

ENVIRONMENTAL PROTECTION COMMISSION[567]

Adopted and Filed

Rulemaking related to animal feeding operations

The Environmental Protection Commission (Commission) hereby rescinds Chapter 65, “Animal Feeding Operations,” Iowa Administrative Code, and adopts a new Chapter 65 with the same title.

Legal Authority for Rulemaking

This rulemaking is adopted under the authority provided in Iowa Code sections 459.103, 459.301, 459A.104 and 459B.104.

State or Federal Law Implemented

This rulemaking implements, in whole or in part, Iowa Code sections 455B.103, 455B.134, 455B.171, 459.103, 459.301, 459A.104 and 459B.104.

Purpose and Summary

Chapter 65 regulates animal feeding operations (AFOs). The chapter regulates the siting, construction, and operation of all types of AFO structures and associated facilities. This rulemaking reduces and consolidates the AFO regulations. This is accomplished by rescinding redundant or outdated provisions. The rules also adopt a floodplain siting map as required by state law.

The new chapter is more intuitive and easier to read and understand. For example, rules applicable to all AFOs have been consolidated into a single division rather than repeated multiple times throughout the chapter. Rules have been streamlined as much as possible, stating the requirements more succinctly and clearly. Antiquated rules have been removed.

Repeal of Iowa Code section 459.301(5)“b”

Iowa Code section 459.301(5)“a” requires that the Department of Natural Resources (Department) designate by rule the location of each one hundred year floodplain in the state. Iowa Code section 459.301(5)“b” states the requirements for construction until the one hundred year floodplain rule is adopted. Iowa Code section 459.301(5)“b”(3) states that Iowa Code section 459.301(5)“b” is repealed on the effective date of the adopted one hundred year floodplain rule and requires that the Department provide a caption on the adopted rule as published stating that the paragraph is repealed. Subrule 65.9(1) designates the location of each one hundred year floodplain in the state; therefore, Iowa Code section 459.301(5)“b” is repealed on the effective date of this rulemaking.

Public Comment and Changes to Rulemaking

Notice of Intended Action for this rulemaking was published in the Iowa Administrative Bulletin on December 27, 2023, as **ARC 7214C**. A public hearing was held on February 14, 2024, at 1:30 p.m. in the Auditorium, Wallace State Office Building, Des Moines, Iowa, and a public hearing was held virtually on February 19, 2024, at 1:30 p.m.

A document summarizing public comment, available from the Department upon request, contains the following information:

1. Comments/summary of comments received;
2. Response to comments;
3. A list of those who submitted written comments; and
4. A list of who attended a public hearing.

Based on the comments received, the following changes were made from the Notice:

1. Alphabetized the definitions subrule (65.1(1)).

2. Added the term “substantially” to the definition of “complete application” (65.1(1)).
3. Moved the definition of “new AFO” from the definition subrule to the body of the rule where the term is used (from 65.1(1) to 65.202(3)).
4. Removed the phrase “or manure storage structure” from the definition of “partially roofed” because “manure storage structure” is already in the definition of “production area” that is referenced in the definition of “partially roofed” (65.1(1)).
5. Revised the definition of “sinkhole” to address a Department technical staff recommendation (65.1(1)).
6. For documents that reference a website, created static lists of the county parks and recreational areas and the parks under federal jurisdiction (65.1(2)“d” and “e”).
7. Provided a date certain for the Natural Resources Conservation Service (NRCS) Iowa Agronomy Technical Note No. 29 Dominant Critical Area (65.1(2)“cc”).
8. The date certain for NRCS Iowa Technical Note No. 25 Phosphorus Index was updated to March 2024.
9. Revised the depth of the coring in potential karst terrain to a minimum depth of seven feet (65.7(1)“b”).
10. Added a provision for persons in one of the five counties that do not have a Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map to contest a one hundred year floodplain determination for construction (65.9(1)).
11. Reverted to the original language to require a county board of supervisors to sign up annually to score master matrix construction permit applications (65.105(3)“a”).
12. Clarified language regarding manure management plans (MMPs) where only a portion of the manure is sold (65.111(2)).
13. Revised language for evaluating sheet and rill erosion based on technical advice from the NRCS (65.111(12)“a”).
14. Clarified language to allow the Department to use the confinement portion of the rules to calculate nitrogen and phosphorus in a nutrient management plan (NMP) (65.209(8)“a”).
15. Clarified language for the Department of Agriculture and Land Stewardship’s 200 and 200A allowances in MMPs and NMPs (65.111(15) and 65.209(8)“f”).
16. Provided clarifying language to 65.108(6)“b”(2) and 65.108(10) based on staff technical recommendations.

Adoption of Rulemaking

This rulemaking was adopted by the Commission on April 16, 2024.

Fiscal Impact

This rulemaking has no fiscal impact to the State of Iowa.

Jobs Impact

After analysis and review of this rulemaking, no impact on jobs has been found.

Waivers

Any person who believes that the application of the discretionary provisions of this rulemaking would result in hardship or injustice to that person may petition the Department for a waiver of the discretionary provisions, if any, pursuant to 561—Chapter 10.

Review by Administrative Rules Review Committee

The Administrative Rules Review Committee, a bipartisan legislative committee which oversees rulemaking by executive branch agencies, may, on its own motion or on written request by any individual or group, review this rulemaking at its [regular monthly meeting](#) or at a special meeting. The Committee’s

meetings are open to the public, and interested persons may be heard as provided in Iowa Code section 17A.8(6).

Effective Date

This rulemaking will become effective on June 19, 2024.

The following rulemaking action is adopted:

ITEM 1. Rescind 567—Chapter 65 and adopt the following **new** chapter in lieu thereof:

CHAPTER 65
ANIMAL FEEDING OPERATIONS

DIVISION I
GENERAL PROVISIONS

The provisions in Division I apply to all confinement feeding operations, open feedlot operations, animal truck washes, dry bedded confinement feeding operations, and associated manure and waste storage structures, unless otherwise noted in this chapter.

The following acronyms will be used throughout this chapter:

“AFO” means animal feeding operation.

“CAFO” means concentrated animal feeding operation.

“MMP” means manure management plan.

“NMP” means nutrient management plan.

“NPDES” means National Pollutant Discharge Elimination System.

567—65.1(455B,459,459A,459B) Definitions and incorporation by reference. In addition to the definitions in Iowa Code sections 455B.101, 455B.171, 459.102, 459A.102, and 459B.102 and in 567—Chapter 60, the following definitions shall apply to this chapter:

65.1(1) Definitions.

“*Abandoned AFO structure*” means the AFO structure has been razed, removed from the site of an AFO, filled in with earth, or converted to uses other than an AFO structure so that it cannot be used as an AFO structure without significant reconstruction.

“*Adjacent*” for open feedlot operation. Two or more open feedlot operations are defined as adjacent if both of the following occur:

1. At least one open feedlot operation structure is constructed on or after July 17, 2002; and
2. An open feedlot operation structure that is part of one open feedlot operation is separated by less than 1,250 feet from an open feedlot operation structure that is part of the other open feedlot operation.

“*Adjacent—air quality*” for confinement feeding operations means, for the purpose of determining separation distance requirements pursuant to rule 567—65.106(455B,459,459B), that two or more confinement feeding operations are adjacent if they have AFO structures that are separated at their closest points by less than the following:

1. 1,250 feet for a confinement feeding operation having an animal unit capacity of less than 1,250 animal units for swine maintained as part of a farrowing and gestating operation, less than 2,700 animal units for swine maintained as part of a farrow-to-finish operation, less than 4,000 animal units for cattle maintained as part of a cattle operation, or less than 3,000 animal units for any other confinement feeding operation, or for a confinement feeding operation consisting of dry bedded confinement feeding operation structures.

2. 1,500 feet for a confinement feeding operation having an animal unit capacity of 1,250 or more but less than 2,000 animal units for swine maintained as part of a swine farrowing and gestating operation, 2,700 or more but less than 5,400 animal units for swine maintained as part of a farrow-to-finish operation, 4,000 or more but less than 6,500 animal units for cattle maintained as part of a cattle operation, or for any other confinement feeding operation having an animal unit capacity of 3,000 or more but less than 5,000 animal units.

3. 2,500 feet for a confinement feeding operation having an animal unit capacity of 2,000 or more animal units for swine maintained as part of a swine farrowing and gestating operation, 5,400 or more animal units for swine maintained as part of a farrow-to-finish operation, or 6,500 or more animal units for cattle maintained as part of a cattle operation, or for any other confinement feeding operation with 5,000 or more animal units.

