, the increased risk associated with dense breast tissue, and the effects of dense breast tissue on screening mammography and shall be stated in language appropriate for the facility’s patient population.

e. Communication of results to health care providers. When the patient has a referring health care provider or the patient has named a health care provider, the facility shall:

(1) Provide a written report of the mammography examination, including all of the items listed in 41.6(4)“b,” to the health care provider as soon as possible, but no later than 30 days from the date of the examination, and

(2) If the assessment is “Suspicious” or “Highly suggestive of malignancy,” make reasonable attempts to communicate with the health care provider as soon as possible or, if the health care provider is unavailable, to a responsible designee of the health care provider.

f. Mammographic image identification. Each mammographic image shall have the following information indicated on it in a permanent, legible, and unambiguous manner and placed so as not to obscure anatomic structures:

(1) Name of patient and an additional patient identifier.

(2) Date of examination.

(3) View and laterality. This information shall be placed on the image in a position near the axilla. Standardized codes specified by the accreditation body and approved by the FDA shall be used to identify view and laterality.

(4) Facility name and location. At a minimum, the location shall include the city, state, and ZIP code of the facility.

(5) Technologist identification.

(6) Mammography unit identification, if there is more than one unit in the facility.

41.6(5) Quality assurance program.

a. The facility shall ensure that the facility has an equipment quality assurance program specific to mammography and covering all components of the system to ensure consistently high-quality images with minimum patient exposure. Responsibility for the quality assurance program and for each of its elements shall be assigned to individuals who are qualified for their assignments and who shall be allowed adequate time to perform those duties.

(1) Lead interpreting physician. The facility shall identify a lead interpreting physician who shall have the general responsibility of ensuring that the quality assurance program, EQUIP included, meets all requirements of these rules. No other individual shall be assigned or shall retain responsibility for quality assurance tasks unless the lead interpreting physician has determined that the individual’s qualifications for, and performance of, the assignment are adequate.
(2) Interpreting physicians. All interpreting physicians interpreting mammograms for the facility shall:
   1. Follow the facility procedures for corrective action when the images they are asked to interpret are of poor quality, and
   2. Participate in the facility’s medical outcomes audit program.
(3) Medical physicist. Each facility shall have the services of a medical physicist available to survey mammography equipment and oversee the equipment-related quality assurance practices of the facility. At a minimum, the medical physicist(s) shall be responsible for performing the surveys and mammography equipment evaluations and providing the facility with the applicable reports.
(4) Quality control technologist. Responsibility for all individual tasks within the quality assurance program not assigned to the lead interpreting physician or the medical physicist shall be assigned to a quality control technologist(s). The tasks are to be performed by the quality control technologist or by other personnel qualified to perform the tasks. When other personnel are utilized for these tasks, the quality control technologist shall ensure that the tasks are completed in such a way as to meet the requirements of 41.6(5) “e” through “j.”
   b. The facility shall ensure that a general review of the program is conducted at least annually and have available the services of a qualified medical physicist who is capable of establishing and conducting the program.
   c. Under the direction of the lead interpreting physician, the medical physicist shall have responsibility for establishing and conducting the equipment quality assurance program. The program shall include:
      (1) Conducting or training others to conduct equipment performance monitoring functions.
      (2) Analyzing the monitoring results to determine if there are any problems requiring correction.
      (3) Ensuring that the facility has procedures in place for carrying out or arranging for the necessary corrective actions as well as for the calibrations and other preventive maintenance.
   d. Calibration of equipment. All variable parameters of the equipment shall be calibrated:
      (1) When the equipment is first installed.
      (2) After any major changes or replacement of parts.
      (3) At least annually during use based on recommendations of the mammography imaging medical physicist.
   e. When quality assurance tests indicate that calibration is needed.
      (4) Performance monitoring. The facility shall routinely ensure that the performance of the mammography system is monitored. The parameters to be monitored shall include all testing as outlined in the manufacturer’s mammography unit’s quality control manual and the RWS quality control requirements of 41.6(2) “i” (2).
      f. Availability and use of technique charts that shall include an indication of the kV-target-filter combination to be used with each image receptor.
      g. Evaluation of monitoring results. FFDM and DBT mammography units must comply with the quality control test requirements outlined by the performance criteria in the appropriate manufacturer’s quality control manual.
      (1) Standards of image quality giving acceptable ranges of values for each of the parameters tested shall be established to aid in the evaluation. The standards of image quality related to dose shall include a requirement that the mean glandular dose for one craniocaudal view of a 4.2 cm compressed breast (50 percent adipose/50 percent glandular) or equivalent phantom shall not exceed 300 millirad for full field digital units.
      (2) The monitoring results shall be compared routinely by the facility staff to the standards of image quality in 41.6(5) “j.” If any test results fall outside the performance criteria range listed for the unit, specific actions as directed in the appropriate quality control manual shall be followed.
   h. Medical outcomes audit. Each facility shall establish a system for reviewing outcome data from all mammography performed, including follow-up on the disposition of positive mammograms and correlation of surgical biopsy results with the interpreting physician’s findings. This program shall be designed to ensure the reliability, clarity, and accuracy of the interpretation of mammograms.
(1) Analysis of these outcome data shall be made individually and collectively for all interpreting physicians at the facility. In addition, any cases of breast cancer among women imaged at the facility that subsequently become known to the facility shall prompt the facility to initiate follow-up on surgical and pathology results, or both, and review of the mammograms taken prior to the diagnosis of a malignancy. Responsibility for each requirement for monitoring shall be assigned to qualified personnel and documented in the facility's records.

(2) Frequency of audit analysis. The facility’s first audit analysis shall be initiated no later than 12 months after the date the facility becomes certified, or 12 months after April 28, 1999, whichever date is the latest. This audit analysis shall be completed within an additional 12 months to permit completion of diagnostic procedures and data collection. Subsequent audit analyses will be conducted at least once every 12 months.

(3) Reviewing interpreting physician. Each facility shall designate at least one interpreting physician to review the medical outcomes audit data at least once every 12 months. This individual shall record the dates of the audit period(s) and shall be responsible for analyzing results based on this audit. This individual shall also be responsible for documenting the results and notifying other interpreting physicians of the results and the facility aggregate results. If follow-up actions are taken, the reviewing interpreting physician shall also be responsible for documenting the nature of the follow-up. The reviewing physician shall sign the medical audit as proof of the evaluation of the data.

i. Quality assurance records. The lead interpreting physician, quality control technologist, and medical physicist shall ensure that records concerning employee qualifications to meet assigned quality assurance tasks, mammography technique and procedures, quality control (including monitoring data, problems detected by analysis of that data, corrective actions, and the effectiveness of the corrective actions), safety, and protection are properly maintained and updated. These quality control records shall be kept for each test specified in these rules until the next annual inspection has been completed and the facility is in compliance with the quality assurance requirements or until the test has been performed two additional times at the required frequency, whichever is longer.

j. Quality assurance—equipment.

(1) Daily, weekly, biweekly, monthly, quarterly, semiannual and annual quality control tests. Facilities shall perform quality control tests as required by the manufacturer’s mammography unit’s quality control manual, the RWS quality control requirements of 41.6(2)“i”(2) or the quality control program outlined by an FDA-approved accrediting body.

(2) Surveys.

1. At least annually, each facility shall undergo a survey by a medical physicist or by an individual under the direct supervision of a medical physicist. The survey shall include testing as required by the manufacturer’s mammography unit’s quality control manual, the RWS quality control manual or the quality control program outlined by the accrediting body.

2. The results of the tests, any corrective actions taken and their results shall be evaluated for adequacy by the medical physicist performing the survey.

3. The medical physicist shall prepare a survey report that includes a summary of this review and recommendations for necessary improvements.

4. The survey report shall be sent to the facility within 30 days of the date of the survey.

5. The survey report shall be dated and signed by the medical physicist performing or supervising the survey. If the survey was performed entirely or in part by another individual under the direct supervision of the medical physicist, that individual and the part of the survey that individual performed shall also be identified in the survey report.

(3) Mammography equipment evaluations. Additional evaluations of mammography units or image processors or any other applicable mammography system ancillary parts shall be conducted at new installations, at disassembly, at reassembly, at the same or a new location, or when major components are changed or repaired. These evaluations shall be used to determine whether the new or changed equipment meets the requirements of applicable standards in 41.6(5) and 41.6(6). All problems shall be corrected before the new or changed equipment is put into service for examinations.
The mammography equipment evaluation shall be performed by a medical physicist or by an individual under the direct supervision of an Iowa-approved medical physicist.

(4) Calibration of air kerma measuring instruments. Instruments used by medical physicists in their annual survey to measure the air kerma or air kerma rate from a mammography unit shall be calibrated at least once every two years and each time the instrument is repaired. The instrument calibration must be traceable to a national standard and calibrated with an accuracy of plus or minus 6 percent (95 percent confidence level) in the mammography energy range.

(5) Infection control. Facilities shall establish and comply with a system specifying procedures to be followed by the facility for cleaning and disinfecting mammography equipment after contact with blood or other potentially infectious materials. This system shall specify the methods for documenting facility compliance with the infection control procedures established and shall:

1. Comply with all applicable federal, state, and local regulations pertaining to infection control; and
2. Comply with the manufacturer’s recommended procedures for the cleaning and disinfecting of the mammography equipment used in the facility; or
3. If adequate manufacturer’s recommendations are not available, comply with generally accepted guidance on infection control, until such recommendations become available.

a. Mammography procedures and techniques for mammography of patients with breast implants.

(1) Each facility shall have a procedure to inquire whether or not the patient has breast implants prior to the actual mammographic examination.

(2) Except where contraindicated, or unless modified by a physician’s directions, patients with breast implants undergoing mammography shall have mammographic views to maximize the visualization of breast tissue.

b. Consumer complaint mechanism. Each facility shall:

(1) Establish a written and documented system for collecting and resolving consumer complaints;
(2) Maintain a record of each serious complaint received by the facility for at least three years from the date the complaint was received;
(3) Provide the consumer with adequate directions for filing serious complaints with the facility’s accreditation body and any other appropriate regulatory entity if the facility is unable to resolve a serious complaint to the consumer’s satisfaction.

(4) Report unresolved serious complaints to the accreditation body in a manner and time frame specified by the accreditation body.

c. Clinical image quality. Clinical images produced by any certified facility must continue to comply with the standards for clinical image quality established by that facility’s accreditation body.

d. Additional mammography review and patient notification.

(1) If the agency believes that mammography quality at a facility has been compromised and may present a serious risk to human health, the facility shall provide clinical images and other relevant information, as specified by the agency, for review by the accreditation body or other entity designated by the agency. This additional mammography review will help the agency to determine whether the facility is in compliance with rule 641—41.6(136C) and, if not, whether there is a need to notify affected patients, their physicians, or the public that the reliability, clarity, and accuracy of interpretation of mammograms has been compromised.

(2) If the agency determines that any activity related to the provision of mammography at a facility may present a serious risk to human health such that patient notification is necessary, the facility shall notify patients or their designees, their physicians, or the public of action that may be taken to minimize the effects of the risk. Such notification shall occur within a time frame and a manner specified by the agency.

41.6(6) Equipment standards. The equipment used to perform mammography shall meet the following standards:

a. Design: Be specifically designed for mammography. This prohibits systems that have been modified or equipped with special attachments for mammography.

c. Image receptor systems:
   (1) Have image receptor systems and individual components which are appropriate for mammography and used according to the manufacturer’s recommendations.
   (2) Systems used for magnification procedures shall be capable of operation with the grid removed from between the source and image receptor.

d. Light fields: For any system with a light beam that passes through the X-ray beam-limiting device, the light shall provide an average illumination of not less than 160 lux (15 foot candles) at 100 centimeters or the maximum source-image receptor distance (SID), whichever is less.

e. Magnification:
   (1) Systems used to perform noninterventional problem-solving procedures shall have radiographic magnification capability available for use by the operator.
   (2) Systems used for magnification procedures shall provide, at a minimum, at least one magnification value within the range of 1.4 to 2.0.

f. Tube-image receptor assembly:
   (1) The assembly shall be capable of being fixed in any position where it is designed to operate. Once fixed in any such position, it shall not undergo unintended motion.
   (2) The mechanism ensuring compliance with this subrule shall not fail in the event of power interruption.

g. Focal spot: The focal spot size, magnification factor and source to image receptor distance (SID) shall be appropriate for mammography.
   (1) When more than one focal spot is provided, the system shall indicate, prior to exposure, which focal spot is selected.
   (2) When more than one target material is provided, the system shall indicate, prior to exposure, the preselected target material.
   (3) When the target material or focal spot, or both, is selected by a system algorithm that is based on the exposure or on a test exposure, the system shall display, after the exposure, the target material or focal spot, or both, actually used during the exposure.

h. Compression devices: Shall have compression devices able to immobilize and compress the breast with a force of at least 25 pounds per square inch and shall be capable of maintaining this compression for at least three seconds. Each system shall provide:
   (1) An initial power-driven compression activated by hands-free controls operable from both sides of the patient; and
   (2) Fine adjustment compression controls operable from both sides of the patient.
   (3) Systems shall be equipped with different sized compression paddles that match the sizes of all full field image receptors provided for the system. Compression paddles for special purposes, including those smaller than the full size of the image receptor (for “spot compression”), may be provided. Such compression paddles for special purposes are not subject to 41.6(6)”h”(6) and (7).
   (4) Except as provided in 41.6(6)”h,” the compression paddle shall be flat and parallel to the breast support table and shall not deflect from parallel by more than 1.0 cm at any point on the surface of the compression paddle when compression is applied.
   (5) Equipment intended by the manufacturer’s design not to be flat and parallel to the breast support table during compression shall meet the manufacturer’s design specifications and maintenance requirements.
   (6) The chest wall edge of the compression paddle shall be straight and parallel to the edge of the image receptor. Equipment intended by the manufacturer’s design not to be straight and parallel to the edge of the image receptor shall meet the manufacturer’s design specifications and maintenance requirements.
   (7) The chest wall edge of the compression paddle may allow for patient comfort but shall not appear on the image.
i. Grids: Shall have the capability for using antiscatter grids.

j. AEC: Shall have automatic exposure control such that:

1. The positioning or selection of the detector shall permit flexibility in the placement of the detector under the target tissue.
   - The size and available positions of the detector shall be clearly indicated at the X-ray input surface of the breast compression paddle.
   - The selected position of the detector shall be clearly indicated.
2. The system shall provide means for the operator to vary the selected optical density from the normal (zero) setting.

k. Control panel: Shall have a control panel that:

1. Gives a positive indication when X-rays are being produced.
2. Gives an audible signal indicating termination of exposure.
3. Has manual selection of milliampere seconds (mAs) or at least one of its component parts (milliampere (mA) or time, or both).
4. Has the technique factors (peak tube potential in kilovolts (kV) and either tube current in mA and exposure time in seconds or the product of tube current and exposure time in mAs) to be used during an exposure indicated before the exposure begins, except when AEC is used, in which case the technique factors that are set prior to the exposure shall be indicated.
5. Has a system that, following AEC mode use, shall indicate the actual kilovoltage peak (kVp) and mAs used during the exposure.

l. mAs: Shall indicate, or provide a means of determining, the mAs resulting from each exposure made with automatic exposure control.

m. Mobile units and vans. Appropriate manufacturer’s quality control manual procedures and criteria shall be met.

41.6(7) Safety standards for mammography equipment.

a. Proper safety precautions shall be maintained and shall include, but not be limited to, adequate shielding for patients, personnel, and facilities. The equipment shall be operated only from a shielded position.

b. Equipment operators shall be monitored in accordance with 641—40.37(136C).

c. Annual inspections shall be conducted by an inspector from the agency to ensure compliance with these rules. Identified hazards shall be promptly corrected.

d. Equipment shall be shockproof and grounded to protect against electrical hazards.

e. Records of all inspection reports and medical physicist surveys shall be maintained for at least seven years.

RULE 641—41.6(136C)—APPENDIX I
Rescinded IAB 4/5/00, effective 5/10/00

RULE 641—41.6(136C)—APPENDIX II
Glandular Dose (in mrad) for 1 Roentgen Entrance Exposure
4.2 cm Breast Thickness—50% Adipose/50% Glandular Breast Tissue*
[ARC 1401C, IAB 4/2/14, effective 5/7/14; ARC 3393C, IAB 10/11/17, effective 11/15/17; ARC 6164C, IAB 2/9/22, effective 3/16/22]

641—41.7(136C) X-ray machines used for stereotactically guided breast biopsy.

41.7(1) Definitions. In addition to the definitions provided in rules 641—38.2(136C), 641—40.2(136C), and 641—41.1(136C), the following definitions are applicable to this rule.

“Collaborative setting” means a setting in which a qualified radiologist and surgeon (under 41.7(3)“a” or 41.7(3)“c”) are working together in consultation and in performing stereotactically guided breast biopsies with a common goal of the patient’s benefit.
“Phantom” means an artificial test object used to simulate radiographic characteristics of compressed breast tissue and containing components that radiographically model aspects of breast disease and cancer.

“Procedure” means a stereotactically guided breast biopsy performed on a patient for diagnostic purposes.

“Qualified training physician” means a physician who is qualified under 41.7(3) to perform stereotactically guided breast biopsies and who has performed at least 24 procedures.

“Stereotactic training phantom” means a training or practice tool or medium used for stereotactically guided breast biopsy procedures.

“Stereotactically guided breast biopsy” means a breast biopsy procedure performed with the utilization of a dedicated system which emits ionizing radiation and is designed specifically for that procedure.

“Supervising physician” means the physician designated by the facility/owner to:

1. Evaluate the equipment, personnel, procedures, and records annually; and
2. Establish and conduct the quality assurance program.

**41.7(2) Registration and application standards and requirements.**

*a.* Each radiation machine used to perform stereotactically guided breast biopsies shall be registered according to 641—subrule 39.3(2).

*b.* Each facility wishing to perform stereotactically guided breast biopsies shall apply to the agency for authorization by providing or verifying the following information for each machine:

1. The stereotactically guided breast biopsy equipment and facility meet the general requirements of these rules for radiation machines.
2. The radiation machine is specifically designed to perform stereotactically guided breast biopsies.
3. The radiation machine is used according to these rules on patient radiation exposure and radiation dose levels.
4. The radiation machine is operated by individuals meeting the requirements of this rule.
5. The entire stereotactically guided breast biopsy system is evaluated annually by a medical physicist who meets the requirements of this rule.
6. The equipment, personnel, procedures and records are evaluated annually by the supervising physician.

*c.* Suspension, revocation, or denial of authorization.

1. Authorization may be suspended or revoked with cause if any machine does not meet one or more of the standards of these rules.
2. The facility shall have an opportunity for a hearing in connection with a denial, suspension, or revocation of authorization.
3. An emergency order suspending or revoking authorization may be issued if the agency finds the radiation machine or facility violates rules that seriously affect the health, safety and welfare of the public. An opportunity for hearing shall be held within 20 working days after the issuance of the order. The order shall be effective during the proceedings.

4. If authorization is revoked, the radiation machine shall not be used until reinstated.

*d.* Reinstatement of authorization.

1. An application for reinstatement shall be submitted and processed the same as an initial application.
2. The agency shall inspect the radiation machine within 60 days of the approved reinstatement application. If the reinstatement is after a revocation, appropriate corrective action shall be submitted with the application.
3. A full reinstatement shall be issued only after the agency has inspected the radiation machine and facility and determined that they meet the requirements of these rules.
41.7(3) Physicians. Physicians must be qualified according to the setting and their role in performing stereotactically guided breast biopsies as outlined below.

a. Requirements for a radiologist in a collaborative setting are as follows:

1. Initial training and qualifications.
   1. Must be qualified according to 41.6(3)”a.”
   2. Shall have performed at least 12 stereotactically guided breast biopsies prior to July 1, 1998, or at least 3 hands-on stereotactically guided breast biopsies under a physician who is qualified under 41.7(3) and has performed at least 24 stereotactically guided breast biopsies.
   3. Shall have at least three hours of Category 1 CME or three hours of training approved by the agency in stereotactically guided breast biopsy.

b. Shall be responsible for mammographic interpretation, be experienced as noted in 41.7(3)”a”(1)”2” above and be experienced in the specific recommendations for each biopsy and lesion identification at time of each biopsy performed by that physician.

2. Shall be responsible for the supervision of the radiologic technologist during the procedure.

b. Maintenance of proficiency and CME requirements.

1. Following the first anniversary in which the requirements of this subrule were met, completion of a total of 12 breast biopsy procedures must be met for each calendar year with at least 6 being stereotactic breast biopsies. The remaining 6 can be any combination of the following, and demonstration of the chosen combination needs to be clearly documented:
   - Stereotactic biopsy procedures.
   - Stereotactic biopsy of a stereotactic training phantom with documentation of steps taken or a written report.
   - Stereotactic breast biopsy case review, which must be documented to include a review of pre-biopsy mammographic examination, scout and stereotactic positioning, biopsy needle pre-fire and post-fire positioning and targeting, specimen radiograph images, post-biopsy images and review of post-biopsy pathology results.
     - Mammographic-guided, stereotactic-guided, or both, wire localization procedures.
     - Ultrasound-guided breast biopsy procedures.
     - MRI-guided breast biopsy procedures.

   If experience is not maintained, the physician must requalify by performing three procedures under direct supervision of a qualified training physician or an agency-approved manufacturer applications specialist before resuming unsupervised procedures.

2. Following the first anniversary in which the requirements of this subrule were met, obtain at least three hours of Category 1 CME or three hours of training approved by the agency in stereotactically guided breast biopsy during the 36 months immediately preceding the date of the facility’s annual stereotactic biopsy inspection, or during the 36-month period ending on the last day of the calendar quarter preceding the inspection. If education is not maintained, the physician must requalify by obtaining additional CME credits to reach 3 CME credits in the prior 36 months before resuming unsupervised procedures. These CMEs cannot be obtained by the performance of supervised procedures.

3. A current state of Iowa medical license must be in effect whenever procedures are performed independently by the physician.

b. Requirements for a physician other than a qualified radiologist in a collaborative setting are as follows:

1. Initial training and qualifications.
   1. Must be licensed to practice medicine in Iowa.
   2. Must have at least three hours of Category 1 CME or three hours of training approved by the agency in stereotactically guided breast biopsy which includes instruction on triangulation for lesion location.
3. Must have performed at least 12 stereotactically guided breast biopsies prior to May 9, 2001, or at least 3 hands-on stereotactically guided breast biopsy procedures under a physician who is both qualified to perform stereotactic biopsy procedures according to 41.7(3) and has performed at least 24 stereotactically guided breast biopsies.

4. Shall be responsible for post-biopsy management of the patient.

5. Shall be responsible for supervision of the radiologic technologist during the procedure.

(2) Maintenance of proficiency and CME requirements.

1. Following the first anniversary in which the requirements of this subrule were met, completion of a total of 12 breast biopsy procedures must be met for each calendar year with at least 6 being stereotactic breast biopsies. The remaining 6 can be any combination of the following and demonstration of the chosen combination needs to be clearly documented:

   ● Stereotactic breast biopsy procedures.
   ● Stereotactic biopsy of a stereotactic training phantom with documentation of steps taken or a written report.
   ● Stereotactic breast biopsy case review, which must be documented to include a review of pre-biopsy mammographic examination, scout and stereotactic positioning, biopsy needle pre-fire and post-fire positioning and targeting, specimen radiograph images, post-biopsy images and review of post-biopsy pathology results.
   ● Mammographic-guided, stereotactic-guided, or both, wire localization procedures.
   ●Ultrasound-guided breast biopsy procedures.
   ● MRI-guided breast biopsy procedures.

If experience is not maintained, the physician must requalify by performing three procedures under direct supervision of a qualified training physician or an agency–approved manufacturer applications specialist before resuming unsupervised procedures.

2. Following the first anniversary in which the requirements of this subrule were met, obtain at least three hours of Category 1 CME immediately preceding the date of the facility’s annual stereotactic biopsy inspection, or during the 36-month period ending on the last day of the calendar quarter preceding the inspection. If education is not maintained, the physician must requalify by obtaining additional CME credits to reach 3 CME credits in the prior 36 months before resuming unsupervised procedures. These CMEs cannot be obtained by the performance of supervised procedures.

3. A current state of Iowa medical license must be in effect whenever unsupervised procedures are performed by the physician.

   c. Requirements for a radiologist performing stereotactically guided breast biopsy independently are as follows:

      (1) Initial training and requirements.

      1. Must be qualified according to 41.6(3) ’a.’

      2. Initially, must have at least three hours of Category 1 CME or three hours of training approved by the agency in stereotactically guided breast biopsy.

      3. Initially, must obtain at least 15 hours of CME in breast imaging including benign and malignant breast diseases.

      4. Must have performed at least 12 stereotactically guided breast biopsies prior to July 1, 1998, or at least 3 hands-on stereotactically guided breast biopsy procedures under a physician who is both qualified according to 41.7(3) and has performed at least 24 stereotactically guided breast biopsies.

      5. Must be responsible for mammographic interpretation.

      6. Must be responsible for patient selection.

      7. Must be responsible for the supervision of the radiologic technologist during the procedure.

      8. Must be responsible for post-biopsy management of the patient which may include referral to a surgeon for a follow-up on certain lesions.

      (2) Maintenance of proficiency and CME requirements.

      1. Following the first anniversary in which the requirements of this subrule were met, completion of a total of 12 breast biopsy procedures must be met for each calendar year with at least 6 being
stereotactic breast biopsies. The remaining 6 can be any combination of the following and demonstration of the chosen combination needs to be clearly documented:

- Stereotactic breast biopsy procedures.
- Stereotactic biopsy of a stereotactic training phantom with documentation of steps taken or a written report.
- Stereotactic breast biopsy case review, which must be documented to include a review of pre-biopsy mammographic examination, scout and stereotactic positioning, biopsy needle pre-fire and post-fire positioning and targeting, specimen radiograph images, post-biopsy images and review of post-biopsy pathology results.
- Mammographic-guided, stereotactic-guided, or both, wire localization procedures.
- Ultrasound-guided breast biopsy procedures.
- MRI-guided breast biopsy procedures.

If experience is not maintained, the physician must requalify by performing three procedures under direct supervision of a qualified training physician or an agency-approved manufacturer applications specialist before resuming unsupervised procedures.

2. Following the first anniversary in which the requirements of this subrule were met, obtain at least three hours of Category 1 CME immediately preceding the date of the facility’s annual stereotactic biopsy inspection, or during the 36-month period ending on the last day of the calendar quarter preceding the inspection which includes post-biopsy management of the patient. If education is not maintained, the physician must requalify by obtaining additional CME credits to reach 3 CME credits in the prior 36 months before resuming unsupervised procedures. These CMEs cannot be obtained by the performance of supervised procedures.

3. A current state of Iowa medical license must be in effect whenever unsupervised procedures are performed by the physician.
   - Requirements for a physician other than a qualified radiologist (under 41.7(3)“e”’) performing stereotactically guided breast biopsy independently are as follows:
     1. Initial training and requirements.
     2. Must have evaluated at least 480 mammograms in the prior 24 months in consultation with a physician who is qualified according to 41.6(3)“a.”
     3. Initially, must have at least 15 hours of Category 1 CME or 15 hours of training approved by the agency in stereotactically guided breast imaging and biopsy or three years’ experience having performed at least 36 stereotactically guided breast biopsies.
     4. Must have four hours of Category 1 CME in medical radiation physics.
     5. Must have performed at least 12 stereotactically guided breast biopsies prior to May 9, 2001, or at least 3 hands-on stereotactically guided breast biopsy procedures under a physician who is both qualified according to 41.7(3) and has performed at least 24 stereotactically guided breast biopsies.
     6. Must be responsible for patient selection.
     7. Must be responsible for the supervision of the radiologic technologist during the procedure.
     8. Must be responsible for post-biopsy management of the patient.
   
   2. Maintenance of proficiency and CME requirements.
     1. Continue to evaluate at least 480 mammograms every 24 months in consultation with a physician who is qualified according to 41.6(3)“a.”
     2. Following the first anniversary in which the requirements of this subrule were met, completion of a total of 12 breast biopsy procedures must be met for each calendar year with at least 6 being stereotactic breast biopsies. The remaining 6 can be any combination of the following and demonstration of the chosen combination needs to be clearly documented:
        - Stereotactic breast biopsy procedures.
        - Stereotactic biopsy of a stereotactic training phantom with documentation of steps taken or a written report.
        - Stereotactic breast biopsy case review, which must be documented to include a review of pre-biopsy mammographic examination, scout and stereotactic positioning, biopsy needle pre-fire and
post-fire positioning and targeting, specimen radiograph images, post-biopsy images and review of post-biopsy pathology results.

- Mammographic-guided, stereotactic-guided, or both, wire localization procedures.
- Ultrasound-guided breast biopsy procedures.
- MRI-guided breast biopsy procedures.

If experience is not maintained, the physician must requalify by performing three procedures under direct supervision of a qualified training physician or an agency-approved manufacturer applications specialist before resuming unsupervised procedures.

3. Following the first anniversary in which the requirements of this subrule were met, obtain at least three hours of Category 1 CME immediately preceding the date of the facility’s annual stereotactic biopsy inspection, or during the 36-month period ending on the last day of the calendar quarter preceding the inspection. If education is not maintained, the physician must requalify by obtaining additional CME credits to reach 3 CME credits in the prior 36 months before resuming unsupervised procedures. The CME credits for requalification cannot be obtained by performing procedures.

4. A current state of Iowa medical license must be in effect whenever unsupervised procedures are performed by the physician.

41.7(4) Medical physicist.

a. Must be qualified according to 41.6(3)"c."

b. Must have performed three hands-on stereotactically guided breast biopsy system physics surveys prior to July 1, 1998; or one hands-on stereotactically guided breast biopsy system physics survey under the guidance of a medical physicist qualified through 41.7(4)“a” and 41.7(4)“b.”

c. Maintenance of proficiency and continuing education requirements.

(1) Have performed at least one stereotactically guided breast biopsy system physics survey per year after the initial qualifications are met or requalify by performing one survey supervised by a qualified medical physicist; and

(2) Following the third anniversary in which the requirements of this subrule were met, have obtained at least three hours of continuing education in stereotactically guided breast biopsy system physics during the previous 36 months or requalify by obtaining additional CME credits to reach 3 CME credits in the prior 36 months.

41.7(5) Radiologic technologist.

a. Must be qualified according to 41.6(3)“b.”

b. Must meet the following initial requirements:

(1) Five hands-on stereotactically guided breast biopsy procedures on patients under the supervision of a physician or technologist qualified under rule 641—41.7(136C).

(2) Three contact hours in stereotactically guided breast biopsy.

c. Maintenance of proficiency and continuing education and experience requirements.

(1) Following the first anniversary in which the requirements of this subrule were met, completion of a total of 12 breast biopsy procedures must be met for each calendar year with at least 6 being stereotactic breast biopsies. The remaining 6 can be any combination of the following and demonstration of the chosen combination needs to be clearly documented:

1. Stereotactic breast biopsy procedures.
2. Stereotactic biopsy of a stereotactic training phantom with documentation of steps taken or a written report.
3. Stereotactic breast biopsy case review, must be documented to include a review of pre-biopsy mammographic examination, scout and stereotactic images, biopsy needle pre-fire and post-fire images, specimen radiograph images, post-biopsy images and review of post-biopsy pathology results.
4. Mammographic-guided, stereotactic-guided, or both, wire localization procedures.
5. Ultrasound-guided breast biopsy procedures.
6. MRI-guided breast biopsy procedures.

If experience is not maintained, the radiologic technologist must requalify by performing three stereotactically guided breast biopsies under the supervision of a physician or radiologic technologist qualified under 41.7(3) or 41.7(5).
(2) Following the third anniversary in which the requirements of this subrule were met, obtain at least three hours of continuing education in stereotactically guided breast biopsy during the 36 months immediately preceding the date of the facility’s annual stereotactic biopsy inspection, or during the 36-month period ending on the last day of the calendar quarter preceding the inspection, or requalify by obtaining additional CME credits to reach 3 CME credits in the prior 36 months. The CMEs cannot be obtained by the performance of supervised procedures.

(3) If a stereotactic radiologic technologist performs only stereotactic procedures, the radiologic technologist must perform at least 100 stereotactic procedures during the prior 24 months immediately preceding the date of the facility’s annual stereotactic biopsy inspection, during the 24-month period ending on the last day of the previous calendar quarter, or any 24-month period between the two. In this case, all requirements for radiologic technologists must be met with the exception of 41.6(3) “b”(4)“1.”

(4) Only 50 percent of the total required stereotactic continuing education hours may be obtained through presenting or acting as a trainer for a continuing education or training program.

(5) An Iowa permit to practice radiography must be in effect whenever stereotactic procedures are performed by the radiologic technologist.

41.7(6) Obtaining and preserving records.

a. The facility must make, for each procedure, a record of the service provided including:

(1) The date of the procedure.
(2) The name of the patient and one additional patient identifier.
(3) The name of the radiologic technologists and physicians performing the procedure.
(4) A description of the service provided.
(5) The name of the referring physician, if any.

b. Records retained by the medical facility must be retained for at least ten years.

41.7(7) Quality assurance program.

a. The facility shall have an equipment quality assurance program specific to stereotactically guided breast biopsy systems and covering all components of the system to ensure high-quality images with minimum patient exposure.

b. The facility shall ensure that a general review of the program is conducted at least annually and have available the services of a qualified medical physicist who is capable of establishing and conducting the program.

c. The facility shall name a supervising stereotactic biopsy physician who shall be responsible for:

(1) Quality assurance activities including the medical audit,
(2) Oversight of the quality control program, and
(3) Supervision of the radiologic technologist(s) and the medical physicist.

d. Under the direction of the supervising physician, the medical physicist shall have the responsibility for establishing and conducting the equipment quality assurance program. The program shall include:

(1) Conducting equipment performance monitoring functions, initially and then at least annually, to include:

1. Evaluation of biopsy unit assembly. Any failed items must be corrected within 30 days of the survey unless the medical physicist deems that the failure poses a serious injury risk to the patient, at which time the failure needs to be corrected before further procedures are performed.

2. Collimation.
   ● X-ray field must not extend beyond the image receptor by more than 5 mm on any side.
   ● Any failures must be corrected within 30 days of the survey.

3. Evaluation of focal spot. Focal spot must not degrade from initial measurement. If reduction in lp/mm is found, focal spot must be corrected within 30 days of survey.

4. kVp accuracy/reproducibility. kVp accuracy/reproducibility must be accurate to within +/- 5% of nominal kVp setting. Failures must be corrected before further procedures are performed.

5. Half-value layer measurement. HVL shall be greater than kVp/100 (in units of mm Al). Failures must be corrected before further procedures are performed.
6. Exposure reproducibility. Exposure must be reproducible to within +/- 15% of mean exposure. Failures must be corrected before further procedures are performed.

7. Breast entrance exposure, average glandular dose. Average glandular dose must be less than 300 millirad (3 milliGray) per exposure of a 50 percent glandular/50 percent adipose 4.2 centimeter breast. Failures must be corrected before further procedures are performed.

8. Image quality evaluation.
   - Phantom image must meet the criteria of 5 fibers, 4 speck groups and 3 masses for the ACR accreditation phantom or 3 fibers, 3 speck groups and 2.5 masses for the mini phantom unless otherwise stated by the phantom manufacturer.
   - Failures must be corrected before further procedures are performed.

9. Artifact evaluation. Any significant black or white artifacts seen in the image detector field must be corrected within 30 days of the survey.

10. Digital field uniformity. For units with region of interest (ROI) capability, the SNR in each corner must be within +/- 15% of the SNR in the center. Failures must be corrected within 30 days of the survey.

11. Localization simulation (gelatin phantom) test. Localization accuracy must be within 1 mm of target, and the test must include a portion of the test “lesion” in the sample chamber. Failures must be corrected before further procedures are performed.

   (2) Analyzing the monitoring results to determine if there are any problems requiring correction.

   (3) Ensuring that the facility has procedures in place for carrying out or arranging for the necessary corrective actions as well as for the calibrations and other preventative maintenance.

   e. The supervising physician shall have the responsibility for establishing and conducting the quality control program in a facility with a fixed unit. In the case of a mobile stereotactic unit, the owner or designee shall assume the responsibility for establishing and conducting the quality assurance program. The program shall include:

      (1) Localization accuracy (daily before use and before using the localization unit after it is adjusted). Each coordinate must be within manufacturer specifications for the intended target value. Failures must be corrected before further procedures are performed.

      (2) Visual checklist (monthly). Any failed items must be corrected within 30 days.

      (3) Phantom image (weekly). Phantom image must meet the criteria of 5 fibers, 4 speck groups and 3 masses for the ACR accreditation phantom or 3 fibers, 3 speck groups and 2.5 masses for the mini phantom unless otherwise stated by the phantom manufacturer.Failures must be corrected before further procedures are performed.

      (4) Compression (semiannually). The maximum auto drive compression force shall not exceed 45 pounds. Failures must be corrected within 30 days.

   (5) Any additional quality control testing indicated by the stereotactic breast biopsy unit manufacturer must be completed as outlined in the quality control manual applicable to the unit.

   f. Each facility shall establish a medical audit program to ensure the accuracy and appropriateness of the procedures performed. This program shall include an imaging-pathology correlation for each biopsy performed, an ongoing analysis of biopsy results and periodic review of the utilization of the procedure. The program must include the number of biopsies performed, the number of cancers found, the number of benign lesions found, and the number of biopsies repeated.

   g. Additional medical physicist evaluations of stereotactic units shall be conducted whenever a new unit is installed, a unit is disassembled and reassembled at the same or a new location, or major components of a stereotactic unit are changed or repaired. These evaluations shall be used to determine whether the new or changed equipment meets the requirements of applicable standards in 41.7(7). All problems shall be corrected before the new or changed equipment is put into service for examinations. The stereotactic equipment evaluation shall be performed by a medical physicist qualified under 41.7(4) or by an individual under the direct supervision of a medical physicist qualified under 41.7(4).

41.7(8) Equipment standards.

   a. Be specifically designed for stereotactically guided breast biopsy.
b. Meet the Food and Drug Administration (FDA) standards found in 21 CFR.

41.7(9) Safety standards.

a. Proper safety precautions shall be maintained and shall include, but not be limited to, adequate shielding for patients, personnel and facilities. The equipment shall be operated only from a shielded position.

b. Annual inspections shall be conducted by an inspector from the agency to ensure compliance with these rules. Identified hazards shall be promptly corrected.

c. Equipment shall be shockproof and grounded to protect against electrical hazards.

d. Records of all inspection reports and medical physicist surveys shall be maintained for at least seven years.

This rule is intended to implement Iowa Code chapter 136C.

[ARC 1401C, IAB 4/2/14, effective 5/7/14; ARC 6164C, IAB 2/9/22, effective 3/16/22]
CHAPTER 41—APPENDIX A

INFORMATION ON RADIATION SHIELDING
REQUIRED FOR PLAN REVIEWS (EXCLUDING THERAPY MACHINES)

In order for the agency to provide an evaluation and verification that national standards have been met on shielding requirements for a radiation installation, the following information shall be submitted.

1. The plans should show, as a minimum, the following:
   (a) The normal location of the X-ray system’s radiation port; the port’s travel and traverse limits; general direction(s) of the useful beam; locations of any windows and doors; the location of the operator’s booth; and the location of the X-ray control panel.
   (b) The structural composition and thickness or lead equivalent of all walls, doors, partitions, floor, and ceiling of the room(s) concerned.
   (c) The dimensions of the room(s) concerned.
   (d) The type of occupancy of all adjacent areas inclusive of space above and below the room(s) concerned. If there is an exterior wall, show distance to the closest area(s) where it is likely that individuals may be present.
   (e) The make and model of the X-ray equipment, the energy waveform (single phase, three phase, etc.) and the maximum technique factors.
   (f) The type of examination(s) or treatment(s) which will be performed with the equipment.

2. Information on the anticipated workload of the X-ray system(s) in mA-minutes per week.

3. If the services of a qualified expert have been utilized to determine the shielding requirements, a report, including all basic assumptions used, shall be submitted with the plans.
CHAPTER 41—APPENDIX B

DESIGN REQUIREMENTS FOR AN OPERATOR’S BOOTH

1. Space requirements:
   (a) The operator shall be allotted not less than 7.5 square feet (0.697 m) of unobstructed floor space in the booth.
   (b) The operator’s booth may be any geometric configuration with no dimension of less than 2 feet (0.61 m).
   (c) The space shall be allotted excluding any encumbrance by the X-ray control panel, such as overhang, cables, or other similar encroachments.
   (d) The booth shall be located or constructed such that unattenuated direct scatter radiation originating on the examination table or at the wall cassette will not reach the operator’s station in the booth.

2. Structural requirements:
   (a) The booth walls shall be permanently fixed barriers of at least 7 feet (2.13 m) high.
   (b) When a door or movable panel is used as an integral part of the booth structure, it must have an interlock which will prevent an exposure when the door or panel is not closed.
   (c) Shielding shall be provided to meet the requirements of 641—Chapter 40.

3. X-ray control placement:
   The X-ray control for the system shall be fixed within the booth; and
   (a) Shall be at least 40 inches (1.02 m) from any point subject to direct scatter, leakage or primary beam radiation.
   (b) Shall allow the operator to use the majority of the available viewing windows or mirrors.

4. Viewing system requirements:
   (a) Each booth shall have at least one viewing device which will:
      (1) Be so placed that the operator can view the patient during any exposure, and
      (2) The device shall be so placed that the operator can have full view of any occupant of the room and should be so placed that the operator can view any entry into the room. If any door which allows access to the room cannot be seen from the booth, then outside that door there shall be an “X-ray” warning sign that will be lighted anytime the rotor of the X-ray tube is activated. Alternatively, that door must have an interlock controlling the exposure which will prevent the exposure if the door is not closed.
   (b) When the viewing system is a window, the following requirements also apply:
      (1) The viewing area shall be at least 1 square foot (0.0929 m²).
      (2) Regardless of size or shape, at least 0.09 m² (1 sq ft) of window area must be centered no less than 0.6 m (2 feet) from the open edge of the booth and no less than 1.5 m (5.0 feet) from the floor.
      (3) The material constituting the window shall have the same lead equivalence as that required in the booth’s wall in which it is mounted.
   (c) When the viewing system is by mirrors, the mirror(s) shall be so located as to accomplish the general requirements of Appendix B, 4(a).
   (d) When the viewing system is by electronic means:
      (1) The camera shall be so located as to accomplish the general requirements of Appendix B, 4(a), and
      (2) There shall be an alternate viewing system as a backup for the primary system.
CHAPTER 41—APPENDIX C

INFORMATION TO BE SUBMITTED BY PERSONS PROPOSING TO CONDUCT HEALING ARTS SCREENING

Persons requesting that the agency approve a healing arts screening program shall submit the following information and evaluation:

1. Name and address of the applicant and, where applicable, the names and addresses of agents within this state.
2. Diseases or conditions for which the X-ray examinations are to be used in diagnoses.
3. A detailed description of the X-ray examinations proposed in the screening program.
4. Description of the population to be examined in the screening program, i.e., age, sex, physical condition, and other appropriate information. Any person conducting a screening program for cardiac scoring shall conduct screening only on either women over age 45 or men over age 50 who meet any two of the following criteria: family history, smoker, high blood pressure, high cholesterol, obesity (at least 20 pounds overweight), diabetes.
5. An evaluation of any known alternate methods not involving ionizing radiation which could achieve the goals of the screening program and why these methods are not used instead of the X-ray examinations.
6. An evaluation by a qualified expert of the X-ray system(s) to be used in the screening program. The evaluation by the qualified expert shall show that such system(s) does satisfy all requirements of these regulations. The evaluation shall include a measurement of patient exposures from the X-ray examinations to be performed.
7. A description of the diagnostic film quality control program.
8. A copy of the technique chart for the X-ray examination procedures to be used.
9. The qualifications of each individual who will be operating the X-ray system(s).
10. The qualifications of the individual who will be supervising the operators of the X-ray system(s).

The extent of supervision and the method of work performance evaluation shall be specified.