The distances in paragraphs “1” to “3” above shall only be used to determine that two or more confinement feeding operations are adjacent if at least one confinement feeding operation structure was constructed on or after March 21, 1996.

To determine if two or more confinement feeding operations are adjacent, for the purpose of determining the separation distance requirements, the animal unit capacity of each individual operation shall be used. If two or more confinement feeding operations do not have the same animal unit capacity, the greater animal unit capacity shall be used to determine the separation distance.

Dry manure that is stockpiled within a distance of 1,250 feet from another stockpile shall be considered part of the same stockpile.

“*Adjacent—water quality*” for confinement feeding operations means, for the purpose of determining the construction permit requirements pursuant to rule 567—65.103(455B,459,459B) and MMP requirements pursuant to rule 567—65.110(455B,459,459B), that two or more confinement feeding operations are adjacent if they have confinement feeding operation structures that are separated at their closest points by less than the following:

1. 1,250 feet for confinement feeding operations having a combined animal unit capacity of less than 1,000 animal units.

2. 2,500 feet for confinement feeding operations having a combined animal unit capacity of 1,000 or more animal units.

3. The distances in paragraphs “1” and “2” above shall only be used to determine that two or more confinement feeding operations are adjacent if at least one confinement feeding operation structure is constructed or expanded on or after May 21, 1998.

“*Aerobic structure*” means an AFO structure other than an egg washwater storage structure which relies on aerobic bacterial action which is maintained by the utilization of air or oxygen and which includes aeration equipment to digest organic matter. Aeration equipment shall be used and shall be capable of providing oxygen at a rate sufficient to maintain an average of 2 milligrams per liter dissolved oxygen concentration in the upper 30 percent of the depth of manure in the structure at all times.

“*AFO structure*” means a confinement building, manure storage structure, dry bedded confinement feeding operation structure, or egg washwater storage structure.

“*Agricultural drainage well*” means a vertical opening to an aquifer or permeable substratum which is constructed by any means including but not limited to drilling, driving, digging, coring, augering, jetting, or washing and which is capable of intercepting or receiving surface or subsurface drainage water from land directly or by a drainage system.

“*Agricultural drainage well area*” means an area of land where surface or subsurface water drains into an agricultural drainage well directly or through a drainage system connecting to the agricultural drainage well.

“*Alluvial aquifer area*” means an area underlaid by sand or gravel aquifers situated beneath floodplains along stream valleys and includes alluvial deposits associated with stream terraces and benches, contiguous windblown sand deposits, and glacial outwash deposits.

“*Alluvial soils*” means soils formed in materials deposited by moving water.

“*Alternative technology settled open feedlot effluent control system*” or “*AT system*” means use of an open feedlot effluent control technology other than a conventional runoff containment system to control and dispose of settled open feedlot effluent.

“*Anaerobic digester system*” or “*digester*” means a manure storage structure that is covered if the primary function of the manure storage structure is to process manure by employing environmental conditions including bacteria to break down organic matter in the absence of oxygen, and the structure is used for producing, collecting, and utilizing a biogas.

“*Anaerobic lagoon*” means an unformed manure storage structure if the primary function of the structure is to store and stabilize manure, the structure is designed to receive manure on a regular basis, and the structure’s design waste loading rates provide that the predominant biological activity is anaerobic. An anaerobic lagoon does not include the following:

1. A runoff control basin or a settled open feedlot effluent basin that collects and stores only precipitation-induced runoff from an open feedlot operation.
2. An anaerobic treatment system that includes collection and treatment facilities for all off gases.

“*Animal*” means cattle, swine, horses, sheep, chickens, turkeys, goats, fish, or ducks.

“*Animal capacity*” means the maximum number of animals that the owner or operator will confine in an AFO at any one time. The animal capacity shall be what is currently approved or permitted on the site and is listed in the MMP or NMP, unless a portion of the facility has been properly closed or taken out of operation through the small AFO election as provided in paragraph 65.110(1) “f.” In a confinement feeding operation, the animal capacity of all confinement buildings will be included in the determination of the animal capacity of the operation, unless the building has been abandoned, in accordance with the definition of “abandoned AFO structure.”

“*Animal feeding operation*” or “*AFO*” means a lot, yard, corral, building, or other area in which animals are confined and fed and maintained for 45 days or more in any 12-month period, and all structures used for the storage of manure from animals in the operation. Except as required for an NPDES permit required pursuant to the Act, an AFO does not include a livestock market. Open feedlot operations and confinement feeding operations are considered to be separate AFOs.

“*Animal truck wash effluent*” means a combination of manure, washwater-induced runoff, or other runoff derived from an animal truck wash facility, which may include solids.

“*Animal truck wash effluent structure*” means an impoundment that is part of an animal truck wash facility, if the primary function of the impoundment is to collect and store animal truck wash effluent.

“*Animal truck wash facility*” means an operation engaged solely in washing single-unit trucks, truck-tractors, semitrailers, or trailers used to transport animals. An animal truck wash facility is considered to be part of an AFO if the animal truck wash facility and the AFO are under common ownership or management and the animal truck wash facility is located within 1,250 feet of the AFO.

“*Animal unit*” means a unit of measurement based upon the product of multiplying the number of animals of each category by a special equivalency factor, as follows:

1. Slaughter and feeder cattle	1.00
2. Immature dairy cattle	1.00
3. Mature dairy cattle	1.400
4. Butcher or breeding swine weighing more than 55 pounds	0.400
5. Swine weighing 15 pounds or more but not more than 55 pounds	0.100
6. Sheep or lambs	0.100
7. Goats	0.100
8. Horses	2.00
9. Turkeys weighing 7 pounds or more	0.018
10. Turkeys weighing less than 7 pounds	0.0085
11. Broiler or layer chickens weighing 3 pounds or more	0.010
12. Broiler or layer chickens weighing less than 3 pounds	0.0025
13. Ducks	0.040
14. Fish weighing 25 grams or more	0.001
15. Fish weighing less than 25 grams	0.00006

“*Animal unit capacity*” means a measurement used to determine the maximum number of animal units that may be maintained as part of an AFO at any one time, including as provided in Iowa Code

sections 459.201, 459.301, and 459A.103. For dry bedded confinement feeding operations, “animal unit capacity” means the maximum number of animal units that the owner or operator confines in a dry bedded confinement feeding operation at any one time, including the animal unit capacity of all dry bedded confinement feeding operation buildings that are used to house cattle or swine in the dry bedded confinement feeding operation. For purposes of determining whether an open feedlot operation must obtain an NPDES permit, the animal unit capacity of the AFO shall include the animal unit capacities of both the open feedlot operation and any adjacent confinement feeding operation if all of the following occur:

1. The animals in the open feedlot operation and any adjacent confinement feeding operation are all in the same category of animals as used in the definitions of “large CAFO” and “medium CAFO” in 40 CFR Part 122;
2. The closest open feedlot operation structure is separated by less than 1,250 feet from the closest confinement feeding operation structure; and
3. The open feedlot operation and the confinement feeding operation are under common ownership or management.

“*Animal weight capacity*” means the sum of the average weight of all animals in a confinement feeding operation when the operation is at full animal capacity. For confinement feeding operations with only one species, the animal weight capacity is the product of multiplying the animal capacity by the average weight during a production cycle. For operations with more than one species, the animal weight capacity of the operation is the sum of the animal weight capacities for all species. This definition applies to confinement feeding operations constructed prior to March 1, 2003.

“*Applicant*” means the person applying for a construction permit or an NPDES permit for an AFO.

“*Bedding*” means crop, vegetation, sand, or forage residue or similar materials placed in a dry bedded confinement building for the care of animals.

“*Business*” means a commercial enterprise.

“*Cemetery*” means a space held for the purpose of permanent burial, entombment or interment of human remains that is owned or managed by a political subdivision or private entity or a cemetery regulated pursuant to Iowa Code chapter 523I. A cemetery does not include a pioneer cemetery as defined by Iowa Code section 331.325.

“*Church*” means a religious institution.

“*Commercial enterprise*” means a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

“*Commercial manure service*” means a sole proprietor or business association engaged in the business of transporting, handling, storing, or applying manure for a fee.

“*Commercial manure service representative*” means a manager, employee, agent, or contractor of a commercial manure service, if the person is engaged in transporting, handling, storing, or applying manure on behalf of the service.

“*Common management*” means significant control by an individual of the management of the day-to-day operations of each of two or more AFOs. “Common management” does not include control over a contract livestock facility by a contractor as defined in Iowa Code section 202.1.