11. The name and address of the physician who will interpret the radiograph(s) and a copy of the physician’s license to practice in Iowa.
12. A description of the procedures to be used in advising the individuals screened and their private practitioners of the healing arts of the results of the screening procedure and any further medical needs indicated.
13. A description of the procedures for the retention or disposition of the radiographs and other records pertaining to the X-ray examinations.
14. An indication of the frequency of screening and the duration of the entire screening program.
15. Documentation justifying the reason for the screening. The applicant must submit data which supports the efficacy of the screening test in diagnosing the disease or condition being screened. Data which will be acceptable to the department includes, but is not limited to, the following: (1) the recommendation of a nationally recognized certifying medical or government body; (2) the recommendation of one of the following national organizations: American Cancer Association, American Lung Association, American Heart Association; or (3) medical literature from peer-reviewed journals supporting the screening.
16. The procedures for preventing pregnant individuals from participating in the screening or justification for allowing pregnant individuals to participate.
17. The dates of the screening to include beginning and ending dates.
18. A copy of IRB for a research project or information justifying the research project.
### CHAPTER 41—APPENDIX D

**QA for Therapeutic Radiation Machines**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Procedure</th>
<th>Tolerance&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>Dosimetry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X-ray output constancy</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Electron output constancy&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Localizing lasers</td>
<td>2mm</td>
</tr>
<tr>
<td></td>
<td>Distance indicator (ODI)</td>
<td>2mm</td>
</tr>
<tr>
<td></td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Door interlocks</td>
<td>functional</td>
</tr>
<tr>
<td></td>
<td>Audiovisual monitors</td>
<td>functional</td>
</tr>
<tr>
<td>Monthly</td>
<td>Dosimetry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X-ray output constancy&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Electron output constancy&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Backup monitor constancy</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>X-ray central axis dosimetry parameter (PDD, TAR) constancy</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Electron central axis dosimetry parameter constancy (PDD)</td>
<td>2mm @ therapeutic depth</td>
</tr>
<tr>
<td></td>
<td>X-ray beam flatness constancy</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Electron beam flatness constancy</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>X-ray and electron symmetry</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Safety Interlocks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wedge, electron cone interlocks</td>
<td>functional</td>
</tr>
<tr>
<td></td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Light/radiation field coincidence</td>
<td>2mm or 1% on a side&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Gantry/collimator angle indicators</td>
<td>1 degree</td>
</tr>
<tr>
<td></td>
<td>Wedge position</td>
<td>2mm (or 2% change in transmission factor)</td>
</tr>
<tr>
<td></td>
<td>Tray position</td>
<td>2mm</td>
</tr>
<tr>
<td></td>
<td>Applicator position</td>
<td>2mm</td>
</tr>
<tr>
<td></td>
<td>Field size indicators</td>
<td>2mm</td>
</tr>
<tr>
<td></td>
<td>Cross-hair centering</td>
<td>2mm diameter</td>
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<tr>
<td></td>
<td>Treatment couch position indicators</td>
<td>2mm/1 deg</td>
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<tr>
<td></td>
<td>Latching of wedges, blocking tray</td>
<td>functional</td>
</tr>
<tr>
<td></td>
<td>Jaw symmetry&lt;sup&gt;e&lt;/sup&gt;</td>
<td>2mm</td>
</tr>
<tr>
<td></td>
<td>Field Light intensity</td>
<td>functional</td>
</tr>
<tr>
<td>Annual</td>
<td>Dosimetry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X-ray/electron output calibration constancy</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Field size dependence of X-ray output constancy</td>
<td>2%</td>
</tr>
</tbody>
</table>

<sup>a</sup> The tolerances listed in the tables should be interpreted to mean that if a parameter either: (1) exceeds the tabulated value (e.g., the measured isocenter under the gantry exceeds 2 mm diameter); or (2) that the change in the parameter exceeds the nominal value (e.g., the output changes by more than 2%), then an action is required. The distinction is emphasized by the use of the term constancy for the latter case. Moreover, for constancy, percent values ± the deviation of the parameter with respect to its nominal value; distances are referenced to the isocenter or nominal SSD.

<sup>b</sup> All electron energies need not be checked daily, but all electron energies are to be checked at least twice weekly.

<sup>c</sup> A constancy check with a field instrument using temperature pressure corrections.

<sup>d</sup> Whichever is greater. Should also be checked after change of light field source.

<sup>e</sup> Jaw symmetry is defined as the difference in distance of each jaw from the isocenter.
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Procedure</th>
<th>Tolerance&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Output factor constancy for electron applicators</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Central axis parameter constancy (PDD, TAR)</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Off-axis factor constancy</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Transmission factor constancy for all treatment accessories</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Wedge transmission factor constancy&lt;sup&gt;f&lt;/sup&gt;</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Monitor chamber linearity</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>X-ray output constancy vs. gantry angle</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Electron output constancy vs. gantry angle</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Off-axis factor constancy vs. gantry angle</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Arc mode</td>
<td>Mfrs. specs.</td>
</tr>
<tr>
<td>Safety Interlocks</td>
<td>Follow manufacturer’s test procedures</td>
<td>functional</td>
</tr>
<tr>
<td>Mechanical</td>
<td>Collimator rotation isocenter</td>
<td>2mm diameter</td>
</tr>
<tr>
<td></td>
<td>Gantry rotation isocenter</td>
<td>2mm diameter</td>
</tr>
<tr>
<td></td>
<td>Couch rotation isocenter</td>
<td>2mm diameter</td>
</tr>
<tr>
<td></td>
<td>Coincidence of collimetry, gantry, couch axes with isocenter</td>
<td>2mm diameter</td>
</tr>
<tr>
<td></td>
<td>Coincidence of radiation and mechanical isocenter</td>
<td>2mm diameter</td>
</tr>
</tbody>
</table>

<sup>f</sup> Most wedges’ transmission factors are field size and depth dependent.

<sup>a</sup> The tolerances listed in the tables should be interpreted to mean that if a parameter either: (1) exceeds the tabulated value (e.g., the measured isocenter under the gantry exceeds 2 mm diameter); or (2) that the change in the parameter exceeds the nominal value (e.g., the output changes by more than 2%), then an action is required. The distinction is emphasized by the use of the term constancy for the latter case. Moreover, for constancy, percent values ± the deviation of the parameter with respect to its nominal value; distances are referenced to the isocenter or nominal SSD.
CHAPTER 41—APPENDIX E

INFORMATION ON RADIATION SHIELDING REQUIRED
FOR PLAN REVIEWS FOR THERAPY MACHINES

I. All therapeutic radiation machines.
   A. Basic facility information including: name, telephone number and agency registration number of the individual responsible for preparation of the shielding plan; name and telephone number of the facility supervisor; and the street address (including room number if applicable) of the external beam radiation therapy facility. The plan should also indicate whether this is a new structure or a modification to existing structure(s).
   B. All wall, floor, and ceiling areas struck by the useful beam shall have primary barriers.
   C. Secondary barriers shall be provided in all wall, floor, and ceiling areas not having primary barriers.

II. Therapeutic machines up to 150 kV (photons only).
   In addition to the requirements listed in Section I above, therapeutic radiation machine facilities which produce only photons with a maximum energy less than or equal to 150 kV shall submit shielding plans which contain, as a minimum, the following additional information:
   A. Equipment specifications, including the manufacturer and model number of the therapeutic radiation machine, as well as the maximum technique factors.
   B. Maximum design workload for the facility including total weekly radiation output (expressed in gray (rad) or air kerma at one meter), total beam-on time per day or week, the average treatment time per patient, along with the anticipated number of patients to be treated per day or week.
   C. A facility blueprint/drawing indicating: scale (0.25 inch = 1 foot is typical); direction of north; normal location of the therapeutic radiation machine’s radiation port(s); the port’s travel and traverse limits; general direction(s) of the useful beam; locations of any windows and doors; and the location of the therapeutic radiation machine control panel. If the control panel is located inside the external beam radiation therapy treatment room, the location of the operator’s booth shall be noted on the plan and the operator’s station at the control panel shall be behind a protective barrier sufficient to ensure compliance with 641—40.15(136C).
   D. The structural composition and thickness or lead/concrete equivalent of all walls, doors, partitions, floor, and ceiling of the room(s) concerned.
   E. The type of occupancy of all adjacent areas inclusive of space above and below the room(s) concerned. If there is an exterior wall, show distance to the closest area(s) where it is likely that individuals may be present.
   F. At least one example calculation which shows the methodology used to determine the amount of shielding required for each physical condition (i.e., primary and secondary leakage barriers, restricted and unrestricted areas, entry door(s)) and shielding material in the facility.
      (1) If commercial software is used to generate shielding requirements, identify the software used and the version/revision date.
      (2) If the software used to generate shielding requirements is not in the open literature, submit quality control sample calculations to verify the result obtained with the software.

III. Therapeutic radiation machines over 150 kV.
   In addition to the requirements listed in Section I above, therapeutic radiation machine facilities which produce photons or electrons with a maximum energy in excess of 150 kV or electrons shall submit shielding plans which contain, as a minimum, the following additional information:
   A. Equipment specifications including the manufacturer and model number of the therapeutic radiation machine, and gray (rad) at the isocenter and the energy(s) and type(s) of radiation produced (i.e., photon, electron). The target to isocenter distance shall be specified.
   B. Maximum design workload for the facility including total weekly radiation output (expressed in gray (rad) at one meter), total beam-on time per day or week, the average treatment time per patient, along with the anticipated number of patients to be treated per day or week.
C. Facility blueprint/drawing (including both floor plan and elevation views) indicating relative orientation of the therapeutic radiation machine, scale (0.25 inch = 1 foot is typical), type(s), thickness and minimum density of shielding material(s), direction of north, the locations and size of all penetrations through each shielding barrier (ceiling, walls and floor), as well as details of the door(s) and maze.

D. The structural composition and thickness or concrete equivalent of all walls, doors, partitions, floor, and ceiling of the room(s) concerned.

E. The type of occupancy of all adjacent areas inclusive of space above and below the room(s) concerned. If there is an exterior wall, show distance to the closest area(s) where it is likely that individuals may be present.

F. Description of all assumptions that were in shielding calculations including, but not limited to, design energy (i.e., room may be designed for 6 MV unit although only a 4 MV unit is currently proposed), workload, presence of integral beam-stop in unit, occupancy and use(s) of adjacent areas, fraction of time that useful beam will intercept each permanent barrier (walls, floor and ceiling) and “allowed” radiation exposure in both restricted and unrestricted areas.

G. At least one example calculation which shows the methodology used to determine the amount of shielding required for each physical condition (i.e., primary and secondary leakage barriers, restricted and unrestricted areas, small angle scatter, entry door(s) and maze) and shielding material in the facility.

(1) If commercial software is used to generate shielding requirements, also identify the software used and the version/revision date.

(2) If the software used to generate shielding requirements is not in the open literature, submit quality control sample calculations to verify the result obtained with the software.

IV. Neutron shielding.

In addition to the requirements listed in Section III above, therapeutic radiation machine facilities which are capable of operating above 10 MV shall submit shielding plans which contain, as a minimum, the following additional information:

A. The structural composition, thickness, minimum density and location of all neutron shielding material.

B. Description of all assumptions that were used in neutron shielding calculations including, but not limited to, neutron spectra as a function of energy, neutron fluence rate, absorbed dose and dose equivalent (due to neutrons) in both restricted and unrestricted areas.

C. At least one example calculation which shows the methodology used to determine the amount of neutron shielding required for each physical condition (i.e., restricted and unrestricted areas, entry door(s) and maze) and neutron shielding material utilized in the facility.

(1) If commercial software is used to generate shielding requirements, also identify the software used and the version/revision date.

(2) If the software used to generate shielding requirements is not in the open literature, submit quality control sample calculations to verify the result obtained with the software.

D. The method(s) and instrumentation which will be used to verify the adequacy of all neutron shielding installed in the facility.

V. References.


These rules are intended to implement Iowa Code chapter 136C.

[Filed 4/7/80, Notice 2/6/80—published 4/30/80, effective 7/1/80]
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[Filed 3/11/05, Notice 2/2/05—published 3/30/05, effective 5/4/05]
[Filed 3/9/06, Notice 2/1/06—published 3/29/06, effective 5/3/06]
[Filed 3/16/07, Notice 1/31/07—published 4/11/07, effective 5/16/07]
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[Filed ARC 7983B (Notice ARC 7792B, IAB 5/20/09), IAB 7/29/09, effective 9/2/09]
[Filed ARC 8659B (Notice ARC 8161B, IAB 9/23/09), IAB 4/7/10, effective 5/12/10]
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[Filed ARC 1639C (Notice ARC 1470C, IAB 5/28/14), IAB 10/1/14, effective 11/5/14]
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[Filed ARC 3393C (Notice ARC 3210C, IAB 7/19/17), IAB 10/11/17, effective 11/15/17]
[Filed ARC 3746C (Notice ARC 3578C, IAB 1/17/18), IAB 4/11/18, effective 5/16/18]
[Filed ARC 5059C (Notice ARC 4856C, IAB 1/15/20), IAB 6/17/20, effective 7/22/20]
[Filed ARC 5683C (Notice ARC 5520C, IAB 3/24/21), IAB 6/16/21, effective 7/21/21]
[Filed ARC 6164C (Notice ARC 6051C, IAB 11/17/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 108  
MEDICAL RESIDENCY TRAINING STATE MATCHING GRANTS PROGRAM  

641—108.1(135) Scope and purpose. The medical residency training state matching grants program is established to provide greater access to health care by increasing the number of practicing physicians in Iowa through the expansion of residency positions in Iowa. The department shall provide funding to sponsors of accredited graduate medical education residency programs for the establishment, expansion, or support of medical residency training programs that will increase the number of residents trained. For the period beginning July 1, 2021, and ending June 30, 2026, the department shall provide funding to sponsors of accredited medical education residency programs for the support of medical residency training program liability costs. Funding for the program may be provided through the health care workforce shortage fund, medical residency training account, and is specifically dedicated to the medical residency training state matching grants program as established in Iowa Code section 135.176. These rules shall be implemented only to the extent funding is available.  
[ARC 1480C, IAB 6/11/14, effective 7/16/14; ARC 6165C, IAB 2/9/22, effective 3/16/22]  

641—108.2(135) Definitions. For the purposes of these rules, the following definitions shall apply:  
“Accredited medical residency training program” means a graduate medical education program approved by the Accreditation Council for Graduate Medical Education (ACGME) or by the American Osteopathic Association (AOA).  
“Department” means the Iowa department of public health.  
“Director” means the director of the Iowa department of public health.  
“Health professional shortage areas” means federal designations that are based on general health professional shortage area (HPSA) designation criteria, plus additional criteria and guidelines specific to each of the three types of designations from the Health Resources and Services Administration Federal Office of Shortage Designations. The three types of designations include primary care, dental and mental health.  
“In excess of the federal residency cap” means a residency position for which no federal Medicare funding is available because the residency position is a position beyond the cap for residency positions established by the federal Balanced Budget Act of 1997, Pub. L. No. 105-33.  
“New or alternative campus accredited medical residency training program” means a program that is accredited by a recognized entity approved for such purpose by the ACGME or the AOA with the exception that a new medical residency training program that, by reason of an insufficient period of operation is not eligible for accreditation on or before the date of submission of an application for a grant, may be deemed accredited if the ACGME or the AOA finds, after consultation with the appropriate accreditation entity, that there is reasonable assurance that the program will meet the accreditation standards of the entity prior to the date of graduation of the initial class in the program.  
“Primary care” means care that shall include psychiatry, obstetrics, gynecology, family medicine, internal medicine, and emergency medicine.  
“Sponsor” means a hospital, school, or consortium located in Iowa that sponsors and maintains primary organizational and financial responsibility for a graduate medical education residency program in Iowa and is accountable to the accrediting body.  
[ARC 1480C, IAB 6/11/14, effective 7/16/14; ARC 5334C, IAB 12/16/20, effective 1/20/21]  

641—108.3(135) Eligibility criteria—establishment or expansion. To be eligible for a matching grant for the establishment or expansion of medical residency training programs, a sponsor shall satisfy the following requirements and qualifications:  
108.3(1) A sponsor shall be financially and organizationally responsible for a residency training program that is accredited by the ACGME or by the AOA.  
108.3(2) A sponsor shall demonstrate through documented financial information that funds have been budgeted and will be expended by the sponsor in the amount required to provide matching funds for each residency proposed in the request for state matching funds. A sponsor shall document this
requirement by providing with its request a line-item budget showing sponsor funding amounts and state matching funds requested.

108.3(3) A sponsor shall demonstrate a need for such residency program in the state by providing with its request for state matching funds objective evidence of such need including:
   a. Workforce data, including state and federal workforce data and data from tracking databases;
   b. Population data, including community health needs assessments;
   c. Supply and demand data, including health professional shortage area designations; and
   d. Other related research including unique community- or state-level factors which establish a need for such residency program.

108.3(4) A sponsor shall submit with its request for state matching funds a recruitment and retention plan to encourage residents to enter practice in Iowa with a preference for health professional shortage areas and to demonstrate over time the impact on Iowa’s workforce.

108.3(5) A sponsor shall offer persons to whom a primary care residency position is awarded the opportunity to participate in a rural rotation to expose the resident to the rural areas of the state.

641—108.4(135) Eligibility criteria—support. To be eligible for a matching grant for the support of medical residency training program liability costs, a sponsor shall satisfy the following requirements and qualifications:

108.4(1) A sponsor shall be financially and organizationally responsible for a residency training program that is accredited by the ACGME or by the AOA.

108.4(2) A sponsor shall not be subject to Iowa Code chapter 669.

108.4(3) A sponsor shall demonstrate through documented financial information that funds have been budgeted and will be expended by the sponsor in the amount required to provide dollar-for-dollar matching funds for the cost of the medical residency program liability.

108.4(4) A sponsor shall demonstrate that the funding of the medical residency program liability costs falls within the period of July 1, 2021, and June 30, 2026.

641—108.5(135) Amount of grant.

108.5(1) The department shall award funds based upon the funds budgeted as demonstrated in the request, as identified in subrule 108.3(2) or 108.4(3).

108.5(2) Grant award per activity.
   a. The total amount of a grant awarded to a sponsor proposing the establishment of a new or alternative campus accredited medical residency training program shall be limited to no more than 100 percent of the amount of funds the sponsor has budgeted as demonstrated through a line-item budget for each residency sponsored for the purpose of the residency program.
   b. The total amount of a grant awarded to a sponsor proposing the provision of a new residency position within an existing accredited medical residency or fellowship training program, or a sponsor funding residency positions which are in excess of the federal residency cap, shall be limited to no more than 25 percent of the amount of funds the sponsor has budgeted as demonstrated through a line-item budget for each residency position sponsored for the purpose of the residency program.
   c. The total amount of a grant awarded to a sponsor proposing to fund medical residency program liability costs shall be limited to no more than 50 percent of the total cost the sponsor has budgeted as demonstrated through a line-item budget for the medical residency program liability costs.

108.5(3) A sponsor shall receive funds based on budgeted expenses that include but are not limited to:
   a. Stipends and fringe benefits for residents and fellows;
   b. The portion of teaching physician salaries and fringe benefits associated with teaching and supervision of residents and fellows;
   c. Other direct costs that can be attributed to medical education (e.g., clerical salaries, telephone, office supplies).
108.5(4) An individual sponsor that establishes a new or alternative campus accredited medical residency training program shall not receive more than 50 percent of the state matching funds available each year to support the program. An individual sponsor proposing the provision of a new residency position within an existing accredited medical residency or fellowship training program, a sponsor funding residency positions which are in excess of the federal residency cap, or the funding of the payment by the sponsor of medical residency program liability costs subject to provision by the sponsor of dollar-for-dollar matching funds used for payment of such costs shall not receive more than 25 percent of the state matching funds available each year to support the program.

[ARC 1480C, IAB 6/11/14, effective 7/16/14; ARC 2179C, IAB 9/30/15, effective 1/13/16; ARC 4830C, IAB 12/18/19, effective 1/22/20; ARC 6165C, IAB 2/9/22, effective 3/16/22]

641—108.6(135) Application and review process.

108.6(1) The department shall follow requirements for competitive selection contained in 641—Chapter 176 in awarding these funds.

108.6(2) The department shall establish a request for proposal process for sponsors eligible to receive funding. The request for proposal and review process and review criteria for preference in awarding the grants shall be described in the request for proposal, including preference in the residency specialty and preference for candidates who are residents of Iowa, attended and earned an undergraduate degree from an Iowa college or university, or attended and earned a medical degree from a medical school in Iowa. The residency specialty preference may be reflective of a subspecialty where particular demands for services have been demonstrated, of geographic areas of preference, or of other particular preferences that advance the objectives of the program.

108.6(3) Each request for proposal issued by the department will identify one or more of the following purposes for use of the funding:

a. The establishment of new or alternative campus accredited medical residency training programs;

b. The provision of new residency positions within existing accredited medical residency or fellowship training programs;

c. The funding of residency positions which are in excess of the federal residency cap; or

d. The funding of the payment by the sponsor of medical residency program liability costs subject to provision by the sponsor of dollar-for-dollar matching funds used for the payment of such costs for the period beginning July 1, 2021, and ending June 30, 2026. The funding shall not apply to medical residency programs to which Iowa Code chapter 669 applies.

108.6(4) An applicant may appeal the denial of a properly submitted request for proposal. Appeals shall be governed by rule 641—176.8(135,17A).

[ARC 1480C, IAB 6/11/14, effective 7/16/14; ARC 4830C, IAB 12/18/19, effective 1/22/20; ARC 6165C, IAB 2/9/22, effective 3/16/22]

These rules are intended to implement Iowa Code section 135.176.

[Filed ARC 1480C (Notice ARC 1392C, IAB 4/2/14), IAB 6/11/14, effective 7/16/14]
[Filed ARC 2179C (Notice ARC 2066C, IAB 7/22/15), IAB 9/30/15, effective 1/13/16]
[Filed ARC 4830C (Notice ARC 4671C, IAB 9/25/19), IAB 12/18/19, effective 1/22/20]
[Filed ARC 5334C (Notice ARC 5196C, IAB 9/23/20), IAB 12/16/20, effective 1/20/21]
[Filed ARC 6165C (Notice ARC 5927C, IAB 9/22/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 109
PRESCRIPTION DRUG DONATION REPOSITORY PROGRAM

641—109.1(135M) Definitions. For purposes of this chapter, the following definitions apply:

“Centralized repository” means an entity approved by the contractor and licensed pursuant to applicable regulations of the Iowa board of pharmacy that accepts donated drugs, conducts a safety inspection of the drugs, and ships the donated drugs to a local repository to be dispensed in compliance with this chapter and federal and state laws, rules and regulations.

“Contractor” means the third party approved by the department to implement and administer the prescription drug donation repository program.

“Controlled substance” means the same as defined in Iowa Code section 124.101.

“Department” means the Iowa department of public health.

“Indigent” means a person with an income that is below 200 percent of the federal poverty level (FPL) as defined by the most recently revised poverty income guidelines published by the United States Department of Health and Human Services.

“Local repository” means a pharmacy or medical facility that elects to accept and dispense donated drugs and that meets the eligibility requirements of rule 641—109.3(135M).

“Medical facility” means any of the following:
1. A physician’s office.
2. A hospital.
3. A health clinic.
4. A nonprofit health clinic, including a federally qualified health center as defined in 42 U.S.C. § 1396d(l)(2)(B); a rural health clinic as defined in 42 U.S.C. § 1396d(l)(1); and a nonprofit health clinic that provides medical care to patients who are indigent, uninsured, or underinsured.
5. A free clinic as defined in Iowa Code section 135.24.
6. A charitable organization as defined in Iowa Code section 135.24.
7. A nursing facility as defined in Iowa Code section 135C.1.

“NDC #” means the unique national drug code number that identifies a specific approved drug.

“Nurse practitioner” means an advanced registered nurse practitioner as defined in 655 IAC Chapter 7.

“Pharmacist” means a pharmacist as defined in Iowa Code section 155A.3.

“Pharmacy” means a pharmacy as defined in Iowa Code section 155A.3.

“Physician” means an individual licensed under Iowa Code chapter 148.

“Prescription drug” means the same as defined in Iowa Code section 155A.3 and includes cancer drugs and antirejection drugs, but does not include controlled substances.

“Supplies” means the supplies necessary to administer the prescription drugs donated.

“USP” means United States Pharmacopoeia.