“*Common ownership*” for confinement feeding operations means the ownership of a confinement feeding operation as a sole proprietor, or a 10 percent or more ownership interest held by a person, in each of two or more confinement feeding operations as a joint tenant, tenant in common, shareholder, partner, member, beneficiary, or other equity interest holder. The ownership interest is a common ownership interest when it is held directly, indirectly through a spouse or dependent child, or both. The following exceptions shall apply to this definition:

1. For a confinement feeding operation structure constructed before June 19, 2024, that has not been expanded, “common ownership” means the ownership of a confinement feeding operation as a sole proprietor, or a majority ownership interest held by a person, in each of two or more confinement feeding operations as a joint tenant, tenant in common, shareholder, partner, member, beneficiary, or other equity

interest holder. The majority ownership interest is a common ownership interest when it is held directly, indirectly through a spouse or dependent child, or both. This exception shall not apply to a confinement feeding structure or operation expanded after June 19, 2024; instead, the 10 percent or more ownership interest standard shall apply.

2. This definition shall not apply to a dry bedded confinement feeding operation that is subject to the common ownership requirements in Iowa Code section 459B.103(3)“a”(3) nor to an open feedlot operation as defined in this rule.

“Common ownership” for open feedlot operations means to hold an interest in each of two or more open feedlot operations as any of the following:

1. A sole proprietor;
2. A joint tenant or tenant in common; or
3. A holder of a majority equity interest in a business association as defined in Iowa Code section 202B.102, including as a shareholder, partner, member, beneficiary, or other equity interest holder.

An interest in an open feedlot operation under paragraph “2” or “3” is a common ownership interest when it is held directly or indirectly through a spouse or dependent child, or both.

“*Complete application*” means an application that is substantially complete and approvable when all necessary questions on the application forms have been completed, the application is signed and all applicable portions of the application, including the application form, required attachments, and application fees, have been submitted.

“*Concentrated AFO*” or “*CAFO*” means an AFO that is a designated CAFO, or that is defined as a large CAFO or a medium CAFO as defined in 40 CFR 122.23(b).

“*Confinement feeding operation*” means an AFO in which animals are confined to areas that are totally roofed and includes an AFO that is not an open feedlot operation as defined in this chapter.

1. For purposes of water quality regulation, Iowa Code section 459.301 provides that two or more AFOs under common ownership or management are deemed to be a single AFO if they are adjacent or utilize a common area or system for manure disposal. For purposes of the air quality-related separation distances in Iowa Code section 459.202, Iowa Code section 459.201 provides that two or more AFOs under common ownership or management are deemed to be a single AFO if they are adjacent or utilize a common system for manure storage. The distinction is due to regulation of AFOs for water quality purposes under the Act. 40 CFR 122.23 sets out the requirements for an AFO and requires that two or more AFOs under common ownership be considered a single operation if they adjoin each other or if they use a common area or system for disposal of wastes. However, this federal regulation does not control regulation of AFOs for the purposes of the separation distances in Iowa Code section 459.202, and therefore the definition is not required by federal law to include common areas for manure disposal.

2. To determine if two or more AFOs are deemed to be one AFO, the first test is whether the AFOs are under common ownership or management. If they are not under common ownership or management, they are not one AFO. For purposes of water quality regulation, the second test is whether the two AFOs are adjacent or utilize a common area or system for manure disposal. If the two operations are not adjacent and do not use a common area or system for manure disposal, they are not one AFO. For purposes of the air quality-related separation distances in Iowa Code section 459.202, the second test is whether the two AFOs are adjacent or utilize a common system for manure storage. If the two operations are not adjacent and do not use the same system for manure storage, they are not one AFO.

3. A common area or system for manure disposal includes but is not limited to use of the same manure storage structure, confinement feeding operation structure, egg washwater storage structure, stockpile, permanent manure transfer piping system or center pivot irrigation system. A common area or system for manure disposal does not include manure application fields included in a manure management plan or anaerobic digester system.

“*Confinement feeding operation building*” or “*confinement building*” means a building used in conjunction with a confinement feeding operation to house animals.

“*Confinement feeding operation structure*” means an AFO structure that is part of a confinement feeding operation.

“*Confinement site*” means a site where there is located a manure storage structure which is part of a confinement feeding operation, other than a SAFO.

“*Confinement site manure applicator*” means a person, other than a commercial manure service or a commercial manure service representative, who applies manure on land if the manure originates from a manure storage structure.

“*Construction approval letter*” means a written document of the department to acknowledge that the preconstruction submittal requirements of rule 567—65.104(455B,459,459B) have been met for a confinement feeding operation that is not required to obtain a construction permit pursuant to rule 567—65.103(455B,459,459B).

“*Construction design statement*” means a document required to be submitted by a confinement feeding operation prior to constructing a formed manure storage structure, other than a SAFO, but that does not meet the threshold engineering requirements.

“*Construction permit*” means a written approval of the department to construct, modify or alter the use of an AFO structure as required by rules 567—65.103(455B,459,459B) and 567—65.203(455B,459A).

“*Controlling interest*” means ownership of a confinement feeding operation as a sole proprietor or a majority ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary, or other equity interest holder. The majority ownership interest is a controlling interest when it is held directly, indirectly through a spouse or dependent child, or both. The majority ownership interest must be a voting interest or otherwise control management of the confinement feeding operation.

“*Covered*” means organic or inorganic material, placed upon an AFO structure used to store manure, which significantly reduces the exchange of gases between the stored manure and the outside air. Organic materials include but are not limited to a layer of chopped straw, other crop residue, or a naturally occurring crust on the surface of the stored manure. Inorganic materials include but are not limited to wood, steel, aluminum, rubber, plastic, or Styrofoam. The materials shall shield at least 90 percent of the surface area of the stored manure from the outside air. Cover shall include an organic or inorganic material which current scientific research shows reduces detectable odor by at least 75 percent. A formed manure storage structure directly beneath a floor where animals are housed in a confinement feeding operation is deemed to be covered.

“*Critical public area*” means land that is owned or managed by the federal government, by the department, or by a political subdivision and that has unique scenic, cultural, archaeological, scientific, or historic significance or contains a rare or valuable ecological system. Critical public areas include:

1. State wildlife and waterfowl refuges listed in 571—subrules 52.1(2) and 52.1(3);
2. Recreation areas, state parks, state parks managed by another governmental agency, and state preserves as listed in rule 571—61.2(461A);
3. County parks and recreation areas as provided in subrule 65.1(2);
4. National wildlife refuges listed as follows: Union Slough National Wildlife Refuge, DeSoto National Wildlife Refuge, Boyer Chute National Wildlife Refuge, Upper Mississippi River National Wildlife and Fish Refuge, Driftless Area National Wildlife Refuge, Neal Smith National Wildlife Refuge, and Port Louisa National Wildlife Refuge;
5. National monuments and national historic sites listed as follows: Effigy Mounds National Monument and Herbert Hoover National Historic Site;
6. Parks in Iowa that are under the federal jurisdiction listed with the United States Army Corps of Engineers as provided in subrule 65.1(2).

“*Cropland*” means any land suitable for use in agricultural production including but not limited to feed, grain and seed crops, fruits, vegetables, forages, sod, trees, grassland, pasture and other similar crops.

“*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.

“*Designated area*” means a known sinkhole, abandoned well, unplugged agricultural drainage well, agricultural drainage well cistern, agricultural drainage well surface tile inlet, drinking water well, designated wetland, or water source. “Designated area” does not include a terrace tile inlet or surface tile inlet other than an agricultural drainage well surface tile inlet.

“*Designated CAFO*” means an AFO that has been designated as a CAFO pursuant to rule 567—65.201(455B,459A).

“*Designated wetland*” means land designated as a protected wetland by the United States Department of the Interior or the department, including but not limited to a protected wetland as defined in Iowa Code section 456B.1, if the land is owned and managed by the federal government or the department. However, a designated wetland does not include land where an agricultural drainage well has been plugged causing a temporary wetland or land within a drainage district or levee district. Designated wetlands in the state are listed in the department’s “Designated Wetlands in Iowa” (more information is contained in subrule 65.1(2), incorporation by reference).

“*Discontinued AFO*” means an AFO whose structures have been abandoned or whose use has been discontinued as evidenced by the removal of all animals and the owner or operator has no immediate plans to repopulate.

“*Discontinued AFO structure*” means an AFO structure that has been abandoned or whose use has been discontinued as evidenced by the removal of all animals from the structure and the owner or operator has no immediate plans to repopulate.

“*Document*” means any form required to be processed by the department under this chapter regulating AFOs, including but not limited to applications or related materials for permits as provided in Iowa Code section 459.303, MMPs as provided in Iowa Code section 459.312, comment or evaluation by a county board of supervisors considering an application for a construction permit, the department’s analysis of the application including using and responding to a master matrix pursuant to Iowa Code section 459.304, and notices required under those sections.

“*Dry bedded confinement feeding operation*” means a confinement feeding operation in which cattle or swine are confined to areas which are totally roofed and in which all manure is stored as dry bedded manure. Unless specifically stated otherwise, all requirements in Divisions I and II of this chapter do apply to dry bedded confinement feeding operations.

“*Dry bedded confinement feeding operation structure*” means a dry bedded confinement feeding operation building or a dry bedded manure storage structure.

“*Dry bedded manure*” means manure from cattle or swine that meets all of the following requirements:

1. The manure does not flow perceptibly under pressure.
2. The manure is not capable of being transported through a mechanical pumping device designed to move a liquid.
3. The manure contains bedding.

“*Dry bedded manure confinement feeding operation building*” or “*building*” means a building used in conjunction with a confinement feeding operation to house cattle or swine and in which any manure from the animals is stored as dry bedded manure.

“*Dry bedded manure storage structure*” means a covered or uncovered structure, other than a building, used to store dry bedded manure originating from a confinement feeding operation.

“*Dry manure*” means manure that meets all of the following conditions:

1. The manure does not flow perceptibly under pressure.
2. The manure is not capable of being transported through a mechanical pumping device designed to move a liquid.
3. The constituent molecules of the manure do not flow freely among themselves but may show a tendency to separate under stress.

“*Dry manure*” includes manure marketed as a bulk dry animal nutrient product that is stored 1,250 feet or less from the confinement animal feeding structure from which it originated.

“Earthen manure storage basin” means an earthen cavity, either covered or uncovered, that, on a regular basis, receives manure discharges from a confinement feeding operation if accumulated manure from the basin is completely removed at least once each year.

“Earthen waste slurry storage basin” means an uncovered and exclusively earthen cavity that, on a regular basis, receives manure discharges from a confinement AFO if accumulated manure from the basin is completely removed at least twice each year and that was issued a permit, constructed or expanded on or after July 1, 1990, but prior to May 31, 1995.

“Educational institution” means a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area education agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.

“Egg washwater storage structure” means an aerobic or anaerobic structure used to store the wastewater resulting from the washing and in-shell packaging of eggs. It does not include a structure also used as a manure storage structure.

“Enforcement action” means an action against a person with a controlling interest in a confinement feeding operation initiated by the department or the attorney general to enforce the provisions of Iowa Code chapter 459 or 459B or rules adopted pursuant to either chapter. An enforcement action begins when the attorney general institutes proceedings in district court pursuant to Iowa Code section 455B.112. An enforcement action is pending until final resolution of the action by satisfaction of a court order, for which all judicial appeal rights are exhausted, expired, or waived.

“Family member” means a person related to another person as parent, grandparent, child, grandchild, sibling, or a spouse of such related person.

“Feed storage runoff basin” means a covered or uncovered impoundment with the primary function to collect and store runoff from a feed storage area.

“Formed animal truck wash effluent structure” means a covered or uncovered impoundment used to store effluent from an animal truck wash facility, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials.

“Formed manure storage structure” means a covered or uncovered impoundment used to store manure from an AFO, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Subject to department approval, 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.

“Formed settled open feedlot effluent basin” means a settled open feedlot effluent basin 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 settled open feedlot effluent basin shall have the structural integrity to withstand expected internal and external load pressures.

“Freeboard” means the difference in elevation between the liquid level and the confinement feeding operation structure’s overflow level.

“Frozen ground” means soil that is impenetrable due to frozen soil moisture but does not include soil that is only frozen to a depth of two inches or less.

“Grassed waterway” means a natural or constructed channel that is shaped or graded to required dimensions and established in suitable vegetation for the stable conveyance of runoff.

“Highly erodible land” means a field that has one-third or more of its acres or 50 acres, whichever is less, with soils that have an erodibility index of eight or more, as determined by rules promulgated by the United States Department of Agriculture.

“Human sanitary waste” means wastewater derived from domestic uses including bathroom and laundry facilities generating wastewater from toilets, baths, showers, lavatories and clothes washing.

“Incidental” means a duty which is secondary or subordinate to a primary job or function.

“Incorporation” means a soil tillage operation following the surface application of manure which mixes the manure into the upper four inches or more of soil.

“Indemnity fund” means the livestock remediation fund created in Iowa Code section 459.501.

“Injection” means the application of manure into the soil surface using equipment that discharges it beneath the surface.

“Interest” means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary, or other equity interest holder. The ownership interest is an interest when it is held directly, indirectly through a spouse or dependent child, or both.

“Karst terrain” means land having karst formations that exhibit surface and subterranean features of a type produced by the dissolution of limestone, dolomite, or other soluble rock and characterized by closed depressions, sinkholes, or caves.

“Known sinkhole” means a sinkhole that has been included in the department’s sinkhole coverage and displayed in the AFO Siting Atlas or a sinkhole known to the applicant.

“Liquid manure” means manure that meets all of the following requirements:

1. The manure flows perceptibly under pressure.
2. The manure is capable of being transported through a mechanical pumping device designated to move a liquid.
3. The constituent molecules of the liquid manure flow freely among themselves and show a tendency to separate under stress.

Liquid manure that is frozen or partially frozen is included in this definition.

“Livestock market” means any place where animals are assembled from two or more sources for public auction, private sale, or on a commission basis, which is under state or federal supervision, including a livestock sale barn or auction market, if such animals are kept for ten days or less.

“Long-term stockpile location” means an area where a person stockpiles manure for more than a total of six months in any two-year period.

“Low-pressure irrigation system” means spray irrigation equipment that discharges manure from a maximum height of nine feet in a downward direction and that utilizes spray nozzles that discharge manure at a maximum pressure of 25 pounds per square inch.

“Major water source” means a water source that is a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state, if the water source is capable of supporting a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Table 1 and Table 2 at iowadnr.gov/afo/rules (more information is contained in subrule 65.1(2), incorporation by reference).

“Manager” means a person who is actively involved in the operation of the commercial manure service and makes management decisions in the operation of the service.

“Man-made manure drainage system” means a drainage ditch, flushing system, or other drainage device which was constructed by human beings and is used for the purpose of transporting manure.

“Manure” means animal excreta or other commonly associated wastes of animals including but not limited to bedding, litter, or feed losses. Manure does not include wastewater resulting from the washing and in-shell packaging of eggs. For the purposes of NPDES permitting, “manure” includes manure, bedding, compost and raw materials or other materials commingled with manure or set aside for disposal. If a manure storage structure or animal truck wash effluent structure contains both manure from an AFO and animal truck wash effluent from an animal truck wash facility, the effluent shall be deemed to be manure.

“Manure storage structure” means a formed manure storage structure, an unformed manure storage structure, digester, or a dry bedded manure storage structure. A manure storage structure does not include the following: (1) egg washwater storage structure, (2) areas of a confinement building where no manure is stored, and (3) areas of a confinement building where the animals have direct contact with the manure and the manure is removed regularly during the production cycle or at the conclusion of the production cycle (referred to as the “animal production area”). An animal truck wash effluent structure may be the same as a manure storage structure that is part of the confinement feeding operation, so long as the

primary function of such impoundment is to collect and store both effluent from the animal truck wash facility and manure from the confinement feeding operation.

“*NPDES permit*” means a written permit of the department, pursuant to the National Pollutant Discharge Elimination System (NPDES) program, to authorize and regulate the operation of a CAFO.

“*NRCS*” means United States Department of Agriculture Natural Resources Conservation Service.

“*Nutrient management plan*” or “*NMP*” means a plan that provides for the management of manure, process wastewater, settled open feedlot effluent, settleable solids, open feedlot effluent, animal truck wash effluent, including the application of effluent, as provided in rule 567—65.209(455B,459A).

“*One hundred year floodplain*” means the land adjacent to a major water source, if there is at least a 1 percent chance that the land will be inundated in any one year. In making the calculations, the department shall consider available maps or data compiled by the Federal Emergency Management Agency.

“*Open feedlot*” means a lot, yard, corral, building, or other area used to house animals in conjunction with an open feedlot operation.

“*Open feedlot effluent*” means a combination of manure, precipitation-induced runoff, or other runoff from an open feedlot before its settleable solids have been removed. If an open feedlot operation structure or animal truck wash effluent structure contains effluent from both an open feedlot operation and an animal truck wash facility, the animal truck wash effluent shall be deemed to be open feedlot effluent.