[ARC 6166C, IAB 2/9/22, effective 3/16/22]

641—109.2(135M) Purpose. The overall purpose of this chapter is to establish administrative rules in accordance with Iowa Code chapter 135M relative to the following:

1. Requirements for medical facilities and pharmacies to accept and dispense donated prescription drugs and supplies.
2. Eligibility criteria for individuals to receive donated prescription drugs and supplies.

641—109.3(135M) Eligibility criteria for program participation by medical facilities and pharmacies.

109.3(1) To be eligible for participation in the prescription drug donation repository program, a medical facility or pharmacy shall be in compliance with all applicable federal and state laws, including laws applicable to the storage and distribution of drugs and the appropriate licensure standards, and shall hold active, nonrestricted, state-issued licenses or registrations in good standing.

109.3(2) Participation in the prescription drug donation repository program is voluntary.
109.3(3) A pharmacy or medical facility may elect to participate in the prescription drug donation repository program by providing, on a form prescribed by the department and available on the program’s web page, written notification to the centralized repository of all of the following:

a. The name, street address, and telephone number of the pharmacy or medical facility, and any state-issued license or registration number issued to the pharmacy or medical facility, including the name of the issuing agency.

b. The name and telephone number of the responsible pharmacist, physician or nurse practitioner who is employed by or under contract with the pharmacy or medical facility.

c. A statement, signed and dated by the responsible pharmacist, physician or nurse practitioner, indicating that the pharmacy or medical facility meets the eligibility requirements under this rule and shall comply with the requirements of this chapter.

109.3(4) Withdrawal from participation. A pharmacy or medical facility may withdraw from participation in the prescription drug donation repository program at any time by providing written notice to the centralized repository on a form prescribed by the department and available on the program’s web page.

641—109.4(135M) Standards and procedures for accepting donated prescription drugs and supplies.

109.4(1) Any individual who is 18 years of age or older may donate legally obtained prescription drugs or supplies to the centralized repository or a local repository if the drugs or supplies meet the requirements of this rule, as determined by a pharmacist who is employed by or under contract with a drug repository.

109.4(2) No drugs that require storage temperatures other than normal room temperature as specified by the manufacturer or United States Pharmacopoeia shall be donated or accepted as part of the prescription drug donation repository program. Drugs that require storage temperatures other than normal room temperature as specified by the manufacturer or USP shall not be donated or accepted because of the increased potential for these drugs to become adulterated. Excluded from this restriction are drugs donated directly from a drug manufacturer.

109.4(3) Controlled substances shall not be donated or accepted. Pursuant to federal and state laws, a controlled substance cannot be returned or reused once the drug has been dispensed to a patient.

109.4(4) The centralized repository or a local repository may accept a prescription drug only if all of the following requirements are met:

a. The drug is in its original sealed and tamper-evident packaging. However, a drug in a single-unit dose or blister pack with the outside packaging opened may be accepted if the single-unit-dose packaging is undisturbed;

b. The drug has been stored according to manufacturer or USP storage requirements;

c. The packaging contains the lot number and expiration date of the drug. If the lot number is not retrievable, all specified medications will be destroyed in the event of a recall, pursuant to Iowa board of pharmacy rules;

d. The drug has an expiration date that is more than six months after the date that the drug was donated. However, a donated prescription drug bearing an expiration date that is six months or less after the date the prescription drug was donated may be accepted and distributed if the drug is in high demand and can be dispensed for use prior to the drug's expiration date;

e. The drug does not have any physical signs of tampering or adulteration, and there is no reason to believe that the drug is adulterated;

f. The packaging does not have any physical signs of tampering, misbranding, deterioration, compromised integrity or adulteration; and

g. All drugs shall be inventoried at the centralized repository or a local repository. The inventory shall include the name of the drug, strength of the drug, quantity of the drug, and the date of donation if the drug has been continually under the control of a health care professional. If the drug has not been continually under the control of a health care professional, the repository shall collect a donation form...
provided by the prescription drug donation repository program that is signed by the person making the donation or that person’s authorized representative.

109.4(5) A repository may accept supplies necessary to administer the prescription drugs donated only if all of the following requirements are met:
   a. The supplies are in their original, unopened, sealed packaging;
   b. The supplies are not adulterated or misbranded; and
   c. All supplies shall be inventoried at the centralized repository or a local repository. The inventory shall include a description of the supplies and the date donated. Such inventory shall be recorded on a form provided by the prescription drug donation repository program.

109.4(6) Drugs and supplies may be donated on the premises of a participating centralized repository or a local repository to a person designated by the repository. A drop box may not be used to deliver or accept donations.

641—109.5(135M) Standards and procedures for inspecting and storing donated prescription drugs and supplies.

109.5(1) A licensed pharmacist employed by or under contract with the centralized repository or a local repository shall inspect donated prescription drugs and supplies to determine, to the extent reasonably possible in the judgment of the pharmacist, that the drugs and supplies are not adulterated or misbranded, are safe and suitable for dispensing, and are not ineligible drugs or supplies. The pharmacist who inspects the drugs shall sign an inspection record stating the above and attach it to the copy of the inventory or donor record provided with the drugs. If a local repository receives drugs and supplies from the centralized repository, the local repository does not need to reinspect the drugs and supplies.

109.5(2) The centralized repository and local repositories shall store donated drugs and supplies in a secure storage area under environmental conditions appropriate for the drugs or supplies being stored. Donated drugs and supplies may not be stored with nondonated inventory. When donated drugs are not inspected immediately upon receipt, a repository shall quarantine the donated drugs separately from all dispensing stock until the donated drugs have been inspected and approved for dispensing under the program.

109.5(3) Repositories shall destroy donated noncontrolled substances that are not suitable for dispensing and make a record of such destruction according to board of pharmacy 657—subrule 8.7(5). The destruction record shall be made in the same manner as prescribed for the record of return or destruction of a controlled substance in subrule 109.5(4).

109.5(4) Controlled substances shall not be accepted for donation.
   a. Controlled substances submitted for donation shall be documented and returned immediately to the donor or the donor’s representative that provided the drugs.
   b. In the event controlled substances enter the centralized repository or a local repository and it is not possible or practicable to return the controlled substances to the donor or the donor’s representative due to inability to identify the donor or the donor’s representative or due to refusal by the donor or the donor’s representative to receive them, abandoned controlled substances shall be documented and destroyed beyond reclamation pursuant to rules of the board of pharmacy. Such destruction shall be performed by a pharmacist or other person that has authority to dispense controlled substances and shall be witnessed by another responsible adult employee of the repository.

109.5(5) If a repository receives a recall notification, the repository shall perform a uniform destruction of all of the recalled prescription drugs in the repository and complete the destruction information form for all donated drugs destroyed. If a recalled drug has been dispensed, the repository shall immediately notify the recipient of the recalled drug pursuant to established drug recall procedures. [ARC 6166C, IAB 2/9/22, effective 3/16/22]

641—109.6(135M) Standards and procedures for dispensing donated prescription drugs and supplies.
109.6(1) Donated drugs and supplies may be dispensed only if the drugs or supplies are prescribed by a health care practitioner for use by an eligible individual and are dispensed by a licensed pharmacist, physician or nurse practitioner.

109.6(2) A repository shall prioritize dispensing to an individual requesting drugs through the program as follows:
   a. First, to an indigent individual;
   b. Second, to an individual who has no active third-party prescription drug reimbursement coverage for the drug prescribed; and
   c. Third, to any other individual if an indigent or uninsured individual is unavailable.

109.6(3) A repository shall dispense donated prescription drugs in compliance with applicable federal and state laws and regulations for dispensing prescription drugs, including all requirements relating to packaging, labeling, record keeping, drug utilization review, and patient counseling.

109.6(4) The centralized repository and a local repository shall remove the original donor’s identification and the name of the dispensing pharmacy from the package prior to dispensing the drugs or supplies.

109.6(5) The centralized repository and a local repository shall be responsible for drug recalls and shall have an established mechanism to notify recipients in the event of a drug recall.

109.6(6) Prescription drugs or supplies donated under this program shall not be resold.

109.6(7) The participating centralized repository and local repositories may distribute drugs and supplies donated under this program to other participating repositories for use pursuant to the program. The repository distributing the drugs or supplies shall complete a transfer form.

641—109.7(135M) Eligibility criteria for individuals to receive donated prescription drugs and supplies.

109.7(1) An individual who requests drugs from the prescription drug donation repository program shall certify to the repository that the individual is a resident of Iowa and meets one or both of the following criteria:
   a. Is indigent;
   b. Has no active third-party prescription drug reimbursement coverage for the drug prescribed.

109.7(2) The local repository shall collect from each individual recipient a signed intake collection form provided by the department or its contractor.
   a. The intake collection form shall attest that:
      (1) The individual is a resident of the state of Iowa;
      (2) The individual’s income does not exceed 200 percent of the FPL;
      (3) The individual is uninsured and has no prescription coverage or is underinsured and has no prescription coverage;
      (4) The individual acknowledges that the drugs may have been donated; and
      (5) The individual consents to a waiver of the requirement for child resistant packaging of the Poison Prevention Packaging Act.
   b. The intake collection form will include an identification card to be given to the recipient for continued use for one year.

109.7(3) The identification card is valid for one year or until the new federal poverty guidelines have been published for all prescriptions and supplies.

109.7(4) A summary of data taken from the intake collection form is to be sent via regular mail, email or facsimile to the centralized repository for data collection.

641—109.8(135M) Forms and record keeping.

109.8(1) The following forms developed for the administration of this program shall be utilized by participants of the program and are available on the program’s web page on the department’s web site, idph.iowa.gov.
   a. Prescription drug donation repository program notice of participation or withdrawal.
b. Prescription drug donation repository program donation, transfer, inventory or destruction record.

c. A record of medications dispensed.

109.8(2) The prescription drug donation repository program recipient data collection form and identification card are given to the recipient by the local repository, and the completed data collection form is collected from the recipient by the local repository.

109.8(3) Record-keeping requirements.

a. All records required to be maintained as a part of the prescription drug donation repository program shall be maintained for a minimum of five years by participating pharmacies and medical facilities.

b. Records required as part of this program shall be maintained pursuant to all current applicable practice acts.

c. Data collected by the prescription drug donation repository program from all participating repositories shall be submitted quarterly or upon request to the centralized repository. The data will consist of the information collected in accordance with 641—109.8(135M), Forms and record keeping.

d. The centralized repository and the contractor shall submit reports to the department as required by the contract or upon request of the department.

641—109.9(135M) Handling fee. A repository may charge the recipient of a donated drug a handling fee, not to exceed a maximum of 200 percent of the Medicaid professional dispensing fee as established by rule of the department of human services, to cover stocking and dispensing costs. A prescription drug dispensed through the prescription drug donation repository program shall not be eligible for reimbursement under the medical assistance program.

641—109.10(135M) List of drugs and supplies program will accept. All prescription drugs, excluding controlled substances, that have been approved for medical use in the United States, that are listed in the USP or National Formulary (USP/NF), and that meet the criteria for donation established by these rules may be accepted for donation under the prescription drug donation repository program.

641—109.11(135M) Exemption from disciplinary action, civil liability and criminal prosecution.

109.11(1) A drug manufacturer acting reasonably and in good faith is not subject to criminal prosecution or civil liability for injury, death, or loss to a person or property for matters related to the donation, acceptance, or dispensing of a prescription drug manufactured by the drug manufacturer that is donated under this chapter, including liability for failure to transfer or communicate product or consumer information or the expiration date of the donated prescription drug.

109.11(2) Except as provided in subrule 109.11(3), a person other than a drug manufacturer subject to subrule 109.11(1), acting reasonably and in good faith, is immune from civil liability and criminal prosecution for injury to or the death of an individual to whom a donated prescription drug is dispensed under this chapter and shall be exempt from disciplinary action related to the person’s acts or omissions related to the donation, acceptance, distribution, or dispensing of a donated prescription drug under this chapter.

109.11(3) The immunity and exemption provided in subrule 109.11(2) does not extend to any of the following:

a. The donation, acceptance, distribution, or dispensing of a donated prescription drug under this chapter by a person if the person’s acts or omissions are not performed reasonably and in good faith.

b. Acts or omissions outside the scope of the program.


641—109.14(135M) Prescription drug donation repository in disaster emergencies. The following are the requirements for the department to receive and distribute prescription drugs and supplies in preparation for a disaster emergency proclaimed by the governor or in preparation for a public health disaster.
109.14(1) The department may receive prescription drugs and supplies directly from the prescription drug donation repository contractor and dispense prescription drugs and supplies through licensed personnel during or in preparation for a disaster emergency proclaimed by the governor pursuant to Iowa Code section 29C.6 or during or in preparation for a public health disaster as defined in Iowa Code section 135.140(6).

109.14(2) The department may receive and distribute prescription drugs and supplies as defined in Iowa Code section 135.142 to any Iowan who has been a victim of a disaster emergency proclaimed by the governor.

These rules are intended to implement Iowa Code chapter 135M.

[ARC 8983B, IAB 8/11/10, effective 9/15/10; ARC 6166C, IAB 2/9/22, effective 3/16/22]

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CHAPTER 42
COLLEGES FOR CHIROPRACTIC PHYSICIANS
[Prior to 7/24/02, see 645—40.9(151)]

645—42.1(151) Definitions. For the purposes of these rules, the following definitions shall apply:

“Chiropractic intern” means a chiropractic student of an approved college of chiropractic in the student’s last academic quarter, semester, or trimester of study, who is eligible for graduation from the college of chiropractic and is eligible to complete a preceptorship program, as authorized by these rules.

“Chiropractic preceptor” means a chiropractic physician licensed and practicing in Iowa pursuant to Iowa Code chapter 151, who accepts a chiropractic intern or resident into the practice for the purpose of providing the chiropractic student with a clinical experience of the practice of chiropractic, and who meets the requirements of these rules.

“Chiropractic resident” means a graduate chiropractic physician who has received a doctor of chiropractic degree from a college of chiropractic approved by the board, and who is not licensed in any state, but who is practicing under a chiropractic preceptorship authorized under these rules.

“Chiropractic student” means a student of an approved college of chiropractic.

“Council on Chiropractic Education” or “CCE” means the organization that establishes the Educational Standards of Chiropractic Colleges and Bylaws. A copy of the standards may be requested from the Council on Chiropractic Education (CCE). CCE’s address and Web site may be obtained from the board’s Web site.

“Preceptorship practice” means the chiropractic practice of a single chiropractic physician or group of chiropractic physicians in a particular business or clinic, into which a licensed practicing chiropractic physician has accepted a chiropractic intern or chiropractic resident for the limited purpose of providing the intern or resident with a clinical experience in the practice of chiropractic.

“60-minute hour” means at least 50 minutes of resident attendance with no more than 10 minutes for note taking and breaks.

645—42.2(151) Board-approved chiropractic colleges.

42.2(1) Approval of a chiropractic college may be granted if the program submits proof to the board of chiropractic that the chiropractic program meets the following requirements:

a. The chiropractic college is fully accredited by the Commission on Accreditation of the Council on Chiropractic Education (CACCE), as recognized by the U.S. Department of Education.

b. The core curriculum meets the requirements of the CACCE standards and, in addition:

(1) Covers a period of four academic years totaling not less than 4,000 60-minute hours in actual resident attendance;

(2) Comprises a supervised course of study, including clinical practical instruction, in all of the subjects specified in Iowa Code section 151.1(3); and

(3) Includes a minimum of 120 hours of physiotherapy coursework with a clinical practical component on the procedures covered in the course.

c. The chiropractic college publishes in a regularly issued catalog the requirements for graduation and degrees that are required by the Iowa board of chiropractic.

d. Transcripts include entries for all completed coursework.

42.2(2) Rescinded IAB 8/15/18, effective 9/19/18.

[ARC 3962C, IAB 8/15/18, effective 9/19/18]

645—42.3(151) Practice by chiropractic interns and chiropractic residents. A student enrolled in a board-approved chiropractic preceptorship program in the state of Iowa may treat patients without obtaining an Iowa license, provided the requirements of these rules are met.

645—42.4(151) Approved chiropractic preceptorship program. The board shall approve a chiropractic college’s preceptorship program if the program meets the following requirements:

42.4(1) The preceptorship program meets current CCE standards for consumer protection.
42.4(2) The preceptorship program is an established component of the curriculum offered by a board-approved chiropractic college.

42.4(3) Chiropractic interns who participate in the preceptorship program have met all requirements for graduation from the chiropractic college except for completion of the preceptorship period.

42.4(4) Chiropractic residents who participate in the postgraduate preceptorship program have graduated from a chiropractic college approved by the board.

42.4(5) All chiropractic physicians who serve as preceptors shall be approved under rule 645—42.5(151).

42.4(6) The chiropractic college retains ultimate responsibility for student learning and evaluations during the preceptorship.

42.4(7) The chiropractic preceptor shall supervise no more than one chiropractic intern or one chiropractic resident for the duration of a given preceptorship period.

42.4(8) If a preceptor agreement must be canceled for any reason, it is the responsibility of the chiropractic college to assign the intern or resident to another preceptor and notify the Iowa board of chiropractic of the preceptorship cancellation. The notice shall include reasons for cancellation of the preceptorship.

645—42.5(151) Approved chiropractic physician preceptors.

42.5(1) A chiropractic physician shall be approved to be a chiropractic physician preceptor if the following criteria are met:

a. The chiropractic physician holds a current Iowa chiropractic license and has continuously held licensure in the United States for the previous five years prior to preceptorship;

b. The chiropractic physician is currently fully credentialed by the sponsoring chiropractic college and approved by the board; and

c. The chiropractic physician has not had any formal disciplinary action.

42.5(2) The role of the chiropractic physician preceptor shall include:

a. Responsibility for supervising the practice of the chiropractic intern or chiropractic resident who is accepted into a preceptorship practice.

b. Identifying the chiropractic intern or chiropractic resident to the patients of the preceptorship practice to ensure that no patient will misconstrue the status of the intern or resident. The intern or resident shall wear a badge identifying that person as an intern or resident at all times in the presence of preceptorship patients.

c. Exercising direct, on-premises supervision of the chiropractic intern or chiropractic resident at all times that the intern or resident is engaged in any facet of patient care in the chiropractic physician preceptor’s clinic.

d. Directing the chiropractic intern or chiropractic resident only in treatment care that is within the educational background and experience of the preceptor.

e. Notifying the preceptorship program within 30 days of either of the following actions:

(1) If the preceptor has any formal disciplinary action taken by any licensing entity; or

(2) If the preceptor is a party to any malpractice settlement or judgment.

[ARC 3962C, IAB 8/15/18, effective 9/19/18; ARC 6187C, IAB 2/9/22, effective 3/16/22]

645—42.6(151) Termination of preceptorship. A preceptorship may terminate upon the occurrence of one of the following events:

42.6(1) Interns. The intern graduates from a board-approved college of chiropractic.

42.6(2) Residents. Twelve months have passed since the resident graduated from a board-approved college of chiropractic.

42.6(3) Formal disciplinary action is taken against the preceptor or the preceptor is a party to a final malpractice judgment or settlement agreement.

[ARC 3962C, IAB 8/15/18, effective 9/19/18]

These rules are intended to implement Iowa Code chapter 151.

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PHARMACY BOARD[657]

[Prior to 2/10/88, see Pharmacy Examiners, Board of [620], renamed Pharmacy Examiners Board[657] under the “umbrella” of Public Health Department by 1986 Iowa Acts, ch 1245; renamed by 2007 Iowa Acts, Senate File 74]

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CHAPTER 39
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657—39.1(155A) Purpose and scope. The purpose of this chapter is to establish the minimum standards for the programs and activities identified in this chapter. These rules shall apply to all licensed pharmacists, other registered pharmacy personnel, and all pharmacies, including owners, engaged in the state of Iowa in the programs and activities identified in this chapter. These rules are in addition to rules of the board relating to the practice of pharmacy unless otherwise indicated by rule.

[ARC 3858C, IAB 6/20/18, effective 7/25/18]

657—39.2 and 39.3 Reserved.

657—39.4(155A) Pharmaceutical care. Pharmaceutical care is a comprehensive, patient-centered, outcomes-oriented pharmacy practice in which the pharmacist accepts responsibility for assisting the prescriber and the patient in optimizing the patient’s drug therapy plan and works to promote health, to prevent disease, and to optimize drug therapy. Pharmaceutical care does not include the prescribing of drugs without the consent of the prescriber.

39.4(1) Drug therapy problems. In providing pharmaceutical care, the pharmacist shall strive to identify, resolve, and prevent drug therapy problems.

39.4(2) Drug therapy plan. In providing pharmaceutical care, the pharmacist shall access and evaluate patient-specific information, identify drug therapy problems, and utilize that information in a documented plan of therapy that assists the patient or the patient’s caregiver in achieving optimal drug therapy. In concert with the patient, the patient’s prescribing practitioner, and the patient’s other health care providers, the pharmacist shall assess, monitor, and suggest modifications of the drug therapy plan as appropriate.

[ARC 3858C, IAB 6/20/18, effective 7/25/18]

657—39.5 Reserved.

657—39.6(155A) Statewide protocols. To the extent authorized in Iowa Code section 155A.46, a pharmacist may, pursuant to statewide protocols developed by the board in consultation with the department of public health and available on the board’s website at pharmacy.iowa.gov, order and dispense medications pursuant to the requirements identified in the statewide protocols. For the purpose of this rule, the order shall constitute a prescription.

[ARC 4270C, IAB 1/30/19, effective 3/6/19; see Delay note at end of chapter; ARC 4387C, IAB 4/10/19, effective 4/5/19; ARC 4583C, IAB 7/31/19, effective 9/4/19; ARC 6076C, IAB 12/15/21, effective 1/19/22]

657—39.7(135,147A) Opioid antagonist dispensing by pharmacist—standing order. An authorized pharmacist may dispense an opioid antagonist pursuant to a standing order established by the department, which standing order can be found via the board’s website, or pursuant to a standing order authorized by an individual licensed health care professional in compliance with the requirements of this rule. An authorized pharmacist may only delegate the dispensing of an opioid antagonist to an authorized pharmacist-intern under the direct supervision of an authorized pharmacist. Nothing in this rule prohibits a prescriber or facility from establishing and implementing standing orders or protocols under the authority granted to the prescriber or facility.

39.7(1) Definitions. For the purposes of this rule, the following definitions shall apply:

“Authorized pharmacist” means an Iowa-licensed pharmacist who has completed the training requirements of this rule. “Authorized pharmacist” also includes an Iowa-registered pharmacist-intern who has completed the training requirements of this rule and is working under the direct supervision of an authorized Iowa-licensed pharmacist.

“Department” means the Iowa department of public health.

“First responder” means an emergency medical care provider, a registered nurse staffing an authorized service program under Iowa Code section 147A.12, a physician assistant staffing an
authorized service program under Iowa Code section 147A.13, a firefighter, or a peace officer as defined in Iowa Code section 801.4 who is trained and authorized to administer an opioid antagonist.