“*Open feedlot effluent basin*” means an open feedlot basin that does not settle solids before the effluent goes to the basin.

“*Open feedlot operation*” means an unroofed or partially roofed AFO if crop, vegetation, or forage growth or residue is not maintained as part of the AFO during the period that animals are confined in the AFO. “Open feedlot operation” includes a “partially roofed AFO” as defined in this rule. Iowa Code section 459A.103 provides that two or more open feedlot operations under common ownership or management are deemed to be a single open feedlot operation if they are adjacent or utilize a common area or system for open feedlot effluent disposal. To determine if two or more open feedlot operations are deemed to be one open feedlot operation, the first test is whether the open feedlot operations are under common ownership or management. If they are not under common ownership or management, they are not one open feedlot operation. The second test is whether the two open feedlot operations are adjacent or utilize a common area or system for open feedlot effluent disposal. If the two operations are not adjacent and do not use a common area or system for open feedlot effluent disposal, they are not one open feedlot operation.

“*Open feedlot operation structure*” means an open feedlot, an open feedlot effluent basin, a settled open feedlot effluent basin, a solids settling facility, or an AT system. “Open feedlot operation structure” does not include a manure storage structure as defined in Iowa Code section 459.102.

“*Owner*” means a person who has legal or equitable title to the property where the AFO is located or a person who has legal or equitable title to the AFO structures. “Owner” does not include a person who has a lease to use the land where the AFO is located or to use the AFO structures.

“*Partially roofed AFO*” means an AFO in which the animals are confined under a roof and there exists unroofed areas located on the perimeter of the roofed structure, where the animals have unrestricted access at all times. The square footage of the unroofed area shall be at least 10 percent of the square footage of the attached roofed production area. Openings or vents in the roofed portion shall not be included in the 10 percent unroofed calculation.

“*Permanent vegetation cover*” means land that is maintained in perennial vegetative cover consisting of grasses, legumes, or both, and includes but is not limited to pastures, grasslands or forages.

“*Process wastewater*” means water directly or indirectly used in the operation of the AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing of pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs or bedding.

“Production area” means that part of an AFO that includes the area in which animals are confined, the manure storage area, the raw materials storage area, egg washing and egg processing facilities, and the waste containment areas. The area in which animals are confined includes but is not limited to open lots, housed lots, feedlots, stall barns, free stall barns, milk rooms, milking centers, cow yards, barnyards, medication pens, walkers, animal walkways, confinement houses, and stables. The manure storage area includes but is not limited to lagoons, solids settling facilities, settled open feedlot effluent basins, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins and areas within berms and diversions that separate uncontaminated storm water. Also included in the definition of production area is any area used in the storage, handling, treatment, or disposal of mortalities.

“Professional engineer” or *“PE”* means a person engaged in the practice of engineering as defined in Iowa Code section 542B.2 who is issued a certificate of licensure as a PE pursuant to Iowa Code section 542B.17.

“Public thoroughfare” means a road, street, or bridge that is constructed or maintained by the state or a political subdivision.

“Public use area” means that portion of land owned by the United States, the state, or a political subdivision with facilities that attract the public to congregate and remain in the area for significant periods of time. Facilities include but are not limited to picnic grounds, campgrounds, cemeteries, lodges and cabins, shelter houses, playground equipment, swimming beaches at lakes, and fishing docks, fishing houses, fishing jetties or fishing piers at lakes. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through but does not congregate or remain in the area for significant periods of time.

“Public water supply” (also referred to as a system or a water system) 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. Such term includes (1) any collection, treatment, storage, and distribution facilities under control of the supplier of water and used primarily in connection with such system, and (2) any collection (including wells) or pretreatment storage facilities not under such control that are used primarily in connection with such system. A public water supply system is either a “community water system” or a “noncommunity water system.”

“Q100,” as defined in rule 567—70.2(455B,481A), means a flood having a 1 percent chance of being equaled or exceeded in any one year as determined by the department.

“Qualified confinement feeding operation” means a confinement feeding operation that has an animal unit capacity of:

1. 5,333 or more for animals other than swine as part of a farrowing and gestating operation or farrow-to-finish operation or cattle as part of a cattle operation.
2. 2,500 or more for a swine farrowing and gestating operation, not including replacement breeding swine if the following apply:
 - The replacement breeding swine are raised at the confinement feeding operation; and
 - The replacement breeding swine are used in the farrowing and gestation operation.
3. 5,400 or more for a swine farrow-to-finish operation.
4. 8,500 or more for a confinement feeding operation maintaining cattle.

“Qualified stockpile cover” means a barrier impermeable to precipitation that is used to protect a stockpile from precipitation.

“Qualified stockpile structure” means a building or roofed structure that is all of the following:

1. Impermeable to precipitation.
2. Constructed using wood, steel, aluminum, vinyl, plastic, or other similar materials.
3. Constructed with walls or other means to prevent precipitation-induced surface runoff from contacting the stockpile.

“Release” means an actual, imminent or probable discharge of manure, process wastewater, open feedlot effluent, settled open feedlot effluent, or settleable solids from an AFO or animal truck wash

facility to surface water, groundwater, drainage tile line or intake or to a designated area resulting from storing, handling, transporting or land-applying manure, process wastewater, open feedlot effluent, settled open feedlot effluent, or settleable solids.

“Religious institution” means a building in which an active congregation is devoted to worship.

“Research college” means an accredited public or private college or university, including but not limited to a university under control of the state board of regents as provided in Iowa Code chapter 262, or a community college under the jurisdiction of a board of directors for a merged area as provided in Iowa Code chapter 260C, if the college or university performs research or experimental activities regarding animal agriculture or agronomy.

“Residence” means a house or other building, including all structures attached to the building, not owned by the owner of the AFO that meets all of the following criteria at the location of the intended residence:

1. Used as a place of habitation for humans on a permanent and frequent basis.
2. Not readily mobile.
3. Connected to a permanent source of electricity, a permanent private water supply or a public water supply system and a permanent domestic sewage disposal system including a private, semipublic or public sewage disposal system.
4. Assessed and taxed as real property.

If a house or other building has not been occupied by humans for more than six months in the last two years, or if a house or other building has been constructed or moved to its current location within the past six months, the owner of the intended residence has the burden of proving that the house or other building is a residence. Paragraph “3” shall not apply to a house or other building inhabited by persons who are exempt from the compulsory education standards of Iowa Code section 299.24 and whose religious principles or tenets prohibit the use of the utilities listed.

“Restricted spray irrigation equipment” means spray irrigation equipment that disperses manure through an orifice at a rate of 80 pounds per square inch or more.

“School” means an educational institution.

“Seasonal high-water table” means the part of the soil profile closest to the soil surface that becomes saturated (usually in the spring) as observed in a monitoring well or determined by recognition of soil redoxomorphic features.

NOTE: “Redoxomorphic features” refers to the gleying or mottling or both that occur under saturated conditions within the soil profile.

“Secondary containment barrier” means a structure used to retain accidental manure overflow from a manure storage structure.

“Settleable solids,” “scraped solids,” or *“solids”* means that portion of the effluent that meets all the following requirements:

1. The solids do not flow perceptibly under pressure.
2. The solids are not capable of being transported through a mechanical pumping device designed to move a liquid.
3. The constituent molecules of the solids do not flow freely among themselves but do show the tendency to separate under stress.

“Settled open feedlot effluent” means a combination of manure, precipitation-induced runoff, or other runoff originating from an open feedlot operation after its settleable solids have been removed.

“Settled open feedlot effluent basin” or *“runoff control basin”* means a covered or uncovered impoundment that is part of an open feedlot operation, if the primary function of the impoundment is to collect and store settled open feedlot effluent. An animal truck wash facility may be part of an open feedlot operation. An animal truck wash effluent structure may be the same as a settled open feedlot effluent basin that is part of the open feedlot operation, so long as the primary function of such impoundment is to collect and store effluent from both the animal truck wash facility and the open feedlot operation.

“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.

“*Sinkhole*” means any closed depression that was caused by the dissolution or collapse of subterranean materials in a carbonate formation or in gypsum or rock salt deposits through which water may drain 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 AFO*” or “*SAFO*” means an AFO that has an animal unit capacity of 500 or fewer animal units.

“*Small animal truck wash facility*” means an animal truck wash facility, if all of the following apply:

1. The animal truck wash facility and all single-unit trucks, truck-tractors, semitrailers, or trailers that are washed at the facility are owned by the same person; and
2. The average total per-day volume of washwater used by the animal truck wash facility does not exceed 2,000 gallons as calculated on a monthly basis.

“*Snow-covered ground*” means soil covered by one inch or more of snow or soil covered by one-half inch or more of ice.

“*Solids settling facility*” means a basin, terrace, diversion, or other structure or solids removal method that is part of an open feedlot operation and which is designed and operated to remove settleable solids from open feedlot effluent. A “solids settling facility” does not include a basin, terrace, diversion, or other structure or solids removal method that retains the liquid portion of open feedlot effluent for more than seven consecutive days following a precipitation event.

“*Spray irrigation equipment*” means mechanical equipment used for the aerial application of manure, if the equipment receives manure from a manure storage structure during application via a pipe or hose connected to the structure, and includes a type of equipment customarily used for aerial application of water to aid the growing of general farm crops.

“*Stockpile*” means dry manure or dry bedded manure originating from a confinement feeding operation that is stored at a particular location outside a confinement feeding operation building or a manure storage structure. For open feedlot operations and animal truck washes, “stockpile” means any accumulation of manure, scraped solids, settleable solids or combination of manure and solids located outside of the open feedlot or animal truck wash facility or outside of an area that drains to an open feedlot or animal truck wash facility, where the scraped manure or solids are stored for less than six months.

“*Stockpile dry bedded manure*” means to store dry bedded manure outside a dry bedded manure confinement feeding operation building or a dry bedded manure storage structure.

“*Stockpile dry manure*” means to create or add to a dry manure stockpile.

“*Surface water drain tile intake*” means an opening to a drain tile, including intake pipes and French drains, which allows surface water to enter the drain tile without filtration through the soil profile.

“*Swine farrow-to-finish operation*” means a confinement feeding operation in which porcine animals are produced and in which a primary portion of the phases of the production cycle is conducted at one confinement feeding operation. Phases of the production cycle include but are not limited to gestation, farrowing, growing and finishing. At a minimum, farrowing, growing, and finishing shall be conducted at the operation with a majority of the pigs farrowed at the site finished to market weight in order to qualify as a farrow-to-finish operation.

“*Threshold requirements for an engineer*” means the limits, pursuant to Iowa Code section 459.303, that require that the design of a formed manure storage structure or egg washwater storage structure be prepared and signed by a PE licensed in the state of Iowa or by an engineer working for the NRCS. A confinement feeding operation that utilizes a formed manure storage structure meets threshold requirements for an engineer if any of the following apply:

1. A confinement feeding operation with an animal unit capacity of 1,250 or more animal units for swine maintained as part of a swine farrowing and gestating operation.
2. A confinement feeding operation with an animal unit capacity of 2,750 or more animal units for swine maintained as part of a swine farrow-to-finish operation.

3. A confinement feeding operation with an animal unit capacity of 4,000 or more animal units for cattle maintained as part of a cattle operation.

4. Any other confinement feeding operation with an animal unit capacity of 3,000 or more animal units.

“*Unformed animal truck wash effluent structure*” means a covered or uncovered impoundment used to store animal truck wash effluent, other than a formed animal truck wash effluent structure.

“*Unformed manure storage structure*” means a covered or uncovered impoundment used to store manure, other than a formed manure storage structure, which includes an anaerobic lagoon, aerobic structure, or earthen manure storage basin.

“*Unformed settled open feedlot effluent basin*” means a settled open feedlot effluent basin, other than a formed settled open feedlot effluent basin.

“*Vegetative infiltration basin*” or “*VIB*” means an open feedlot operation structure in which settled open feedlot effluent is discharged into a relatively flat basin area which is bermed to prevent entry or discharge of surface water flows and is planted to permanent vegetation. An extensive tile system installed at a depth of three to five feet is used to collect infiltrated settled open feedlot effluent from the VIB and discharge it into a VTA for further treatment. As opposed to wetlands, which are designed to maintain a permanent water level, a VIB is designed to maximize water infiltration into the soil and thus normally will have standing water for only short periods of time. Removal of settleable solids is required prior to discharge of open feedlot effluent into the VIB. Soil suitability is essential to ensure adequate filtration and treatment of pollutants. Periodic harvesting of vegetation is required.

“*Vegetative treatment area*” or “*VTA*” means an open feedlot operation structure in which settled open feedlot effluent is discharged into areas that are level in one dimension and have a slight slope (less than 5 percent) in the other dimension and are planted to relatively dense permanent vegetation. Settled open feedlot effluent must be discharged evenly across the top width of the VTA and allowed to slowly flow downslope through the VTA. Level spreaders or other practices may be required to maintain even flow throughout the length of the VTA. Management to maintain a dense vegetation cover is required, as is periodic harvesting of vegetation.

“*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, that are contained within, flow through or border upon the state or any portion thereof.

“*Water source*” means a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without outlet to which only one landowner is riparian.

“*Water well*” means an excavation that is drilled, cored, augered, washed, driven, dug, jetted, or 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. “Water well” does not include an open ditch or drain tiles or an excavation made for obtaining or prospecting for oil, natural gas, minerals, or products mined or quarried.

“*Wetted perimeter*” means the outside edge of land where the direct discharge of manure occurs from spray irrigation equipment.

65.1(2) Incorporation by reference. The text of the following incorporated materials is not included in this chapter. The materials are provided at iowadnr.gov/afo/rules. The materials listed below are hereby made a part of this chapter. For material subject to change, only the specific version specified in this subrule is incorporated. Any amendment or revision to a reference document is not incorporated until this subrule has been amended to specify the new version.

a. “Act” means the federal Water Pollution Control Act, also known as the Clean Water Act, as defined by 40 CFR 403.3 as amended through July 19, 2023;

b. “AFO Siting Atlas” means an online mapping tool to assist in determining compliance of potential building sites to meet regulatory requirements. The AFO Siting Atlas is located on the department’s website, and the regulatory layers are effective as of June 19, 2024. Any changes to the

regulatory layers of the AFO Siting Atlas shall be done through rulemaking. Regulatory layers include: karst, one hundred year floodplains in major water sources, and sinkholes;

c. “CFR” or “Code of Federal Regulations” means the federal administrative rules adopted by the United States as amended through July 19, 2023;

d. County Parks and Recreation Areas listed in Iowa’s County Conservation System Guide to Outdoor Adventure – effective June 19, 2024;

e. Parks in Iowa under the federal jurisdiction of the United States Army Corps of Engineers listed on the United States Army Corps of Engineers’ website – effective June 19, 2024;

f. Designated Wetlands in Iowa – effective August 23, 2006;

g. Emergency spill line telephone number is 515.725.8694 – effective January 1, 2023;

h. Appendix A: Open feedlot effluent control alternatives for open feedlot operations – effective December 14, 2016;

i. Appendix B: Master matrix – effective March 1, 2003;

j. Appendix C: Design specifications—formed manure storage structures – effective March 24, 2004;

k. Table 1: Major water sources—Rivers and Streams – effective December 14, 2016;

l. Table 2: Major water sources—Lakes – effective December 14, 2016;

m. Table 3: Annual pounds of nitrogen per space of capacity – effective September 15, 2010;

n. Table 4: Crop nitrogen usage rate factors – effective December 14, 2016;

o. Table 5: Manure production per space of capacity – effective September 15, 2010;

p. Table 6: Required separation distances for confinement feeding operations construction on or after March 1, 2003—swine, sheep, horses, poultry, and beef and dairy cattle – effective September 15, 2010;

q. Table 6a: Required separation distances for confinement feeding operations constructed on or after January 1, 1999, but prior to March 1, 2003—swine, sheep, horses and poultry – effective September 15, 2010;

r. Table 6b: Required separation distances for confinement feeding operations constructed on or after January 1, 1999, but prior to March 1, 2003—beef and dairy cattle – effective September 15, 2010;

s. Table 6c: Required separation distances for confinement feeding operations constructed prior to January 1, 1999—swine, sheep, horses and poultry – effective September 15, 2010;

t. Table 6d: Required separation distances for confinement feeding operations constructed prior to January 1, 1999—beef and dairy cattle – effective September 15, 2010;

u. Table 7: Required separation distances for open feedlot operations, stockpiles from open feedlot operations, stockpiles from dry manure confinement operations and stockpiles from dry bedded confinement operations – effective September 15, 2010;

v. Table 8: Summary of credit for mechanical aeration – effective September 15, 2010;

w. List of high-quality water resources in 567—Chapter 61 – effective January 1, 2001;

x. NRCS Iowa Technical Note No. 25 Iowa Phosphorus Index – published March 2024;

y. Iowa State University Extension and Outreach publication PM 1688, “A General Guide for Crop Nutrient and Limestone Recommendations in Iowa” – published February 2023;

z. Iowa State University Extension and Outreach publication PMR 1003, “Using Manure Nutrients for Crop Production”—published April 2023;

aa. Iowa State University Extension and Outreach publication AE 3550, “How to Sample Manure for Nutrient Analysis” – published January 2021; and

bb. Iowa State University Extension and Outreach publication CROP 31-8, “Take a Good Soil Sample to Help Make Good Fertilization Decisions” – published December 2016.

cc. NRCS Iowa Agronomy Technical Note No. 29 Dominant Critical Area – published April 2024.