“Licensed health care professional” means a person licensed under Iowa Code chapter 148 to practice medicine and surgery or osteopathic medicine and surgery, an advanced registered nurse practitioner licensed under Iowa Code chapter 152 or 152E and registered with the board of nursing, or a physician assistant licensed to practice under the supervision of a physician as authorized in Iowa Code chapters 147 and 148C.

“Opioid antagonist” means the same as defined in Iowa Code section 147A.1.

“Opioid-related overdose” means the same as defined in Iowa Code section 147A.1.

“Person in a position to assist” means a family member, friend, caregiver, health care provider, employee of a substance abuse treatment facility, or other person who may be in a position to render aid to a person at risk of experiencing an opioid-related overdose.

“Recipient” means an individual at risk of an opioid-related overdose or a person in a position to assist an individual at risk of an opioid-related overdose.

“Standing order” means a preauthorized medication order with specific instructions from the licensed health care professional to dispense a medication under clearly defined circumstances.

39.7(2) Authorized pharmacist training. An authorized pharmacist shall document successful completion of an ACPE-approved continuing education program of at least one-hour duration related to opioid antagonist utilization prior to dispensing opioid antagonists pursuant to a standing order.

39.7(3) Additional supply. Notwithstanding a standing order to the contrary, an authorized pharmacist shall only dispense an opioid antagonist after completing an eligibility assessment and providing training and education to the recipient.

39.7(4) Assessment. An authorized pharmacist shall assess an individual for eligibility to receive an opioid antagonist pursuant to a standing order. In addition to the criteria identified in a standing order, an authorized pharmacist shall also take into consideration the following criteria to determine the eligibility of the recipient to receive and possess an opioid antagonist:

a. The person at risk of an opioid-related overdose for which the opioid antagonist is intended to be administered has no known sensitivity or allergy to naloxone, unless the person at risk is not known to the recipient, including but not limited to a first responder or a law enforcement officer.

b. The recipient is oriented to person, place, and time and able to understand and learn the essential components of opioid-related overdose, appropriate response, and opioid antagonist administration.

39.7(5) Recipient training and education. Upon assessment and determination that an individual is eligible to receive and possess an opioid antagonist pursuant to a standing order, an authorized pharmacist shall, prior to dispensing an opioid antagonist pursuant to a standing order, provide training and education to the recipient including, but not limited to, the information identified in this subrule. An authorized pharmacist shall require the recipient to attest that, if the product will be accessible to any other individual for administration, the recipient will make available to such individual all received training and education materials. An authorized pharmacist may provide to the recipient written materials that include, but may not be limited to, the information identified in this subrule, but the written materials shall not be in lieu of direct pharmacist consultation with the recipient.

a. The signs and symptoms of opioid-related overdose as described in the standing order.

b. The importance of calling 911 as soon as possible and the potential need for rescue breathing.

c. The appropriate use and directions for administration of the opioid antagonist to be dispensed pursuant to the standing order.

d. Adverse reactions of the opioid antagonist as well as reactions resulting from opioid withdrawal following administration.

e. The proper storage conditions, including temperature excursions, of the opioid antagonist being dispensed.

f. The expiration date of the opioid antagonist being dispensed and the appropriate disposal of the opioid antagonist upon expiration.

g. The prohibition of the recipient from further distributing the opioid antagonist to another individual, unless that individual has received appropriate training and education.
h. Information about substance abuse or behavioral health treatment programs.

39.7(6) Labeling. Upon the determination that a recipient is eligible to receive and possess an opioid antagonist, an authorized pharmacist shall label the product pursuant to rule 657—6.10(126,155A) and 657—subrule 8.19(8). An authorized pharmacist shall ensure that the labeling does not render the expiration date of the product illegible. The medication shall be dispensed in the name of the eligible recipient.

39.7(7) Reporting. A copy of the assessment form shall be submitted to the department as provided on the assessment form within seven days of the dispensing of the opioid antagonist or within seven days of a denial of eligibility.

39.7(8) Records. An authorized pharmacist shall create and maintain an original record of each individual assessment on forms provided by the board, regardless of the eligibility determination following assessment, and dispensing of opioid antagonists pursuant to a standing order. These records shall be available for inspection and copying by the board or its authorized agent for at least two years.

[ARC 3858C, IAB 6/20/18, effective 7/25/18]

657—39.8(155A) Medications administered via prescription.

39.8(1) Vaccine administration. A pharmacist who is authorized to administer vaccines pursuant to the statewide protocol may administer, including via delegation to authorized pharmacy personnel, any vaccine pursuant to a prescription or medication order for an individual patient. In case of a serious complication, the pharmacist shall notify the prescriber who authorized the prescription within 24 hours and shall submit a report to the Vaccine Adverse Event Reporting System (VAERS).

39.8(2) Medication administration. A pharmacist may administer, including via delegation to authorized pharmacy personnel if so delegated or authorized by the prescriber, any medication pursuant to a prescription or medication order for an individual patient. In case of a serious complication, the pharmacist shall notify the prescriber who issued the prescription within 24 hours and shall submit a report to the United States Food and Drug Administration Adverse Event Reporting System (FAERS).

[ARC 6076C, IAB 12/15/21, effective 1/19/22]

657—39.9(155A) Statewide protocol—nicotine replacement tobacco cessation products. Rescinded ARC 6076C, IAB 12/15/21, effective 1/19/22.

657—39.10(155A) Vaccine administration by pharmacists—physician-approved protocol. Rescinded ARC 6076C, IAB 12/15/21, effective 1/19/22.

657—39.11(155A) Vaccine administration by pharmacists—statewide protocol. Rescinded ARC 6076C, IAB 12/15/21, effective 1/19/22.

657—39.12 Reserved.

657—39.13(155A) Collaborative pharmacy practice.

39.13(1) Definitions. For the purpose of this rule, the following definitions shall apply:

“Collaborative pharmacy practice” means a practice of pharmacy whereby one or more pharmacists provides patient care and drug therapy management services not otherwise permitted to be performed by a pharmacist to patients under a collaborative pharmacy practice agreement with one or more practitioners which defines the nature, scope, conditions, and limitations of the patient care and drug therapy management services to be provided by the pharmacist(s) in order to ensure that a patient achieves the desired outcomes.

“Practitioner” means a physician, dentist, podiatric physician, veterinarian, optometrist, or advanced registered nurse practitioner who holds an active license to practice in Iowa.

39.13(2) Collaborative practice agreement.

a. Pursuant to these rules, a pharmacist or pharmacy may engage in collaborative pharmacy practice under a collaborative pharmacy practice agreement with one or more practitioners, or as
established by a health system pharmacy and therapeutics committee, to provide patient care and drug therapy management services to one or more patients.

b. A collaborative pharmacy practice agreement shall include:

   (1) The identification of the parties to the agreement, including the name(s) or category of the pharmacist(s), including registered pharmacist-intern(s) under the supervision of a pharmacist, who are authorized to perform delegated activities under the agreement and the name(s) or category of the practitioner(s) who are delegating activities under the agreement;

   (2) The establishment of the delegating practitioner’s scope of practice authorized in the agreement and a description of the permitted activities and decisions to be performed by the pharmacist(s);

   (3) The protocol, formulary, or clinical guidelines that describe or limit the pharmacist’s authority to perform the patient care or drug therapy management services and, as applicable, the drug name, class or category provided under drug therapy management;

   (4) A description of the process to monitor compliance with the agreement and clinical outcomes of patients;

   (5) The effective date;

   (6) A provision addressing termination of the agreement; and

   (7) The signatures of the parties to the agreement and dates of signing, unless established by a health system pharmacy and therapeutics committee.

c. Parties to the collaborative pharmacy practice agreement shall review and revise such agreement as appropriate, but no less than every two years.

d. Any collaborative pharmacy practice agreement shall be maintained by the pharmacist(s) or pharmacy and be available upon request or inspection.

e. Prior to engaging in patient care or drug therapy management services under a collaborative pharmacy practice agreement, including when the agreement is updated, each pharmacist practicing under the agreement shall attest that the pharmacist has read and understands the agreement. Documentation of pharmacist attestation shall be maintained for at least two years from the attestation date and be available upon request or inspection.

[ARC 6174C, IAB 2/9/22, effective 3/16/22]

657—39.14 and 39.15 Reserved.

657—39.16(155A) Pharmacy pilot or demonstration research projects. The purpose of this rule is to specify the procedures to be followed in applying for approval of a pilot or demonstration research project for innovative applications in the practice of pharmacy. In reviewing projects, the board will consider only projects that expand pharmaceutical care services that contribute to positive patient outcomes. The board will not consider any project intended only to provide a competitive advantage to a single applicant or group of applicants.

39.16(1) Definitions. For the purposes of this rule, the following definitions shall apply:

   “Act” means Iowa Code chapter 155A, the Iowa pharmacy practice Act.

   “Board” means the Iowa board of pharmacy.

   “Practice of pharmacy” means the practice of pharmacy as defined in Iowa Code section 155A.3(37).

   “Project” means a pilot or demonstration research project as described in this rule.

39.16(2) Scope of project. A project may not expand the definition of the practice of pharmacy. A project may include therapeutic substitution or substitution of medical devices used in patient care if such substitution is included under a collaborative pharmacy practice agreement pursuant to rule 657—39.13(155A).

39.16(3) Board approval of a project. Board approval of a project may include the grant of an exception to or a waiver of rules adopted under the Act or under any law relating to the authority of prescription verification and the ability of a pharmacist to provide enhanced patient care in the practice of pharmacy. Project approval, including exception to or waiver of board rules, shall initially be for a specified period of time not exceeding 18 months from commencement of the project. The board may
approve the extension or renewal of a project following consideration of a petition that clearly identifies the project, that includes a report similar to the final project report described in paragraph 39.16(6) “a.” that describes and explains any proposed changes to the originally approved and implemented project, and that justifies the need for extending or renewing the term of the project.

39.16(4) Applying for approval of a project. A person who wishes the board to consider approval of a project shall submit to the board a petition for approval that contains at least the following information:

a. Responsible pharmacist. Name, address, telephone number, and pharmacist license number of each pharmacist responsible for overseeing the project.

b. Location of project. Name, address, and telephone number of each specific location and, if a location is a pharmacy, the pharmacy license number where the proposed project will be conducted.

c. Project summary. A detailed summary of the proposed project that includes at least the following information:

(1) The goals, hypothesis, and objectives of the proposed project.

(2) A full explanation of the project and how it will be conducted.

(3) The time frame for the project including the proposed start date and length of study. The time frame may not exceed 18 months from the proposed start date of the project.

(4) Background information or literature review to support the proposed project.

(5) The rule or rules to be waived in order to complete the project and a request to waive the rule or rules.

(6) Procedures to be used during the project to ensure that the public health and safety are not compromised as a result of the waiver.

39.16(5) Review and approval or denial of a proposed project.

a. Staff review. Upon receipt of a petition for approval of a project, board staff shall initially review the petition for completeness and appropriateness. If the petition is incomplete or inappropriate for board consideration, board staff shall return the petition to the requestor with a letter explaining the reason the petition is being returned. A petition that has been returned pursuant to this paragraph may be amended or supplemented as necessary and submitted for reconsideration.

b. Board review. Upon review by the board of a petition for approval of a project, the board shall either approve or deny the petition. If the board approves the petition, the approval:

(1) Shall be specific for the project requested;

(2) Shall approve the project for a specific time period; and

(3) May include conditions or qualifications applicable to the project.

c. Inspection. The project site and project documentation shall be available for inspection and review by the board or its representative at any time during the project review and the approval or denial processes and, if a project is approved, throughout the approved term of the project.

d. Documentation maintained. Project documentation shall be maintained and available for inspection, review, and copying by the board or its representative for at least two years following completion or termination of the project.

39.16(6) Presentation of reports. The pharmacist responsible for overseeing a project shall be responsible for submitting to the board any reports required as a condition of a project, including the final project report.

a. Final project report. The final project report shall include a written summary of the results of the project and the conclusions drawn from those results. The final project report shall be submitted to the board within three months after completion or termination of the project.

b. Board review. The board shall receive and review any report regarding the progress of a project and the final project report at a regularly scheduled meeting of the board. The report shall be an item on the open session agenda for the meeting.

[ARC 3858C, IAB 6/20/18, effective 7/25/18; ARC 6076C, IAB 12/15/21, effective 1/19/22]

These rules are intended to implement Iowa Code sections 135.190, 147.76, 147A.18, 155A.2, 155A.3, 155A.13, 155A.33, and 155A.44; and 2011 Iowa Acts, chapter 63, section 36, as amended by 2012 Iowa Acts, chapter 1113, section 31, and by 2013 Iowa Acts, chapter 138, section 128.

[Filed ARC 3858C (Notice ARC 3509C, IAB 12/20/17), IAB 6/20/18, effective 7/25/18]
March 6, 2019, effective date of ARC 4270C [amendments to ch 39] delayed 70 days by the Administrative Rules Review Committee at its meeting held February 8, 2019; delay lifted at the meeting held April 5, 2019.
CHAPTER 607
COMMERCIAL DRIVER LICENSING

761—607.1(321) Scope. This chapter applies to licensing persons for the operation of commercial motor vehicles. Unless otherwise stated, the provisions of this chapter are in addition to other motor vehicle licensing rules.

This rule is intended to implement Iowa Code chapter 321.

761—607.2(17A) Information.

607.2(1) Information and location. Applications, forms and information about the commercial driver’s license (CDL) are available at any driver’s license service center. Assistance is also available by mail from the Motor Vehicle Division, Iowa Department of Transportation, P.O. Box 9204, Des Moines, Iowa 50306-9204; in person at 6310 SE Convenance Blvd., Ankeny, Iowa; by telephone at (515)244-8725; by facsimile at (515)239-1837; or on the department’s website at www.iowadot.gov.

607.2(2) Manual. A copy of a study manual for the commercial driver’s license tests is available upon request at any driver’s license service center and on the department’s website.

This rule is intended to implement Iowa Code section 17A.3.

[ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 3689C, IAB 3/14/18, effective 4/18/18; ARC 4986C, IAB 3/11/20, effective 4/15/20; ARC 6168C, IAB 2/9/22, effective 3/16/22]

761—607.3(321) Definitions. The definitions in Iowa Code section 321.1 apply to this chapter of rules. In addition, the following definitions are adopted:

“Air brake system” means a system that uses air as a medium for transmitting pressure or force from the driver’s control to the service brake. “Air brake system” shall include any braking system operating fully or partially on the air brake principle.

“Air over hydraulic brakes” means any braking system operating partially on the air brake and partially on the hydraulic brake principle.

“Automatic transmission” means any transmission other than a manual transmission.

“CDLIS” means “commercial driver’s license information system” as defined in Iowa Code section 321.1.

“Commercial driver’s license downgrade” or “CDL downgrade” means either:
1. The driver changes the driver’s self-certification of type of driving from non-excepted interstate to excepted interstate, non-excepted intrastate, or excepted intrastate driving, or
2. The department removed the CDL privilege from the driver’s license.

“Commercial motor vehicle” or “CMV” as defined in Iowa Code section 321.1 does not include a motor vehicle designed as off-road equipment rather than as a motor truck, such as a forklift, motor grader, scraper, tractor, trencher or similar industrial-type equipment. “Commercial motor vehicle” also does not include self-propelled implements of husbandry described in Iowa Code subsection 321.1(32).

“Controlled substance” as used in Iowa Code section 321.208 means a substance defined in Iowa Code section 124.101.

“Hazardous materials” means any material that has been designated as hazardous under 49 U.S.C. Section 5103 and is required to be placarded under 49 CFR Part 172, Subpart F, or any quantity of a material listed as a select agent or toxin in 42 CFR Part 73.

“Manual transmission” means a transmission utilizing a driver-operated clutch that is activated by a pedal or lever and a gear-shift mechanism operated either by hand or by foot. All other transmissions, whether semi-automatic or automatic, will be considered automatic.

“Medical examiner” means a person who is licensed, certified or registered, in accordance with applicable state laws and regulations, to perform physical examinations. The term includes but is not limited to doctors of medicine, doctors of osteopathy, physician assistants, advanced registered nurse practitioners, and doctors of chiropractic.

“Medical examiner’s certificate” means a certificate completed and signed by a medical examiner under the provisions of 49 CFR Section 391.43.
“Medical variance” means a driver has received one of the following from the Federal Motor Carrier Safety Administration that allows the driver to be issued a medical certificate:
1. An exemption letter permitting operation of a commercial motor vehicle pursuant to 49 CFR Part 381, Subpart C, or 49 CFR Section 391.62, or 49 CFR Section 391.64.
2. A skill performance evaluation certificate permitting operation of a commercial motor vehicle pursuant to 49 CFR Section 391.49.

“Passenger vehicle” means either of the following:
1. A motor vehicle designed to transport 16 or more persons including the operator.
2. A motor vehicle of a size and design to transport 16 or more persons including the operator which is redesigned or modified to transport fewer than 16 persons with disabilities. The size of a redesigned or modified vehicle shall be any such vehicle with a gross vehicle weight rating of 10,001 or more pounds.

“School bus” means a commercial motor vehicle used to transport pre-primary, primary, or secondary school students from home to school, from school to home, or to and from school-sponsored events unless otherwise provided in Iowa Code section 321.1(69). “School bus” does not include a bus used as a common carrier.

“Self-certification” means a written certification of which category of type of driving an applicant for a commercial driver’s license engages in or intends to engage in, from the following categories:
1. Non-excepted interstate. The person certifies that the person operates or expects to operate in interstate commerce, is both subject to and meets the qualification requirements under 49 CFR Part 391, and is required to obtain a medical examiner’s certificate by 49 CFR Section 391.45.
2. Excepted interstate. The person certifies that the person operates or expects to operate in interstate commerce, but engages exclusively in transportation or operations excepted under 49 CFR Section 390.3(f), 391.2, 391.68 or 398.3 from all or parts of the qualification requirements of 49 CFR Part 391, and is therefore not required to obtain a medical examiner’s certificate by 49 CFR Section 391.45.
3. Non-excepted intrastate. The person certifies that the person operates only in intrastate commerce and is subject to state driver qualification requirements.
4. Excepted intrastate. The person certifies that the person operates only in intrastate commerce, but engages exclusively in transportation or operations excepted from all or parts of the state driver qualification requirements as set forth in Iowa Code section 321.449.

“State,” as used in this chapter and in “another state” in Iowa Code subsection 321.174(2), “former state of residence” in Iowa Code subsection 321.188(5), or “any state” in Iowa Code subsection 321.208(1), means one of the United States or the District of Columbia unless the context means the state of Iowa.

This rule is intended to implement Iowa Code sections 321.1, 321.174, 321.188, 321.191, 321.193, 321.207 and 321.208.

[ARC 7902B, IAB 7/1/09, effective 8/5/09; ARC 9954B, IAB 1/11/12, effective 1/30/12; ARC 0031C, IAB 3/7/12, effective 4/1/12; ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 4986C, IAB 3/11/20, effective 4/15/20]
a commercial motor vehicle shall be maintained as provided in the department’s “Record Management Manual” adopted in 761—Chapter 4.

This rule is intended to implement Iowa Code sections 22.11, 321.12 and 321.199.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16]

761—607.8 and 607.9 Reserved.

761—607.10(321) Adoption of federal regulations.

607.10(1) Code of Federal Regulations. The department’s administration of commercial driver’s licenses shall be in compliance with the state procedures set forth in 49 CFR Section 383.73, and this chapter shall be construed to that effect. The department adopts the following portions of the Code of Federal Regulations which are referenced throughout this chapter of rules:

a. 49 CFR Section 391.11 as adopted in 761—Chapter 520.

b. 49 CFR Section 392.5 as adopted in 761—Chapter 520.

c. 49 CFR Part 380, Subpart F.

d. The following portions of 49 CFR Part 383 (October 1, 2020):

(1) Section 383.51, Disqualification of drivers.

(2) Subpart E—Testing and Licensing Procedures.

(3) Subpart G—Required Knowledge and Skills.

(4) Subpart H—Tests.

607.10(2) Copies of regulations. Copies of the federal regulations may be reviewed at the state law library or through the Internet at www.fmcsa.dot.gov.

This rule is intended to implement Iowa Code sections 321.187, 321.188, 321.207, 321.208 and 321.208A.

[ARC 7902B, IAB 7/1/09, effective 8/5/09; ARC 9954B, IAB 1/11/12, effective 1/30/12; ARC 0031C, IAB 3/7/12, effective 4/11/12; ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 2986C, IAB 3/15/17, effective 4/19/17; ARC 3840C, IAB 6/6/18, effective 7/11/18; ARC 4401C, IAB 4/10/19, effective 5/5/19; ARC 4986C, IAB 3/11/20, effective 4/15/20; ARC 5018C, IAB 4/8/20, effective 5/13/20; ARC 5547C, IAB 4/7/21, effective 5/12/21]

761—607.11 to 607.14 Reserved.

761—607.15(321) Application. An applicant for a commercial driver’s license shall comply with the requirements of Iowa Code sections 321.180(2) “c,” 321.182 and 321.188, and 761—Chapter 601, and must provide the proofs of citizenship or lawful permanent residence and state of domicile required by 49 CFR Section 383.71. If the applicant is domiciled in a foreign jurisdiction and applying for a nondomiciled commercial driver’s license, the applicant must provide a document required by 49 CFR Section 383.71(f).

This rule is intended to implement Iowa Code sections 321.180, 321.182 and 321.188.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16]

761—607.16(321) Commercial driver’s license (CDL).

607.16(1) Classes. The department may issue a commercial driver’s license only as a Class A, B or C driver’s license. The license class identifies the types of vehicles that may be operated. A commercial driver’s license may have endorsements which authorize additional vehicle operations or restrictions which limit vehicle operations.

607.16(2) Validity.

a. A Class A commercial driver’s license allows a person to operate a combination of commercial motor vehicles as specified in Iowa Code section 321.189(1) “a.” With the required endorsements and subject to the applicable restrictions, a Class A commercial driver’s license is valid to operate any vehicle. Before the department administers the skills test for a Class A commercial driver’s license to an applicant for the first time, the applicant must comply with the entry-level driver training requirements as provided in Iowa Code section 321.188.

b. A Class B commercial driver’s license allows a person to operate a commercial motor vehicle as specified in Iowa Code section 321.189(1) “b.” With the required endorsements and subject to the
applicable restrictions, a Class B commercial driver’s license is valid to operate any vehicle except
a truck-tractor semitrailer combination as a chauffeur (Class D) or a vehicle requiring a Class A
commercial driver’s license. Before the department administers the skills test for a Class B commercial
driver’s license to an applicant for the first time, the applicant must comply with the entry-level driver
training requirements as provided in Iowa Code section 321.188.

  c. A Class C commercial driver’s license allows a person to operate a commercial motor vehicle
as specified in Iowa Code section 321.189(1) “c.” With the required endorsements and subject to the
applicable restrictions, a Class C commercial driver’s license is valid to operate any vehicle except a
vehicle requiring a Class A or Class B commercial driver’s license.

d. A commercial driver’s license is valid for operating a motorcycle as a commercial motor vehicle
only if the license has a motorcycle endorsement and a hazardous material endorsement. A commercial
driver’s license is valid for operating a motorcycle as a noncommercial motor vehicle only if the license
has a motorcycle endorsement.

e. A commercial driver’s license valid for eight years shall be issued to a qualified applicant who
is at least 18 years of age but not yet 78 years of age. However, the expiration date of the license issued
shall not exceed the licensee’s 80th birthday.

f. A commercial driver’s license valid for two years shall be issued to a qualified applicant 78
years of age or older. A two-year license may also be issued, at the discretion of the department, to an
applicant whose license is restricted due to vision or other physical disabilities.

g. A commercial driver’s license is valid for 60 days after the expiration date.

h. A person with a commercial driver’s license valid for the vehicle operated is not required to
obtain a Class D driver’s license to operate the vehicle as a chauffeur.

607.16(3) Requirements.

a. The minimum age to obtain a commercial driver’s license is set out in 49 CFR, Part 391, Subpart
B, except that, for a person operating solely intrastate, the driver age qualifications are set out in Iowa
Code section 321.449(3).

b. The applicant shall meet the requirements set forth in rule 761—607.15(321).

607.16(4) Transition from five-year to eight-year licenses. During the period January 1, 2014, to
December 31, 2018, the department shall issue qualified applicants otherwise eligible for an eight-year
license a five-year, six-year, seven-year, or eight-year license, subject to all applicable limitations for
age and ability. The applicable period shall be randomly assigned to the applicant by the department’s
computerized issuance system based on a distribution formula intended to spread renewal volumes as
equally as practical over the eight-year period beginning January 1, 2019, and ending December 31,
2026.

607.16(5) License extension.

a. As provided in 49 CFR Section 383.153, a person may apply for a 60-day extension of a
commercial driver’s license if the person:

(1) Has a valid license,
(2) Is eligible for further licensing, and
(3) Is temporarily absent from Iowa or is temporarily incapacitated at the time for renewal.

b. The person shall apply for an extension by submitting Form 430027 to the department. The
form may be obtained from and submitted to a driver’s license service center. The person may also
apply by letter to the address in 761—paragraph 605.12(1) “a.”

c. A 60-day extension shall be added to the expiration date on the license. When the person
appears to renew the license, the expiration date of the renewed license will be computed from the
expiration date of the original license, notwithstanding the extension.

d. The department shall allow only one 60-day extension.

This rule is intended to implement Iowa Code sections 321.1(8) as amended by 2021 Iowa Acts,
House File 389, 321.177, 321.182, 321.188, 321.189, 321.196, and 321.449 and 2013 Iowa Acts, chapter
104, section 2.

[ARC 1714C, IAB 11/12/14, effective 12/17/14; ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective
2/10/16; ARC 4986C, IAB 3/11/20, effective 4/15/20; ARC 5495C, IAB 3/10/21, effective 4/14/21; ARC 5942C, IAB 10/6/21,
effective 11/10/21]
Endorsements. All endorsements except the hazardous material endorsement continue to be valid without retesting or additional fees when renewing or upgrading a license. The endorsements that authorize additional commercial motor vehicle operations with a commercial driver’s license are:

607.17(1) Hazardous material. A hazardous material endorsement (H) is required to transport hazardous materials. The hazardous material endorsement is only valid when the applicant or holder of the endorsement complies with the Transportation Security Administration’s security threat assessment standards specified in 49 CFR Sections 383.71(b)(8) and 383.141. Before the department administers the knowledge test for a hazardous material endorsement to an applicant for the first time, the applicant shall comply with the entry-level driver training requirements as provided in Iowa Code section 321.188. To obtain or retain the hazardous material endorsement, the applicant or holder must pass a knowledge test as required under 49 CFR Section 383.121 and pay the endorsement fee. Retesting and fee payment are also required when an applicant transfers a commercial driver’s license from another state unless, as provided in 49 CFR Section 383.73, the transfer applicant provides evidence of passing the knowledge test as required under 49 CFR Section 383.121 within the preceding 24 months. A farmer or a person working for a farmer is not subject to the hazardous material endorsement while operating either a pickup or a special truck within 150 air miles of the farmer’s farm to transport supplies to or from the farm.

607.17(2) Passenger vehicle. A passenger vehicle endorsement (P) is required to operate a passenger vehicle as defined in rule 761—607.3(321). Before the department administers the skills test for a passenger vehicle endorsement to an applicant for the first time, the applicant shall comply with the entry-level driver training requirements as provided in Iowa Code section 321.188.

607.17(3) Tank vehicle. A tank vehicle endorsement (N) is required to operate a tank vehicle as defined in Iowa Code section 321.1. A vehicle transporting a tank, regardless of the tank’s capacity, which does not otherwise meet the definition of a commercial motor vehicle in Iowa Code section 321.1 is not a tank vehicle.

607.17(4) Double/triple trailer. A double/triple trailer endorsement (T) is required to operate a commercial motor vehicle with two or more towed trailers when the combination of vehicles meets the criteria for a Class A commercial motor vehicle. Operation of a triple trailer combination vehicle is not permitted in Iowa.

607.17(5) Hazardous material and tank. A combined endorsement (X) authorizes both hazardous material and tank vehicle operations.

607.17(6) School bus. A school bus endorsement (S) is required to operate a school bus as defined in rule 761—607.3(321). An applicant for a school bus endorsement must also qualify for a passenger vehicle endorsement. Before the department administers the skills test for a school bus endorsement to an applicant for the first time, the applicant shall comply with the entry-level driver training requirements as provided in Iowa Code section 321.188.

607.17(7) Exceptions for towing operations.

a. A driver who tows a vehicle in an emergency “first move” from the site of a vehicle malfunction or accident on a highway to the nearest appropriate repair facility is not required to have the endorsement(s) applicable to the towed vehicle. In any subsequent move, a driver who tows a vehicle from one repair or disposal facility to another is required to have the endorsement(s) applicable to the towed vehicle with one exception: A tow truck driver is not required to have a passenger endorsement to tow a passenger vehicle.

b. The double/triple trailer endorsement is not required to operate a commercial motor vehicle with two or more towed vehicles that are not trailers.

This rule is intended to implement Iowa Code sections 321.1, 321.176A, 321.188 and 321.189.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 4986C, IAB 3/11/20, effective 4/15/20]

Restrictions. The restrictions that may limit commercial motor vehicle operation with a commercial driver’s license are listed in 761—subrule 605.8(3) and are explained below:
607.18(1) Air brake. The air brake restriction (L, no air brake equipped CMV) applies to a licensee who either fails the air brake component of the knowledge test or performs the skills test in a vehicle not equipped with air brakes and prohibits the operation of a commercial motor vehicle equipped with an air brake system until the licensee passes the required air brake tests and pays the fee for upgrading the license. Retesting and fee payment are not required when the license is renewed.

607.18(2) Full air brake. The full air brake restriction (Z, no full air brake equipped CMV) applies to a licensee who performs the skills test in a vehicle equipped with air over hydraulic brakes and prohibits the operation of a commercial motor vehicle equipped with any braking system operating fully on the air brake principle until the licensee passes the required air brake tests and pays the fee for upgrading the license. Retesting and fee payment are not required when the license is renewed.

607.18(3) Manual transmission. The manual transmission restriction (E, no manual transmission equipped CMV) applies to a licensee who performs the skills test in a vehicle equipped with automatic transmission and prohibits the operation of a commercial motor vehicle equipped with a manual transmission until the licensee passes the required tests and pays the fee for upgrading the license. Retesting and fee payment are not required when the license is renewed.

607.18(4) Tractor-trailer. The tractor-trailer restriction (O, no tractor trailer CMV) applies to a licensee who performs the skills test in a combination vehicle for a Class A commercial driver’s license with the power unit and towed unit connected with a pintle hook or other non-fifth wheel connection and prohibits operation of a tractor-trailer combination connected by a fifth wheel that requires a Class A commercial driver’s license until the licensee passes the required tests and pays the fee for upgrading the license. Retesting and fee payment are not required when the license is renewed.

607.18(5) Class A passenger vehicle. The Class A passenger vehicle restriction (M, no Class A passenger vehicle) applies to a licensee who applies for a passenger endorsement and performs the skills test in a passenger vehicle that requires a Class B commercial driver’s license and prohibits operation of a passenger vehicle that requires a Class A commercial driver’s license.

607.18(6) Class A and B passenger vehicle. The Class A and B passenger vehicle restriction (N, no Class A and B passenger vehicle) applies to a licensee who applies for a passenger endorsement and performs the skills test in a passenger vehicle that requires a Class C commercial driver’s license and prohibits operation of a passenger vehicle that requires a Class A or Class B commercial driver’s license.

607.18(7) Intrastate only. The intrastate only restriction (K, intrastate only) applies to a licensee who self-certifies to non-excepted intrastate or excepted intrastate driving and prohibits the operation of a commercial motor vehicle in interstate commerce.

607.18(8) Medical variance. The medical variance restriction (V, medical variance) applies to a licensee when the department is notified pursuant to 49 CFR Section 383.73(o)(3) that the driver has been issued a medical variance and indicates there is information about a medical variance on the CDLIS driver record.

This rule is intended to implement Iowa Code sections 321.189 and 321.191.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 4586C, IAB 7/31/19, effective 9/4/19]

761—607.19 Reserved.

761—607.20(321) Commercial learner’s permit.

607.20(1) Validity.

a. A commercial learner’s permit allows the permit holder to operate a commercial motor vehicle when accompanied as required by Iowa Code section 321.180(2) “d.”

b. A commercial learner’s permit is valid for one year without retaking the general and endorsement knowledge tests required by Iowa Code section 321.188.

c. A commercial learner’s permit is invalid after the expiration date of the underlying commercial or noncommercial driver’s license issued to the permit holder or the expiration date of the permit whichever occurs first.

d. The issuance of a commercial learner’s permit is a precondition to the initial issuance of a commercial driver’s license. The issuance of a commercial learner’s permit is also a precondition to
the upgrade of a commercial driver’s license if the upgrade requires a skills test. If the permit holder is subject to the requirement to complete entry-level driver training as provided in Iowa Code section 321.188, the permit holder shall complete the training after the permit holder obtains the commercial learner’s permit, but before the permit holder takes the required skills test. The holder of a commercial learner’s permit is not eligible to take a required driving skills test for the first 14 days after the permit holder is issued the permit. The 14-day period includes the day the commercial learner’s permit was issued.

**EXAMPLE:** The commercial learner’s permit is issued on September 1. The earliest date the permit holder would be eligible to take the skills test is September 15.

**e.** A commercial learner’s permit is not valid for the operation of a vehicle transporting hazardous materials.

607.20(2) **Requirements.**

a. An applicant for a commercial learner’s permit must hold a valid Class A, B, C, or D driver’s license issued in this state that is not an instruction permit, a special instruction permit, a motorized bicycle license or a temporary restricted license; must be at least 18 years of age; and must meet the requirements to obtain a valid commercial driver’s license, including the requirements set forth in Iowa Code section 321.188. However, the applicant does not have to complete the driving skills tests required for a commercial driver’s license to obtain a commercial learner’s permit.

b. The applicant must successfully pass a general knowledge test that meets the federal standards contained in 49 CFR Part 383, Subparts F, G and H, for the commercial motor vehicle the applicant operates or expects to operate, including any endorsement for which the applicant applies.

607.20(3) **Endorsements.** A commercial learner’s permit may include the following endorsements. All other endorsements are prohibited on a commercial learner’s permit.

a. An applicant for a passenger endorsement (P) must take and pass the passenger endorsement knowledge test. A commercial learner’s permit holder with a passenger endorsement is prohibited from operating a commercial motor vehicle carrying passengers, other than federal/state auditors and inspectors, test examiners, other trainees, and the commercial driver’s license holder accompanying the permit holder required by Iowa Code section 321.180(2)”d.”

b. An applicant for a school bus endorsement (S) must take and pass the school bus endorsement knowledge test. A commercial learner’s permit holder with a school bus endorsement is prohibited from operating a commercial motor vehicle carrying passengers, other than federal/state auditors and inspectors, test examiners, other trainees, and the commercial driver’s license holder accompanying the permit holder required by Iowa Code section 321.180(2)”d.”

c. An applicant for a tank vehicle endorsement (N) must take and pass the tank vehicle endorsement knowledge test. A commercial learner’s permit holder with a tank vehicle endorsement may only operate an empty tank vehicle and is prohibited from operating any tank vehicle that previously contained materials that has not been purged of any residue.

607.20(4) **Restrictions.** A commercial learner’s permit may include the air brake (L), medical variance (V), Class A passenger vehicle (M), Class A and B passenger vehicle (N) and intrastate only (K) restrictions described in rule 761—607.18(321). In addition, a commercial learner’s permit may include the following restrictions that are specific to the commercial learner’s permit:

a. **Passenger.** The passenger restriction (P, no passengers in CMV bus) applies to a permit holder who has a commercial learner’s permit with a passenger or school bus endorsement and prohibits the operation of a commercial motor vehicle carrying passengers, other than federal/state auditors and inspectors, test examiners, other trainees, and the commercial driver’s license holder accompanying the permit holder required by Iowa Code section 321.180(2)”d.”

b. **Cargo.** The cargo restriction (X, no cargo in CMV tank vehicle) applies to a permit holder who has a commercial learner’s permit with a tank vehicle endorsement and prohibits the operation of any
tank vehicle containing cargo or any tank vehicle that previously contained hazardous materials that has not been purged of any residue.

This rule is intended to implement Iowa Code sections 321.180, 321.186 and 321.188.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 3689C, IAB 3/14/18, effective 4/18/18; ARC 4986C, IAB 3/11/20, effective 4/15/20]

761—607.21 to 607.24  Reserved.

761—607.25(321) Examination for a commercial driver’s license. In addition to the requirements of 761—Chapter 604, an applicant for a commercial driver’s license shall pass the knowledge and skills tests as required in 49 CFR Part 383, Subparts G and H.

This rule is intended to implement Iowa Code section 321.186.

761—607.26(321) Vision screening. An applicant for a commercial driver’s license or commercial learner’s permit must pass a vision screening test administered by the department. The vision standards are given in 761—604.11(321).

This rule is intended to implement Iowa Code sections 321.186 and 321.186A.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16]

761—607.27(321) Knowledge tests.

607.27(1) General knowledge test. The general knowledge test for a commercial driver’s license is a written test of topics such as vehicle inspection, operation, safety and control in accordance with 49 CFR Section 383.111.

607.27(2) Additional tests. In addition to the general knowledge test for a commercial driver’s license, an additional knowledge test is required for each of the following:

a. Class A license for combination vehicle operation as required in 49 CFR Section 383.111.

b. Hazardous material endorsement as required in 49 CFR Section 383.121. The knowledge test for a hazardous material endorsement shall not be administered orally or in a language other than English.

c. Passenger vehicle endorsement as required in 49 CFR Section 383.117.

d. Tank vehicle endorsement as required in 49 CFR Section 383.119.

e. Double/triple trailer endorsement as required in 49 CFR Section 383.115.

f. School bus endorsement as required in 49 CFR Section 383.123. The applicant must also qualify for a passenger vehicle endorsement.

g. Removal of the air brake restriction as required in 49 CFR Section 383.111.

607.27(3) Test methods. All knowledge tests shall be administered in compliance with 49 CFR Section 383.133(b). All tests other than the hazardous material endorsement test may be administered in written form, verbally, or in automated format and can be administered in a foreign language, provided no interpreter is used in administering the test. A verbal test shall be offered only at specified locations. Information about the locations is available at any driver’s license service center.

607.27(4) Waiver. A waiver of any knowledge test is permitted only as provided in Iowa Code section 321.188(5) and this chapter. The burden of proof of having passed the hazardous material endorsement test within the preceding 24 months rests with the applicant.

607.27(5) Military waiver. The department may waive the requirement that an applicant pass a required knowledge test for an applicant who is a current or former military service member as defined in 49 CFR Section 383.5. An applicant for a waiver of the knowledge test under this subrule shall certify and provide evidence, as required by the department, that the following apply:

a. The applicant is regularly employed or was regularly employed within the past year in a military position specifically designated in 49 CFR Section 383.77.

b. The applicant is or was operating a vehicle representative of the commercial motor vehicle the applicant operates or expects to operate immediately preceding honorable separation from military service as evidenced by the applicant’s certificate of release or discharge from active duty, commonly referred to as a DD form 214.

c. The applicant has not had more than one driver’s license, other than a military license.
d. The applicant has not had any driver’s license suspended, revoked, or canceled.

e. The applicant has not been convicted of an offense committed while operating any type of motor vehicle that is listed as a disqualifying offense in 49 CFR Section 383.51(b).

f. The applicant has not had more than one conviction for an offense committed while operating any type of motor vehicle that is listed as a serious traffic violation in 49 CFR Section 383.51(c).

g. The applicant has not had a conviction for violation of a military, state, or local law relating to motor vehicle traffic control, other than a parking violation, arising in connection with any traffic accident, and has no record of an accident in which the applicant was at fault.

607.27(6) Requirement. An applicant must pass the applicable knowledge test(s) before taking the skills test. Passing scores for a knowledge test shall meet the standards contained in 49 CFR Section 383.135(a).

This rule is intended to implement Iowa Code sections 321.186 and 321.188.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/1/16, effective 6/15/16; ARC 4986C, IAB 3/1/20, effective 4/15/20]

761—607.28(321) Skills test.

607.28(1) Content. The skills test for a commercial driver’s license is a three-part test as required in 49 CFR Part 383, Subparts E, G and H.

607.28(2) Test methods. All skills tests shall be administered in compliance with 49 CFR Section 383.133(c). Interpreters are prohibited during the administration of skills tests. Applicants must be able to understand and respond to verbal commands and instructions in English by a skills test examiner. Neither the applicant nor the examiner may communicate in a language other than English during the skills test.

607.28(3) Order. The skills test must be administered and successfully completed in the following order: pre-trip inspection, basic vehicle control skills, on-road skills. If an applicant fails one segment of the skills test, the applicant cannot continue to the next segment of the test, and scores for the passed segments of the test are only valid during initial issuance of the commercial learner’s permit.

607.28(4) Vehicle. The applicant shall provide a representative vehicle for the skills test. “Representative vehicle” means a commercial motor vehicle that meets the statutory description for the class of license applied for.

a. To obtain a passenger vehicle endorsement applicable to a specific vehicle class, the applicant must take the skills test in a passenger vehicle, as defined in rule 761—607.3(321), satisfying the requirements of that class, as required in 49 CFR Section 383.117.

b. To obtain a school bus endorsement, the applicant must qualify for a passenger vehicle endorsement and take the skills test in a school bus, as defined in rule 761—607.3(321), in the same vehicle class as the applicant will drive, as required in 49 CFR Section 383.123.

c. To obtain a tank endorsement, the applicant must take the skills test in a representative vehicle for the class of license applied for, but the representative vehicle is not required to be a tank vehicle.

d. To remove an air brake or full air brake restriction, the applicant must take the skills test in a vehicle equipped with an air brake system, as defined in rule 761—607.3(321) and as required in 49 CFR Section 383.113.

e. To remove a manual transmission restriction, the applicant must take the on-road segment of the skills test in a vehicle equipped with a manual transmission, as defined in rule 761—607.3(321).

607.28(5) Skills test scoring. Passing scores for a skills test shall meet the standards contained in 49 CFR Section 383.135(b).

607.28(6) Military waiver. The department may waive the requirement that an applicant pass a required skills test for an applicant who is on active duty in the military service or who has separated from such service in the past year, provided the applicant meets the requirements of Iowa Code subsection 321.188(6).

607.28(7) Locations. The skills test for a commercial driver’s license shall be given only at specified locations where adequate testing facilities are available. An applicant may contact any driver’s license service center for the location of the nearest skills testing center.
607.28(8) Fees. Fees authorized pursuant to Iowa Code sections 321.187A and 321M.6A will be collected by the department or a county treasurer location offering commercial driver’s license skills tests.

a. Except as provided in paragraph 607.28(8)“c,” the fee for an applicant to schedule the pre-trip vehicle inspection segment of the skills test with the department is $25. No fees are due to the department for scheduling the basic vehicle control skills or on-road skills segment of the test.

b. Except as provided in paragraph 607.28(8)“c,” the fee to schedule the pre-trip vehicle inspection segment of the skills test with a county treasurer is $25. The fee for a county treasurer to administer the basic vehicle control skills segment is $25, and the fee to administer the on-road skills segment of the test is $25. However, if the applicant fails one segment of the driving skills test, no fee shall be due for a subsequent segment of the test.

c. If the applicant is an employee or volunteer of a government agency as defined in Iowa Code section 553.3, the following shall apply:

1. The department shall not charge the pre-trip inspection scheduling fee under paragraph 607.28(8)“a.”

2. A county treasurer may charge only the pre-trip inspection fee under paragraph 607.28(8)“b.”

3. An applicant must provide the department or county treasurer with reasonable proof that the applicant is an employee or volunteer of a qualifying government agency and that a commercial driver’s license is necessary for the applicant’s employment or volunteer duties. Reasonable proof shall be provided on Form 430311. Alternatively, if the applicant is seeking a skills test from a county treasurer, reasonable proof may include payment of the pre-trip inspection fee by a government agency on behalf of the applicant.

d. If an applicant fails to appear for the pre-trip inspection segment of the skills test, the appointment shall be canceled and no other applicable fees are due.

e. Except as provided in paragraph 607.28(8)“g,” new fees will apply if an applicant schedules a new skills test appointment.

f. The department or a county treasurer may collect any fees due and owed for the skills test at the same time any fees are collected as part of the commercial driver’s license issuance transaction.

g. Any fees collected under this subrule are nonrefundable. However, nothing in this paragraph shall be construed as preventing the department or a county treasurer from transferring a fee charged for a pre-trip inspection to a new pre-trip inspection if rescheduling the appointment is determined necessary or appropriate as determined by the department or county treasurer upon a showing of good cause.

h. A skills test fee charged under this subrule that remains unpaid may be collected at the person’s next driver’s license renewal or replacement.

This rule is intended to implement Iowa Code sections 321.186, 321.187A, 321.188 and 321M.6A. [ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 3689C, IAB 3/14/18, effective 4/18/18; ARC 4986C, IAB 3/11/20, effective 4/15/20; ARC 5547C, IAB 4/7/21, effective 5/12/21; ARC 6168C, IAB 2/9/22, effective 3/16/22]


761—607.30(321) Third-party testing.

607.30(1) Purpose and definitions. The skills test required by rule 761—607.28(321) may be administered by third-party testers and third-party skills test examiners approved and certified by the department. For the purpose of administering third-party skills testing and this rule, the following definitions shall apply:

“Community college” means an Iowa community college established under Iowa Code chapter 260C.

“Iowa-based motor carrier” means a motor carrier or its subsidiary that has its principal place of business in the state of Iowa and operates a permanent commercial driver training facility in the state of Iowa.