567—65.2(455B,459,459A,459B) Reporting of releases. A release, as defined in rule 567—65.1(455B,459,459A,459B), shall be reported to the department as provided in this subrule. This rule does not apply to land application of manure in compliance with these rules.

65.2(1) Notification. A person storing, handling, transporting, or land-applying manure from an AFO or animal truck wash facility who becomes aware of a release shall notify the department of the occurrence of release as soon as possible but not later than six hours after the onset or discovery of the release by contacting the department's spill line. The local police department or the office of the sheriff of the affected county shall also be contacted within the same time period if the spill involves a public roadway and public safety could be threatened. Reports made pursuant to this rule shall be confirmed in writing as provided in paragraph 65.2(1)"c."

65.2(2) Verbal report. The verbal report of such a release should provide information on as many items listed in paragraph 65.2(1)"c" as available information will allow.

65.2(3) Written report. The written report of a release shall be submitted at the request of the department within 30 days after the verbal report of the release and contain at a minimum the following information:

- a. The approximate location of the alleged release (including at a minimum the quarter-quarter section, township and county in which the release occurred or was discovered).
- b. The time and date of onset of the alleged release, if known, and the time and date of the discovery of the alleged release.
- c. The time and date of the verbal report to the department of the alleged release.
- d. The name, mailing address and telephone number of the person reporting the alleged release.
- e. The name, mailing address and telephone number of any other person with knowledge of the event who can be contacted for further information.
- f. The source of the manure allegedly released (e.g., formed storage, earthen storage) and the form of the manure or process water released.
- g. The estimated or known volume of manure allegedly released.
- h. The weather conditions at the time of the onset or discovery of the alleged release.
- i. If known, the circumstances under which the alleged release occurred or exists (e.g., overflow, storage structure breach, equipment malfunction or breakdown, land runoff).
- j. The approximate location of the nearest stream or other water body that is or could be impacted by the alleged release and the approximate location to the alleged release of any known tile intakes or tile lines that could be a direct conveyance to a surface water or groundwater.
- k. A description of any containment or remedial measures taken to minimize the impact of the alleged release.
- l. Any information that may assist the department in evaluating the alleged release.

65.2(4) Reporting of subsequent findings. All subsequent findings and laboratory results should be reported and submitted in writing to the department as soon as they become available.

567—65.3(455B,459,459A,459B) CAFOs and NPDES permits. Iowa Code sections 459B.306 and 459.311(2) require a confinement feeding operation and Iowa Code section 459A.401(2) requires an open feedlot operation that is a CAFO as defined in 40 CFR 122.23(b) to comply with applicable NPDES permit requirements pursuant to rules adopted by the commission. The following regulations are adopted by reference:

1. 40 CFR 122.21, application for a permit.
2. 40 CFR 122.23, CAFOs.
3. 40 CFR 122.42(e), additional conditions applicable to specified categories of NPDES permits.
4. 40 CFR 122.63(h), minor modification of permits.
5. 40 CFR Part 412, CAFO point source category.

567—65.4(455B,459,459A,459B) Complaint investigations. Complaints of violations of Iowa Code chapters 455B, 459, 459A and 459B and this rule, which are received by the department or are forwarded to the department by a county, following a county board of supervisors' determination that a complainant's allegation constitutes a violation, shall be investigated by the department if it is determined that the complaint is legally sufficient and an investigation is justified.

65.4(1) If after evaluating a complaint to determine whether the allegation may constitute a violation, without investigating whether the facts supporting the allegation related to violations of the Iowa Code or this chapter are true or untrue, the county board of supervisors shall forward its finding to the department director.

65.4(2) A complaint is legally sufficient if it contains adequate information to investigate the complaint and if the allegation constitutes a violation, without investigating whether the facts supporting the allegation are true or untrue, of rules adopted by the department; Iowa Code chapters 455B, 459, 459A and 459B or environmental standards in regulations subject to federal law and enforced by the department.

65.4(3) The department in its discretion shall determine the urgency of the investigation, and the time and resources required to complete the investigation, based upon the circumstances of the case, including the severity of the threat to the quality of surface water or groundwater.

65.4(4) The department shall notify the complainant and the alleged violator if an investigation is not conducted specifying the reason for the decision not to investigate.

65.4(5) The department will notify the county board of supervisors where the violation is alleged to have occurred before doing a site investigation unless the department determines that a clear, present and impending danger to the public health or environment requires immediate action.

65.4(6) The county board of supervisors may designate a county employee to accompany the department on the investigation of any site as a result of a complaint.

65.4(7) A county employee accompanying the department on a site investigation has the same right of access to the site as the department official conducting the investigation during the period that the county designee accompanies the department official. The county shall not have access to records required in subrule 65.111(9).

65.4(8) Upon completion of an investigation, the department shall notify the complainant of the results of the investigation, including any anticipated, pending or complete enforcement action arising from the investigation. The department shall deliver a copy of the notice to the AFO or animal truck wash facility that is the subject of the complaint, any alleged violators if different from the AFO or animal truck wash facility and the county board of supervisors of the county where the violation is alleged to have occurred.

65.4(9) When a person who is a department official, an agent of the department, or a person accompanying the department official or agent enters the premises of an AFO or animal truck wash facility, both of the following shall apply:

a. The person may enter at any reasonable time in and upon any private or public property to investigate any actual or possible violation of this chapter or the rules or standards adopted under this chapter. However, the owner or person in charge shall be notified.

(1) If the owner or occupant of any property refuses admittance to the operation, or if prior to such refusal the director demonstrates the necessity for a warrant, the director may make application under oath or affirmation to the district court of the county in which the property is located for the issuance of a search warrant.

(2) In the application, the director shall state that an inspection of the premises is mandated by the laws of this state or that a search of certain premises, areas, or things designated in the application may result in evidence tending to reveal the existence of violations of public health, safety, or welfare requirements imposed by statutes, rules or ordinances established by the state or a political subdivision thereof. The application shall describe the area, premises, or thing to be searched; give the date of the last inspection if known; give the date and time of the proposed inspection; declare the need for such inspection; recite that notice of desire to make an inspection has been given to affected persons and that admission was refused if that be the fact; and state that the inspection has no purpose other than to carry out the purpose of the statute, ordinance, or regulation pursuant to which inspection is to be made. If an item of property is sought by the director, it shall be identified in the application.

(3) If the court is satisfied from the examination of the applicant, and of other witnesses, if any, and of the allegations of the application of the existence of the grounds of the application, or that there is probable cause to believe their existence, the court may issue such search warrant.

(4) In making inspections and searches pursuant to the authority of this rule, the director must execute the warrant:

1. Within ten days after its date.
2. In a reasonable manner, and any property seized shall be treated in accordance with the provisions of Iowa Code chapters 808, 809, and 809A.
3. Subject to any restrictions imposed by the statute, ordinance or regulation pursuant to which inspection is made.
 - b.* The person shall comply with standard biosecurity requirements customarily required by the AFO or animal truck wash facility which are necessary in order to control the spread of disease among an animal population.

567—65.5(455B,459,459A,459B) Transfer of legal responsibilities or title. If title or legal responsibility for a permitted AFO or an animal truck wash facility is transferred, the person to whom title or legal responsibility is transferred shall be subject to all terms and conditions of the construction permit and these rules. The person to whom the construction permit was issued and the person to whom title or legal responsibility is transferred shall notify the department, in writing, of the transfer of legal responsibility or title of the operation within 30 days of the transfer. Within 30 days of receiving a written request from the department, the person to whom legal responsibility is transferred shall submit to the department all information needed to modify the construction permit to reflect the transfer of legal responsibility. A person who has been classified as a habitual violator under Iowa Code section 459.604 shall not acquire legal responsibility or a controlling interest to any additional permitted confinement feeding operations for the period that the person is classified as a habitual violator.