“Iowa nonprofit corporation” means a nonprofit corporation that serves as a trade association for Iowa-based motor carriers.
"Motor carrier" means the same as defined in 49 CFR Section 390.5.

"Permanent commercial driver training facility" means a facility dedicated to a program of commercial driving instruction that is offered to employees or potential employees of the motor carrier as an incident to the motor carrier’s commercial operations, that requires at least 40 hours of instruction, and that includes fixed and permanent structures and facilities for the off-road portions of commercial driving instruction, including classroom, pretrip inspection, and basic vehicle control skills. A permanent commercial driver training facility must include a fixed and paved or otherwise hard-surfaced area for basic vehicle control skills testing that is permanently marked and capable of inspection and measurement by the department.

"Skills test" means the skills test required by rule 761—607.28(321).

"Subsidiary” means a company that is partly or wholly owned by a motor carrier that holds a controlling interest in the subsidiary company.

"Third-party skills test examiner” means the same as defined in 49 CFR Section 383.5.

"Third-party tester” means the same as defined in 49 CFR Section 383.5.

607.30(2) Certification of third-party testers.

a. The department may certify as a third-party tester a community college, Iowa-based motor carrier or Iowa nonprofit corporation to administer skills tests. A community college, Iowa-based motor carrier or Iowa nonprofit corporation that seeks certification as a third-party tester shall contact the motor vehicle division and schedule a review of the proposed testing program, which shall include the proposed testing courses and facilities, information sufficient to identify all proposed third-party skills test examiners, and any other information necessary to demonstrate compliance with 49 CFR Section 383.75.

b. No community college, Iowa-based motor carrier or Iowa nonprofit corporation shall be certified to conduct third-party testing unless and until the community college, Iowa-based motor carrier or Iowa nonprofit corporation enters an agreement with the department that meets the requirements of 49 CFR Section 383.75 and demonstrates sufficient ability to conduct skills tests in a manner that consistently meets the requirements of 49 CFR Section 383.75.

c. The department shall issue a certified third-party tester a certificate of authority that identifies the classes and types of vehicles for which skills tests may be administered. The certificate shall be valid for the duration of the agreement executed pursuant to paragraph 607.30(2) “b,” unless revoked by the department for engaging in fraudulent activities related to conducting skills tests or failing to comply with the requirements, qualifications, and standards of this chapter, the agreement, or 49 CFR Section 383.75.

607.30(3) Certification of third-party skills test examiners.

a. A certified third-party tester shall not employ or otherwise use as a third-party skills test examiner a person who has not been approved and certified by the department to administer skills tests. Each certified third-party tester shall submit for approval the names of all proposed third-party skills test examiners to the department. The department shall not approve as a third-party skills test examiner a person who does not meet the requirements, qualifications and standards of 49 CFR Sections 383.75 and 384.228, including but not limited to all required training and examination and a nationwide criminal background check. The criteria for passing the nationwide criminal background check shall include no felony convictions within the last ten years and no convictions involving fraudulent activities.

b. The department shall issue a certificate of authority for each person certified as a third-party skills test examiner that identifies the certified third-party tester for which the person will administer skills tests and the classes and types of vehicles for which the person may administer skills tests. The certificate shall be valid for a period of four years from the date of issuance of the certificate.

c. The department shall revoke the certificate if the person holding the certificate does not administer skills tests to at least ten different applicants per calendar year; does not successfully complete the refresher training required by 49 CFR Section 384.228 every four years; is involved in fraudulent activities related to conducting skills tests; or otherwise fails to comply with and meet the requirements, qualifications and standards of this chapter or 49 CFR Sections 383.75 and 384.228. Notwithstanding anything in this paragraph to the contrary, as provided in 49 CFR Section 383.75,
if the person does not administer skills tests to at least ten different applicants per calendar year, the certificate will not be revoked for that reason if the person provides proof of completion of the examiner refresher training in 49 CFR Section 384.228 to the department or successfully completes one skills test under the observation of a department examiner.

d. A third-party skills test examiner who is also a skills instructor shall not administer a skills test to an applicant who received skills training from that third-party skills test examiner.

e. A third-party skills test examiner may only administer CDL skills tests for the examiner’s primary employer, unless authorized by the department to administer CDL skills tests for another county or third-party tester.

607.30(4) Bond. As a condition of certification, an Iowa-based motor carrier or Iowa nonprofit corporation must maintain a bond in the amount of $50,000 to pay for the retesting of drivers in the event that the third-party tester or one or more of its third-party skills test examiners are involved in fraudulent activities related to conducting skills tests of applicants for a commercial driver’s license.

607.30(5) Limitation applicable to Iowa-based motor carriers. An Iowa-based motor carrier certified as a third-party tester may only administer the skills test to persons who are enrolled in the Iowa-based motor carrier’s commercial driving instruction program and shall not administer skills tests to persons who are not enrolled in that program.

607.30(6) Training and refresher training for third-party skills test examiners. All training and refresher training required under this rule shall be provided by the department, in form and content that meet the recommendations of the American Association of Motor Vehicle Administrators’ International Third-Party Examiner/Tester Certification Program.

This rule is intended to implement Iowa Code section 321.187.

761—607.31(321) Test results.

607.31(1) Period of validity. Passing knowledge and skills test results shall remain valid for a period of one year.

607.31(2) Retesting. Subject to rule 761—607.28(321), an applicant shall be required to repeat only the knowledge test(s) or part(s) of the skills test that the applicant failed. An applicant who fails a test shall not be permitted to repeat that test the same day. An applicant may be required to repeat a test if the department determines the test was improperly administered.

607.31(3) Skills test results from other states. As required by 49 CFR Section 383.79, the department shall accept the valid results of a skills test administered to an applicant who is domiciled in the state of Iowa and that was administered by another state, in accordance with 49 CFR Part 383, Subparts F, G and H, in fulfillment of the applicant’s testing requirements under 49 CFR Section 383.71 and the state’s test administration requirements under 49 CFR Section 383.73. The results must be transmitted directly from the testing state to the department as required by 49 CFR Section 383.79.

607.31(4) Skills test results from certified third-party testers. A third-party skills tester certified under rule 761—607.30(321) shall transmit the skills test results of tests administered by the third-party tester through secure electronic means determined by the department. The department may retest any person who has passed a skills test administered by a certified third-party tester if it appears to the department that the skills test administered by the third-party tester was administered fraudulently or improperly, and as needed to meet the third-party skills test examiner oversight requirements of 49 CFR Section 383.75(a)(5).

This rule is intended to implement Iowa Code sections 321.180, 321.186, 321.187 and 321.188.

761—607.32(321) Knowledge and skills testing of nondomiciled military personnel.

607.32(1) Role of state of duty station. The department may accept an application for a CLP or CDL, including an application for waiver of the knowledge test as provided in subrule 607.27(5), if the applicant is an active duty military service member stationed, but not domiciled, in Iowa, and
the department has an agreement to accept such applications with the applicant’s state of domicile as provided in 49 CFR Section 383.79.

a. The applicant shall certify and provide evidence that the following apply:
   (1) The applicant is regularly employed or was regularly employed within the past year in a military position requiring operation of a commercial motor vehicle.
   (2) The applicant has a valid driver’s license from the applicant’s state of domicile.
   (3) The applicant has a valid active duty military identification card.
   (4) The applicant has a current copy of either the applicant’s military leave and earnings statement or the applicant’s orders.

b. If the applicant meets the requirements of paragraph 607.32(1) “a” and the department has an agreement with the applicant’s state of domicile as provided in this subrule, the department may do either of the following:
   (1) Administer the knowledge and skills tests to the applicant as appropriate in accordance with 49 CFR Part 383, Subparts F, G, and H, if the state of domicile requires those tests; or
   (2) Waive the knowledge and skills tests in accordance with 49 CFR Section 383.77 and this chapter if the state of domicile also permits waiver of the knowledge and skills test.

c. The department may destroy the applicant’s driver’s license on behalf of the state of domicile unless the state of domicile requires the driver’s license to be surrendered to the state of domicile’s driver’s licensing agency.

607.32(2) Electronic transmission of application and test results. The department shall transmit to the state of domicile the applicant’s application, any supporting documents and the results of any skills or knowledge tests administered under this rule.

607.32(3) Role of state of domicile. If the department has an agreement with the applicant’s state of duty station, upon completion of the applicant’s application pursuant to 49 CFR Section 383.71 and any testing administered by the applicant’s state of duty station pursuant to 49 CFR Sections 383.71 and 383.73, the department may do all of the following:

a. Accept the completed application, any supporting documents, and the results of the knowledge and skills tests administered by the applicant’s state of duty station.

b. Issue the applicant a CLP or CDL.

This rule is intended to implement Iowa Code sections 321.180, 321.186, 321.187, and 321.188 and 49 CFR Part 383.

[ARC 4986C, IAB 3/11/20, effective 4/15/20]

761—607.33 and 607.34 Reserved.

761—607.35(321) Issuance of commercial driver’s license and commercial learner’s permit. A commercial driver’s license or commercial learner’s permit issued by the department shall include the information and markings required by Iowa Code section 321.189(2) “b.”

This rule is intended to implement Iowa Code section 321.189.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16]


761—607.37(321) Commercial driver’s license renewal. The department shall administer commercial driver’s license renewals as required by 49 CFR Section 383.73.

607.37(1) Licensee requirements. To renew a commercial driver’s license, the licensee shall apply at a driver’s license service center and complete the following requirements:

a. The licensee shall make a written self-certification of type of driving as required by rule 761—607.50(321) and, if required, provide a current medical examiner’s certificate unless the person’s medical examiner’s certificate is provided to the department electronically by the Federal Motor Carrier Safety Administration.
b. If the licensee has and wishes to retain a hazardous material endorsement, the licensee shall pass the test required in 49 CFR Section 383.121 and comply with the Transportation Security Administration security threat assessment standards specified in 49 CFR Sections 383.71(b)(8) and 383.141 for such endorsement. A lawful permanent resident of the United States must also provide the licensee’s U.S. Citizenship and Immigration Services alien registration number.

c. The licensee shall provide proof of citizenship or lawful permanent residency and state of domicile as required by rule 761—607.15(321) and 49 CFR 383.73(d)(7). Proof of citizenship or lawful permanent residency is not required if the licensee provided such proof at initial issuance or a previous renewal or upgrade of the license and the department has a notation on the licensee’s record confirming that the required proof of legal citizenship or legal presence check was made and the date on which it was made.

d. If the licensee is domiciled in a foreign jurisdiction and renewing a non-domiciled commercial driver’s license, the licensee must provide a document required by 49 CFR 383.71(f) at each renewal.

**607.37(2) Early renewal.** A valid commercial driver’s license may be renewed 90 days before the expiration date. If this is impractical, the department for good cause may renew a license earlier, not to exceed 364 days prior to the expiration date. The department may allow renewal earlier than 364 days prior to the expiration date for active military personnel being deployed due to actual or potential military conflict.

This rule is intended to implement Iowa Code sections 321.186, 321.188 and 321.196.

761—607.38(321) Transfers from another state. Upon initial application for an Iowa license, an Iowa resident who has a valid commercial driver’s license from a former state of residence is not required to retest except as specified in Iowa Code subsection 321.188(5) but is required to pay the applicable endorsement and restriction removal fees.

This rule is intended to implement Iowa Code sections 321.188 and 321.191.

761—607.39(321) Disqualification.

**607.39(1) Date.** A disqualifying act, action or offense under Iowa Code section 321.208, that occurred before July 1, 1990, shall not be grounds for disqualification from operating a commercial motor vehicle.

**607.39(2) Notice.** A 30-day advance notice of disqualification shall be served by the department in accordance with rule 761—615.37(321). Pursuant to Iowa Code subsection 321.208(12), a peace officer on behalf of the department may serve the notice of disqualification immediately.

**607.39(3) Hearing and appeal process.** A person who has received a notice of disqualification may contest the disqualification in accordance with 761—615.38(17A,321).

**607.39(4) Reduction of lifetime disqualification.**

a. As permitted by 49 CFR Section 383.51, a person subject to lifetime disqualification of the person’s commercial driving privileges may apply to the department for reinstatement. The approval is subject to the discretion of the department and subject to the following requirements:

1. The request may not be made prior to ten years from the effective date of the lifetime disqualification.

2. The person must submit the request in a manner prescribed by the department.

3. If the driving record contains alcohol-related or drug-related offenses that resulted in the lifetime disqualification, the person must have completed an alcohol or drug evaluation and have completed any recommended treatment which meets or exceeds the minimum standards approved by the Iowa department of public health. Evidence of a completed evaluation and treatment must be on file with the department or submitted with the application for reinstatement.

4. Within the ten years preceding the request, the person must not have any of the following moving violation convictions:

   1. A drug or alcohol offense.
   2. Leaving the scene of an accident.
3. A felony involving the use of any motor vehicle.
4. Any moving violation while operating a commercial motor vehicle.

(5) The department may request, and the person shall provide, any additional information or documentation necessary to determine the person’s eligibility for reinstatement or general fitness for licensure.

b. If the department finds the person is eligible for reinstatement under this subrule, the person shall do all of the following prior to reinstatement:
   (1) Pay all outstanding reinstatement fees.
   (2) Meet all outstanding reinstatement requirements.
   (3) Pass the required knowledge, vision, and skills tests as specified in Iowa Code section 321.188.
   (4) Complete any other courses or requirements as required by the director.

c. As provided in 49 CFR Section 383.51(a)(6), a person who has previously had the person’s commercial driving privileges reinstated pursuant to this subrule shall not be eligible to apply for reinstatement following conviction of a subsequent disqualifying offense.

d. If the department determines the person is not eligible for reinstatement as provided in this subrule, the department shall send notice by first-class mail to the person’s mailing address as shown on departmental records that the lifetime disqualification remains in effect.

607.39(5) Fraud related to testing and issuance.

a. As required by 49 CFR Section 383.73(k) and Iowa Code section 321.201(2) “b,” the department shall disqualify the commercial driver’s license or commercial learner’s permit of a person convicted or suspected of fraud related to the testing for or issuance of a commercial driver’s license or commercial learner’s permit.

b. Upon receipt of a person’s conviction of fraud related to the issuance of the commercial driver’s license or commercial learner’s permit, the department shall disqualify the person’s commercial driver’s license or commercial learner’s permit for one year.

c. Upon receipt of credible evidence that a person is suspected of committing fraud relating to the issuance of a commercial driver’s license or a commercial learner’s permit, the department shall notify the person of the requirement to retake the applicable knowledge or skills test. Within 30 days of receiving notice from the department, the person is required to contact the department to retake the knowledge or skills test. If the person fails to contact the department within 30 days after the notice, or the person fails the knowledge or skills test, or does not take the test, the department shall disqualify the person’s commercial driver’s license or commercial learner’s permit.

d. Once a person’s commercial driver’s license or commercial learner’s permit has been disqualified, the person must reapply following the usual procedures as provided in Iowa Code section 321.188 and this chapter.

This rule is intended to implement Iowa Code chapter 17A and section 321.208.

[ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 4986C, IAB 3/11/20, effective 4/15/20]

761—607.40(321) Sanctions. When a person’s motor vehicle license is denied, canceled, suspended, revoked or barred, the person is also disqualified from operating a commercial motor vehicle.

This rule is intended to implement Iowa Code section 321.208.

761—607.41 to 607.44 Reserved.

761—607.45(321) Reinstatement. To reinstate a commercial driver’s license after completion of a period of disqualification, a person shall appear at a driver’s license service center. The person must also meet the vision standards for licensing, pass the applicable knowledge test(s) and the skills test, and pay the required reinstatement fee and the fees for a new license.

This rule is intended to implement Iowa Code sections 321.191 and 321.208.

[ARC 4986C, IAB 3/11/20, effective 4/15/20]

761—607.46 to 607.48 Reserved.
761—607.49(321) Restricted commercial driver’s license.

607.49(1) Scope. This rule pertains to the issuance of restricted commercial driver’s licenses to suppliers or employees of suppliers of agricultural inputs. Issuance is permitted by 49 CFR 383.3(f). A restricted commercial driver’s license shall meet all requirements of a regular commercial driver’s license, as set out in Iowa Code chapter 321 and this chapter of rules, except as specified in this rule.

607.49(2) Agricultural inputs. The term “agricultural inputs” means suppliers or applicators of agricultural chemicals, fertilizer, seed or animal feeds.

607.49(3) Validity.

a. A restricted commercial driver’s license allows the licensee to drive a commercial motor vehicle for agricultural input purposes. The license is valid to:

(1) Operate Group B and Group C commercial motor vehicles including tank vehicles and vehicles equipped with air brakes, except passenger vehicles.
(2) Transport the hazardous materials listed in paragraph 607.49(3)“b.”
(3) Operate only during the current, validated seasonal period.
(4) Operate between the employer’s place of business and the farm currently being served, not to exceed 150 miles.

b. A restricted commercial driver’s license is not valid for transporting hazardous materials requiring placarding, except as follows:

(1) Liquid fertilizers such as anhydrous ammonia may be transported in vehicles or implements of husbandry with total capacities of 3,000 gallons or less.
(2) Solid fertilizers such as ammonium nitrate may be transported provided they are not mixed with any organic substance.
(3) A hazardous material endorsement is not needed to transport the products listed in the preceding subparagraphs.

c. When not driving for agricultural input purposes, the license is valid for operating a noncommercial motor vehicle that may be legally operated under the noncommercial license held by the licensee.

607.49(4) Requirements.

a. The applicant must have two years of previous driving experience. This means that the applicant must have held a license that permits unaccompanied driving for at least two years. This does not include a motorized bicycle license, a minor’s school license or a minor’s restricted license.

b. The applicant must have a good driving record for the most recent two-year period, as defined in subrule 607.49(5).

c. An applicant who currently holds an unrestricted commercial driver’s license is not eligible for issuance of a restricted commercial driver’s license.

607.49(5) Good driving record. A “good driving record” means a driving record showing:

a. No multiple licenses.

b. No driver’s license suspensions, revocations, disqualifications, denials, bars, or cancellations of any kind.

c. No convictions in any type of motor vehicle for:

(1) Driving under the influence of alcohol or drugs.
(2) Leaving the scene of an accident.
(3) Committing any felony involving a motor vehicle.
(4) Speeding 15 miles per hour or more over the posted speed limit.
(5) Reckless driving, drag racing, or eluding or attempting to elude a law enforcement officer.
(6) Improper or erratic lane changes.
(7) Following too closely.
(8) A moving violation that contributed to a motor vehicle accident.
(9) A violation deemed serious under rule 761—615.17(321).

d. No record of contributive accidents, as defined in rule 761—615.1(321).

607.49(6) Issuance.
a. The knowledge and skills tests described in rules 761—607.27(321) and 761—607.28(321) are waived.
b. A restricted commercial driver’s license shall be coded with restriction “W” on the face of the driver’s license, with the restriction explained in text on the back of the driver’s license. In addition, the license shall be issued with a restriction stating the license’s period of validity.
c. The expiration date for a restricted commercial driver’s license that is converted to this license from another Iowa license shall carry the same expiration date as the previous license.
d. A restricted commercial driver’s license may be renewed for the period of time specified in Iowa Code section 321.196. The licensee’s good driving record shall be confirmed at the time of renewal.
e. The fee for a restricted commercial driver’s license shall be as specified in Iowa Code section 321.191.
f. On or after January 1, 2017, a licensee may have up to three individual periods of validity for a restricted commercial driver’s license, provided the cumulative period of validity for all individual periods does not exceed 180 days in any calendar year. An individual period of validity may be 60, 90, or 180 consecutive days, at the election of the licensee. A licensee may add 30 days to an individual period of validity by applying for an extension, subject to the 180-day cumulative maximum period of validity. A request for extension must be made no later than the date of expiration of the individual period of validity for which an extension is requested; a request for extension made after that date shall be treated as a request for a new individual period of validity. An extension shall be calculated from the date of expiration of the individual period of validity for which an extension is requested. Any period of validity authorized previously by another state’s license shall be considered a part of the 180-day cumulative maximum period of validity.
g. A restricted commercial driver’s license must be validated for commercial motor vehicle operation for each individual period of validity. This means that the applicant/licensee must have the person’s good driving record confirmed at each application for an individual period of validity. Upon confirmation, the department shall issue a replacement license with a restriction validating the license for that individual period of validity, provided the person is otherwise eligible for the license. The fee for a replacement license shall be as specified in Iowa Code section 321.195.
h. The same process must be repeated for each individual period of validity within a calendar year.

This rule is intended to implement Iowa Code section 321.176B.

[ARC 2071C, IAB 8/5/15, effective 7/14/15; ARC 2337C, IAB 1/6/16, effective 2/10/16; ARC 2530C, IAB 5/11/16, effective 6/15/16; ARC 4986C, IAB 3/11/20, effective 4/15/20]

761—607.50(321) Self-certification of type of driving and submission of medical examiner’s certificate.

607.50(1) Applicants for commercial learner’s permit, restricted CDL, or new, transferred, renewed or upgraded CDL.

a. A person shall provide to the department a self-certification of type of driving if the person is applying for:

1. A commercial learner’s permit,
2. An initial commercial driver’s license,
3. A transfer of a commercial driver’s license from a prior state of domicile to the state of Iowa,
4. Renewal of a commercial driver’s license,
5. A license upgrade for a commercial driver’s license or an endorsement authorizing the operation of a commercial motor vehicle not covered by the current commercial driver’s license, or
6. A restricted commercial driver’s license.

b. The self-certification shall be on a form or in a format, which may be electronic, as provided by the department.

607.50(2) Submission of medical examiner’s certificate by persons certifying to non-excepted interstate driving. Every person who self-certifies to non-excepted interstate driving must give the department a copy of the person’s current medical examiner’s certificate, unless the person’s medical examiner’s certificate is provided to the department electronically by the Federal Motor Carrier
Safety Administration. The department shall not issue, transfer, renew, or upgrade a license until the department receives a medical examiner’s certificate that complies with the requirements of this subrule, or unless the person changes the person’s self-certification of type of driving to a type other than non-excepted interstate driving. When the department receives a current medical examiner’s certificate, the department shall post a medical certification status of “certified” on the person’s CDLIS driver’s record. A person who self-certifies to a type of driving other than non-excepted interstate shall have no medical certification status on the CDLIS driver’s record.

607.50(3) Maintaining certified status. To maintain a medical certification status of “certified,” a person who self-certifies to non-excepted interstate driving must give the department a copy of each subsequently issued medical examiner’s certificate valid for the person unless the person’s medical examiner’s certificate is provided to the department electronically by the Federal Motor Carrier Safety Administration.

607.50(4) CDL downgrade. If the medical examiner’s certificate or medical variance for a person self-certifying to non-excepted interstate driving expires or if the Federal Motor Carrier Safety Administration notifies the department that the person’s medical variance was removed or rescinded, the department shall post a medical certification status of “not certified” to the person’s CDLIS driver’s record and shall initiate a downgrade of the person’s commercial driver’s license or commercial learner’s permit. The medical examiner’s certificate of a person who fails to maintain a medical certification status of “certified” as required by subrule 607.50(3) shall be deemed to be expired on the date of expiration of the last medical examiner’s certificate filed for the person as shown by the person’s CDLIS driver’s record. The downgrade will be initiated and completed as follows:

a. The department shall give the person written notice that the person’s medical certification status is “not certified” and that the commercial motor vehicle privileges will be removed from the person’s commercial driver’s license or commercial learner’s permit 60 days after the date the medical examiner’s certificate or medical variance expired or the medical variance was removed or rescinded unless the department receives a current medical certificate or medical variance or the person self-certifies to a type of driving other than non-excepted interstate.

b. If the department receives a current medical examiner’s certificate or medical variance before the end of the 60-day period, the department shall post a medical certification status of “certified” on the person’s CDLIS driver’s record and shall terminate the downgrade of the person’s commercial driver’s license or commercial learner’s permit.

c. If the person self-certifies to a type of driving other than non-excepted interstate before the end of the 60-day period, the department shall not remove the commercial motor vehicle privileges from the person’s commercial driver’s license or commercial learner’s permit, and the person will have no medical certification status on the person’s CDLIS driver’s record.

d. If the requirements in either paragraph 607.50(4)“b” or “c” are not met before the end of the 60-day period, the department shall remove the commercial motor vehicle privileges from the person’s commercial driver’s license or commercial learner’s permit and shall leave the person’s medical certification status as “not certified” on the person’s CDLIS driver’s record.

607.50(5) Establishment or reestablishment of “certified” status. A person who has no medical certification status or whose medical certification status has been posted as “not certified” on the person’s CDLIS driver’s record may have the person’s status established or reestablished as “certified” if the department receives a current medical examiner’s certificate or medical variance. A person who has failed to self-certify to a type of driving or has self-certified to a type of driving other than non-excepted interstate must also make a self-certification of type of driving to non-excepted interstate driving. The department shall then post a medical certification status of “certified” on the person’s CDLIS driver’s record.

607.50(6) Reestablishment of the CDL privilege. A person whose commercial motor vehicle privileges have been removed from the person’s commercial driver’s license or commercial learner’s permit under the provisions of paragraph 607.50(4)”d” may have the person’s commercial motor vehicle privileges reestablished if either of the following occurs:
a. The department receives the person’s current medical examiner’s certificate or medical variance. A person who has failed to self-certify to a type of driving must also make an initial self-certification of type of driving to non-excepted interstate driving. The department shall then post a medical certification status of “certified” on the person’s CDLIS driver’s record and reestablish the commercial motor vehicle privileges, provided that the person otherwise remains eligible for a commercial driver’s license or commercial learner’s permit.

b. The person self-certifies to a type of driving other than non-excepted interstate. The department shall then reestablish the commercial motor vehicle privileges, provided that the person otherwise remains eligible for a commercial driver’s license or commercial learner’s permit; the person will have no medical certification status on the driver’s CDLIS driver’s record.

607.50(7) Change of type of driving. A person may change the person’s self-certification of type of driving at any time. As required by subrule 607.50(2), the department must receive a copy of the person’s current medical examiner’s certificate prepared by a medical examiner for a person certifying to non-excepted interstate driving.

607.50(8) Record keeping. The department shall comply with the medical record-keeping requirements set forth in 49 CFR Section 383.73.

607.50(9) Medical examiner’s certificate conflict. As required by 49 CFR Sections 383.71 and 383.73, in the event of a conflict between the medical certification information provided electronically by the Federal Motor Carrier Safety Administration and a paper copy of the medical examiner’s certificate, the medical certification information provided electronically by the Federal Motor Carrier Safety Administration shall supersede.

This rule is intended to implement Iowa Code sections 321.182, 321.188 and 321.207.

761—607.51(321) Determination of gross vehicle weight rating.

607.51(1) Actual weight prohibited. In determining whether the vehicle is a representative vehicle for the skills test and the commercial driver’s license for which the applicant is applying, the vehicle’s gross weight rating or gross combination weight rating must be used, not the vehicle’s actual gross weight or gross combination weight. For purposes of this rule, “gross weight rating” and “gross combination weight rating” mean as defined in 49 CFR Section 383.5.

607.51(2) Vehicle without legible manufacturer’s certification label. To complete a skills test using a vehicle that has no legible manufacturer’s certification label, whether a power unit or towed vehicle, the applicant must provide documentation of the vehicle’s gross vehicle weight rating, such as a manufacturer’s certificate of origin, a title, or the vehicle identification number information for the vehicle. In the absence of such documentation, the vehicle may not be used, either alone or in combination.

This rule is intended to implement Iowa Code section 321.1.
[Filed Emergency ARC 9954B, IAB 1/11/12, effective 1/30/12]
[Filed ARC 0031C (Notice ARC 9955B, IAB 1/11/12), IAB 3/7/12, effective 4/11/12]
[Filed ARC 1714C (Notice ARC 1601C, IAB 9/3/14), IAB 11/12/14, effective 12/17/14]
[Filed Emergency ARC 2071C, IAB 8/5/15, effective 7/14/15]
[Filed ARC 2337C (Notice ARC 2070C, IAB 8/5/15), IAB 1/6/16, effective 2/10/16]
[Filed ARC 2530C (Notice ARC 2451C, IAB 3/16/16), IAB 5/11/16, effective 6/15/16]
[Filed ARC 2986C (Notice ARC 2878C, IAB 1/4/17), IAB 3/15/17, effective 4/19/17]
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[Filed ARC 3840C (Notice ARC 3700C, IAB 3/28/18), IAB 6/6/18, effective 7/11/18]
[Filed ARC 4401C (Notice ARC 4256C, IAB 1/30/19), IAB 4/10/19, effective 5/15/19]
[Filed ARC 4586C (Notice ARC 4476C, IAB 6/5/19), IAB 7/31/19, effective 9/4/19]
[Filed ARC 4986C (Notice ARC 4836C, IAB 1/1/20), IAB 3/11/20, effective 4/15/20]
[Filed ARC 5018C (Notice ARC 4895C, IAB 2/12/20), IAB 4/8/20, effective 5/13/20]
[Filed ARC 5495C (Notice ARC 5384C, IAB 1/13/21), IAB 3/10/21, effective 4/14/21]
[Filed ARC 5547C (Notice ARC 5411C, IAB 2/10/21), IAB 4/7/21, effective 5/12/21]
[Filed ARC 5942C (Notice ARC 5804C, IAB 7/28/21), IAB 10/6/21, effective 11/10/21]
[Filed ARC 6168C (Notice ARC 6065C, IAB 12/1/21), IAB 2/9/22, effective 3/16/22]
CHAPTER 12
STANDARDS OF PRACTICE
[Prior to 2/8/89, Veterinary Medicine, Board of 842] Ch 9


12.1(1) The board shall determine, on a case-by-case basis, if a valid veterinarian/client/patient relationship exists. This relationship shall be deemed to exist when all of the following criteria have been met:

a. The licensed veterinarian has assumed the responsibility for making medical judgments regarding the health of the patient and the need for medical treatment, and the client has agreed to follow the instructions of the licensed veterinarian;

b. The licensed veterinarian has sufficient knowledge of the patient to initiate at least a general or preliminary diagnosis of the medical condition of the patient. Sufficient knowledge means that the licensed veterinarian has recently seen or is personally acquainted with the care of the patient by virtue of a physical examination of the patient within the past 12 months or a visit to the premises where the patient is kept within the past 12 months; and

c. The licensed veterinarian is readily available or provides for follow-up in case of adverse reactions or failure of the regimen of therapy.

12.1(2) A valid veterinarian/client/patient relationship cannot be established by contact solely based on a telephonic or electronic communication.

12.1(3) Both the licensed veterinarian and the client have the right to establish or decline a valid veterinarian/client/patient relationship. Once the licensed veterinarian and the client have agreed and entered into a relationship, and the licensed veterinarian has begun patient care, the licensed veterinarian may not neglect the patient and must continue to provide professional services related to the patient’s injury or illness within the previously agreed limits. As subsequent needs and costs for patient care are identified, the licensed veterinarian and the client must confer and reach agreement on the continued care and responsibility for fees. If the informed client declines future care or declines to assume responsibility for the fees, the relationship may be terminated by either party.

12.1(4) If no ongoing medical condition exists, a licensed veterinarian may terminate a valid veterinarian/client/patient relationship by notifying the client that the licensed veterinarian no longer wishes to serve that patient and client. However, if an ongoing medical or surgical condition exists, the patient should be referred to another licensed veterinarian for diagnosis, care, and treatment and the former attending licensed veterinarian should continue to provide care as needed during the transition.

12.1(5) Concerns about licensed veterinarian or staff safety may result in immediate termination of the veterinarian/client/patient relationship.

[ARC 1465C, IAB 5/28/14, effective 7/2/14; ARC 6171C, IAB 2/9/22, effective 4/1/22]

811—12.2(169) Controlled substances, drugs, prescription medications and restricted immunization products. When state or federal law restricts a drug, medication or immunization product intended for use by or on the order of a licensed veterinarian, the licensed veterinarian shall sell, distribute, or order the drug or medication only in the course of the licensed veterinarian’s professional practice. A prescription veterinary drug, medication or immunization product shall not be deemed to be used “in the course of the licensed veterinarian’s professional practice” unless a valid veterinarian/client/patient relationship exists.

12.2(1) Prescriptions. The order for all such drugs, medications or immunization products shall be accompanied by the licensed veterinarian’s original prescription that shows the following:

a. Licensed veterinarian’s name, address and telephone number;

b. Client’s name;

c. Patient’s name or identification;

d. Date issued;

e. Drug, medication or product name, strength, and quantity;

f. Directions for use;

g. Number of times the prescription may be refilled;
h. Expiration date of the drug, medication or product; and
i. Applicable withdrawal period (paragraph 12.2(2) “d”) for livestock and poultry.

12.2(2) Extra-label use of veterinary drugs, medications, and immunization products. Any extra-label use of veterinary drugs, medications or immunization products shall be by or under the order of a licensed veterinarian only and shall be subject to the following criteria:

a. There shall be a veterinarian/client/patient relationship as defined in subrule 12.1(1).

b. For drugs or medications used in patients not intended for food, one of the following applies:
   (1) There are no marketed drugs, medications and immunization products specifically labeled for the condition(s) diagnosed;
   (2) The approved product is clinically ineffective; or
   (3) In the licensed veterinarian’s clinical judgment, the labeled dosage is inappropriate for the condition or the extra-label use should result in a better outcome for the patient.

c. The health of the treated patient is immediately threatened, or suffering or death would result from a failure to treat the affected patient.

d. Appropriate withdrawal period shall be specified when the drugs, medications or immunization products are used in animals intended as food. Extra-label drug use in food-producing animals must follow Food and Drug Administration - Animal Medicinal Drug Use Clarification Act regulations (21 Code of Federal Regulations 530). Licensed veterinarians are encouraged to consult the Food Animal Residue Avoidance Databank (FARAD) or public peer-reviewed documents when determining appropriate withdrawal period.

[ARC 1465C, IAB 5/28/14, effective 7/2/14]

811—12.3(169) Prescription drug or medication labeling and packaging. A licensed veterinarian shall comply with all of the following requirements for the storage, handling, dispensing, and administering of a drug or medication.

12.3(1) All prescription drugs, medications and controlled substances must be purchased, maintained, handled, prescribed and dispensed in compliance with state and federal requirements including but not limited to the requirements of the Iowa board of pharmacy, the U.S. Occupational Safety and Health Administration, the U.S. Department of Agriculture, the U.S. Food and Drug Administration, the U.S. Environmental Protection Agency and the U.S. Drug Enforcement Administration.

a. A valid veterinarian/client/patient relationship must be established before prescription drugs or medications may be dispensed or a prescription released. All drugs or medications administered, prescribed or dispensed must be documented in the patient’s medical record. The sale of veterinary prescription drugs or medications or the extra-label use of any drug, medication or product by a licensed veterinarian without a valid veterinarian/client/patient relationship is not permissible.

b. If a veterinarian prescribes a drug for the client’s animal, the veterinarian shall, upon request, provide the prescription to the client, unless prohibited by state or federal law or to prevent inappropriate use. The veterinarian may charge a fee for issuing the prescription. This paragraph does not apply to livestock as defined in Iowa Code section 717.1(4).

12.3(2) All drugs or medications dispensed shall be labeled with the following information:

a. Name, telephone number, and address of the veterinary clinic, hospital, or service facility.

b. Name of the prescribing licensed veterinarian.

c. Date on which the prescription is dispensed.

d. Directions for use, including any cautionary statements and withdrawal times when appropriate.

e. Species of the patient.

f. Name, or identification, or location of the patient.

g. Name of the owner.

h. Name, strength, and dosage form of the drug or medication. If the drug or medication is a compounded product, all active ingredients must be listed on the label, with corresponding strengths or concentrations of each ingredient.

i. Number of units dispensed.
12.3(3) All drugs or medications dispensed in the original container shall retain the original label and, in addition, shall be labeled with the same information as required in subrule 12.3(2).

12.3(4) All drugs or medications that are dispensed in a container other than the original container shall be placed in a tamper-resistant container unless otherwise requested by the owner or unless the drug or medication is in a form or size that cannot be easily dispensed in a tamper-resistant container.

12.3(5) Drugs or medications which have expired shall be removed from current inventory and shall not be dispensed or sold. Expired drugs or medications shall be disposed of in accordance with local, state and federal regulations.

12.3(6) Drugs or medications shall be dispensed only for specific animals and for specific veterinary medical therapies with the exception of groups of similar animals and other groups such as pet fish, kennels, and catteries for which dispensing shall be done judiciously within a valid veterinarian/client/patient relationship.

[ARC 1465C, IAB 5/28/14, effective 7/2/14; ARC 5640C, IAB 6/2/21, effective 7/7/21]

811—12.4(169) Veterinary medical records.

12.4(1) Controlled substances records. The licensed veterinarian must maintain a controlled substance log which contains complete, accurate and readily retrievable records of all controlled substances possessed, administered, or dispensed.

a. Each record of a controlled substance which is dispensed must meet all U.S. Drug Enforcement Administration and Iowa board of pharmacy regulations for the controlled substances log.

b. Each log record must include the following information:

1. Name or identification of the patient.
2. Client’s name and address, if not readily available from the licensed veterinarian’s records.
3. Name, strength and quantity of the controlled substance dispensed.
4. Date on which the controlled substance was dispensed.
5. Initials of the dispensing licensed veterinarian or authorized auxiliary.
6. Name of the prescribing licensed veterinarian.

c. All controlled substances must be kept in a locked storage area, and access to the storage area must be restricted pursuant to state and federal laws and regulations.

d. Each package or container in which a controlled substance is stored or dispensed must be clearly labeled pursuant to the requirements set forth in state and federal laws and regulations.

e. Each package or container in which a controlled substance is stored or dispensed must comply with all state and federal packaging requirements and with rule 811—12.2(169).

12.4(2) Patient records. Veterinary medical records are an integral part of veterinary care. Medical records are the property of the veterinary practice. Each licensed veterinarian shall maintain for at least five years an easily retrievable record for each patient that receives veterinary services. The record must be available for inspection by the client during normal business hours. The information within veterinary medical records is privileged and confidential and shall not be released except by court order, a public health emergency, consent of the client, or as otherwise authorized by law. The licensed veterinarian in charge shall provide a copy of the complete record to the client not later than two business days after the licensed veterinarian or practice receives from the client a request for the record. A licensed veterinarian or veterinary practice may have an additional three business days to provide a copy of nondigital diagnostic images. The licensed veterinarian may charge reasonable and customary fees for the copying of records.

a. Records required for patients defined as “livestock” in Iowa Code section 717.1(4) include the following:

1. Name, address and telephone number of the client.
(2) Name or identity of the patient, pen, herd, flock, or group, including the identification number, if any.
(3) Date of service.
(4) Documentation of client consent.
(5) Diagnosis or condition at the beginning of treatment of the patient, including results of tests.
(6) Procedures/indications.
(7) Name of drug or medication and treatment administered indicating dosage, frequency and route of administration.
(8) Withdrawal period.
(9) Record of diagnostic images taken.
(10) Name of attending licensed veterinarian.
b. Records required for other patients include the following:
(1) Name, address and telephone number of the client.
(2) Name and identity of the patient, including the identification number, if any.
(3) Date of birth (or estimated age), sex, species and breed of patient.
(4) Dates of care, custody or treatment of the patient.
(5) A history of the patient’s condition as it pertains to the patient’s medical status.
(6) Documentation of client consent.
(7) Diagnosis or condition at the beginning of treatment of the patient, including results of tests and body weight.
(8) Surgery record, including preanesthesia medication, anesthesia, and the procedure performed.
(9) Name of drug or medication and treatment administered indicating dosage, frequency and route of administration.
(10) Progress and disposition of the case.
(11) Record of diagnostic images taken.
(12) Name of attending licensed veterinarian.

12.4(3) Stored diagnostic images.
a. Each stored diagnostic image must be identified with the following information:
(1) The name of the licensed veterinarian or facility that took the diagnostic image.
(2) The name or identifying number, or both, of the patient.
(3) The name of the client.
(4) The date on which the diagnostic image was taken.
(5) The anatomical orientation depicted by the diagnostic image.
b. Stored diagnostic images must be retained for at least five years.
c. A stored diagnostic image of the patient or a copy must be released, upon the written or verbal request, to another licensed veterinarian who has the authorization of the client. Original diagnostic images shall be returned in a reasonable time.

12.4(4) General anesthesia. General anesthesia is a condition caused by the administration of a drug or combination of drugs sufficient to produce a state of unconsciousness or dissociation and blocked response to a given pain or alarming stimulus. The following standards relating to general anesthesia must be adhered to:
a. Within 12 hours prior to the administration of a general anesthetic, the patient must receive a physical examination, with the results noted in the patient’s medical records.
b. The patient under general anesthesia must be under observation for a length of time appropriate to the species for the patient’s safe recovery.
c. The licensed veterinarian must provide a method of respiratory monitoring that may include observing the patient’s chest movements, observing the rebreathing bag, or using a respirometer.
d. The licensed veterinarian must provide a method of cardiac monitoring which may include the use of a stethoscope or electrocardiograph monitor.
[ARC 1465C, IAB 5/28/14, effective 7/2/14; ARC 5485C, IAB 2/24/21, effective 3/31/21]

811—12.5(169) Veterinary facilities.
12.5(1) **Facility standards.** The following standards shall apply to all facilities used by a licensed veterinarian to provide veterinary services.

a. **Facilities for treatment or hospitalization.** In a facility where patients are examined and retained for treatment or hospitalization, the following must be provided:

   1. An examination room, separate from the reception room or office, with sufficient size to accommodate the licensed veterinarian, assistant, patient and client.
   2. Nonporous tabletops, countertops and floor coverings which can be adequately cleaned and disinfected.
   3. The ability to house patients separately and maintain sanitary conditions.
   4. Appropriate separation of patients with known or suspected infectious and contagious diseases from patients not known to have such diseases in a manner that reasonably guards against transmission of disease.
   5. Provision for daily exercise of patients unless the primary enclosure is of sufficient size to provide exercise.
   6. Exercise areas that are cleaned a minimum of once in each 24-hour period and more frequently as may be necessary to reduce disease hazards and odors.
   7. A sanitary area for performing surgeries under sterile conditions. If sterile surgical procedures are performed on the premises, the licensed veterinarian must maintain the following at all times:
      1. Appropriate sterile surgical packs including drapes, sponges and instrumentation for use in each procedure.
      2. For each sterile surgical procedure, equipment sterilized and surgical packs properly prepared for sterilization sufficient to kill microorganisms.
      3. Clean attire, masks, and gloves for use in any sterile procedure.
      4. Oxygen and equipment necessary to administer oxygen to the types of patients treated in the facility.
      5. Capability to provide diagnostic radiological images in the facility or through an outside facility.
      6. Provision for laboratory and pharmaceutical services in the facility or through another commercial facility.

b. **Facilities for services.** Veterinary service facilities where patients are only examined or provided vaccinations must provide the following:

   1. An examination room, separate from the reception room or office, with sufficient size to accommodate the licensed veterinarian, assistant, patient and client.
   2. Nonporous tabletops, countertops and floor coverings which can be adequately cleaned and disinfected.
   3. A secure and sanitary area for the storage of instruments, drugs and medications.
   4. Cooling/heating equipment for the storage of drugs, medications and immunization products.
   5. Capability to provide diagnostic radiological images in the facility or through an outside facility.
   6. Provision for laboratory and pharmaceutical services in the facility or through another commercial facility.

c. **Mobile clinics.** Mobile clinics are self-contained units for small animal, nonlivestock or nonpoultry patients and shall be equipped with the following:

   1. Hot and cold water.
   2. Nonporous tabletops, countertops and floor coverings which can be adequately cleaned and disinfected.
   3. An adequate power source for diagnostic equipment.
   5. Adequate lighting.
   6. Adequate heating, cooling and ventilation.
   7. Sterile instrumentation which meets the requirements of the level of surgery to be performed.
   8. Separate compartments for the transportation or holding of patients.
   9. A secure and sanitary area for the storage of instruments, drugs and medications.
   10. Cooling/heating equipment for the storage of drugs, medications and immunization products.
d. **House/farm call units.** House/farm call units are not self-contained units and must be equipped with or have access to all of the following:

1. Water.
2. Cooling/heating equipment for the storage of drugs, medications and immunization products.
3. A secure and sanitary area for the storage of instruments, drugs and medications.

e. **Emergency veterinary hospitals.** “Emergency veterinary hospital” means an animal hospital which provides emergency treatment to an ill or injured patient. Any facility advertising as an emergency facility shall have a licensed veterinarian and appropriate support staff on the premises during the hours of operation. Any facility which advertises using phrases similar or identical to “24-hour emergency veterinary hospital,” “Emergency,” “Open 24 hours,” or “Day or night care” must have treatment services continuously available.

**12.5(2) Safety and sanitation standards.** A veterinary facility must have a safe and sanitary environment that:

a. Protects the health of the patients and guards against the transmission of infection.

b. Provides for proper routine disposal of waste materials in compliance with all applicable local, state, and federal laws and regulations and for proper disposal of hypodermic devices, sharps and biomedical waste. Any person who is authorized to use hypodermic devices and sharps shall dispose of them in accordance with applicable local, state and federal regulations. Biomedical waste should be disposed of in accordance with applicable local, state and federal regulations.

c. Provides for proper sterilization or sanitation of all equipment used in diagnosis, treatment or surgery.

d. Ensures the maintenance of proper temperature and ventilation of the indoor facility.

e. Provides adequate lighting appropriate for the task being performed.

f. Includes legal and sanitary methods for the disposal or storage of deceased patients.

g. Meets the standards for radiological procedures as set by the Iowa department of public health.

**12.5(3) Resources.** A library of current journals or textbooks, or Internet access which provides readily accessible reference materials shall be available.

[ARC 1465C, IAB 5/28/14, effective 7/2/14]

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