567—65.6(455B,459,459A,459B) Construction. For purposes of these rules:

65.6(1) Construction of an AFO structure, open feedlot operation structure, or animal truck effluent structure begins or an AFO structure, open feedlot operation structure, or animal truck wash effluent structure is constructed when any of the following occurs:

- a.* Excavation for a proposed AFO structure, open feedlot operation structure, or animal truck wash effluent structure; excavation for footings; or filling or compacting of the soil or soil amendments for a proposed AFO structure, open feedlot operation structure, or animal truck wash effluent structure.
- b.* Installation of forms for concrete for an AFO structure, open feedlot operation structure, or animal truck wash effluent structure.
- c.* Installation of piping for movement of manure within, from or between AFO structures, open feedlot operation structures, or animal truck wash effluent structures.

65.6(2) Construction does not begin upon occurrence of any of the following:

- a.* Removal of trees, brush, or other vegetative growth.
- b.* Construction of driveways or roads.
- c.* General earth moving for leveling at the site.
- d.* Installation of temporary utility services.
- e.* Installation of temporary or permanent groundwater lowering tiles.

65.6(3) Prohibition on construction for confinement feeding operations.

a. A person shall not construct or expand an AFO structure that is part of a confinement feeding operation, if the person is either of the following:

(1) A party to a pending action for a violation of this chapter concerning a confinement feeding operation in which the person has a controlling interest and the action is commenced in district court by the attorney general.

(2) A habitual violator.

b. A person shall not construct or expand a confinement feeding operation structure for five years after the date of the last violation committed by a person or a confinement feeding operation in which the person holds a controlling interest during which the person or operation was classified as a habitual violator under Iowa Code sections 459.317 and 459.604.

c. Paragraphs 65.6(3)“a” and “b” shall not prohibit a person from completing the construction or expansion of an AFO structure, if either of the following applies:

- (1) The person has an unexpired permit for the construction or expansion of the AFO structure.
- (2) The person is not required to obtain a permit for the construction or expansion of the AFO structure.

d. A person shall not construct or expand an unformed manure storage structure within an agricultural drainage well area as specified in Iowa Code sections 459.310 and 460.205.

567—65.7(455B,459,459A,459B) Karst terrain. Except as provided for in subrules 65.7(4) and 65.7(5), the provisions of this rule shall apply to the following structures: (1) confinement feeding operation structures at confinement feeding operations with over 500 animal units, (2) settled open feedlot effluent basins at open feedlot operations requiring a construction permit, (3) egg washwater structures, (4) AT systems, and (5) animal truck wash effluent structures.

65.7(1) Karst terrain submittal requirements. Prior to beginning construction of a structure identified in the introductory paragraph of this rule, the person planning the construction shall determine whether the proposed structure will be located in potential “karst terrain,” as defined in subrule 65.1(1). The AFO Siting Atlas shall be used to determine if the proposed structure is in potential karst terrain. The results of the karst terrain determination shall be submitted to the department according to the following:

a. If the proposed structure is not in potential karst terrain, the person planning the construction shall submit a printed map from the AFO Siting Atlas indicating the location of the structure, with the potential karst layer turned on, with the construction permit application documents or with the construction design statement if a construction permit is not required.

b. If the proposed formed manure storage structure is located in potential karst terrain, a PE licensed in Iowa, an NRCS-qualified staff person or a qualified organization shall submit a soil report, based on the results from soil corings, test pits or acceptable well log data, describing the subsurface materials and vertical separation distance from the bottom of the proposed structure to the underlying limestone, dolomite or soluble rock. A minimum of two soil corings spaced equally within the structure or two test pits located within five feet of the outside of the structure are required if acceptable well log data is not available. The soil corings shall be taken to a minimum depth of seven feet below the bottom elevation of the proposed structure or into bedrock, whichever is shallower. Any limestone, dolomite, or soluble bedrock in the corings or test pits shall be considered the bedrock surface rather than auger refusal. After the soil exploration is complete, each coring or test pit shall be properly plugged with concrete grout, bentonite or similar materials, and completion of this activity shall be documented in the soil report. If a 25-foot vertical separation distance can be maintained between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock, then the structure is not considered to be in karst terrain.

65.7(2) Construction standards for formed manure storage structures. A formed manure storage structure shall be constructed in accordance with the minimum concrete standards set forth in subrule 65.108(10) or Iowa Code section 459.307 if the structure is not constructed of concrete. No intact or weathered bedrock, including sandstone, shale, limestone, dolomite, or soluble rock, shall be removed or excavated during the construction of a storage structure.

65.7(3) Vertical separation distance requirements for formed manure storage structures. Except as provided for in subrule 65.7(5) related to the construction of a dry bedded confinement feeding operation structure, in addition to the concrete standards set forth in subrule 65.108(10) or Iowa Code section 459.307 if not constructed of concrete, a person constructing a formed manure storage structure on karst terrain shall comply with the following:

a. A minimum five-foot layer of low permeability soil (1×10^{-6} cm/sec) or rock between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or NRCS-qualified staff person.

b. If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than five feet, the structure shall be

designed and sealed by a PE or NRCS-qualified staff person who certifies the structural integrity of the structure. A two-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure. However, it is recommended that any formed manure storage structure be constructed aboveground if the vertical separation distance between the bottom of the structure and the limestone, dolomite, or other soluble rock is less than five feet.

c. Groundwater monitoring shall be performed as specified by the department.

d. Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed and grouted and shall be performed with material free of vegetation, large rocks, or debris.

65.7(4) *Unformed manure storage structures.* The construction of unformed manure storage structures, including unformed manure storage structures at SAFOs, is prohibited in karst terrain or an area that drains into a known sinkhole. In potential karst, at least one coring shall be taken to a minimum depth of 25 feet below the bottom elevation of the proposed unformed manure storage structure or into bedrock, whichever is shallower. If a 25-foot vertical separation distance can be maintained between the bottom of the unformed manure storage structure and limestone, dolomite, or other soluble rock, then the structure is not considered to be in karst terrain. No intact or weathered bedrock, including sandstone, shale, limestone, dolomite, or soluble rock, shall be removed or excavated during the construction of a manure storage structure.

65.7(5) *Dry bedded confinement feeding operation structure.* A person constructing any dry bedded confinement feeding operation structure, including structures at SAFOs, on karst terrain shall comply with all of the following:

a. The person must construct the structure at a location where there is a vertical separation distance of at least five feet between the bottom of the floor of the structure and the underlying limestone, dolomite, or other soluble rock in karst terrain or the underlying sand and gravel aquifer in an alluvial aquifer area.

b. The person must construct the structure with a floor consisting of reinforced concrete at least five inches thick.

567—65.8(455B,459,459A,459B) Karst terrain—stockpile requirements. The provisions of this rule shall apply to locations at confinement feeding operations where dry manure or dry bedded manure is stockpiled.

65.8(1) *Karst terrain submittal requirements.* Prior to stockpiling dry manure or dry bedded manure, the person planning to stockpile shall determine whether the proposed stockpile location will be located in potential “karst terrain,” as defined in subrule 65.1(1). The AFO Siting Atlas shall be used to determine if the proposed stockpile location is in potential karst terrain. The results of the karst terrain determination shall be submitted to the department according to the following:

a. If the proposed stockpile location is not in potential karst terrain, the person planning the stockpiling shall submit a printed map from the AFO Siting Atlas indicating the location of the stockpile location, with the potential karst layer turned on, to the department.

b. If the proposed stockpile is located in potential karst terrain, a PE licensed in Iowa, NRCS-qualified staff person or a qualified organization shall submit a soil report to the department, based on the results from soil corings, test pits or acceptable well log data, describing the subsurface materials and vertical separation distance from the proposed bottom of the stockpile to the underlying limestone, dolomite or soluble rock. A minimum of two soil corings spaced equally within the stockpile location or two test pits located within five feet of the outside of the stockpile location are required if acceptable well log data is not available. The soil corings shall be taken to a minimum depth of 25 feet below the bottom elevation of the proposed stockpile or into bedrock, whichever is shallower. After the soil exploration is complete, each coring or test pit shall be properly plugged with concrete grout, bentonite or similar materials and completion of this activity shall be documented in the soil report. If a 25-foot vertical separation distance can be maintained between the bottom of the proposed stockpile and limestone, dolomite, or other soluble rock, then the structure is not considered to be in karst terrain.

65.8(2) *Dry manure stockpiling.* A person shall comply with all of the following when stockpiling dry manure on karst terrain:

a. Maintain a minimum five-foot vertical separation distance between the bottom of the stockpile and the underlying limestone, dolomite, or other soluble rock.

b. A person who stockpiles dry manure for more than 15 days shall use any of the following:

(1) A qualified stockpile structure; or

(2) A qualified stockpile cover. However, a person shall not stockpile dry manure using a qualified stockpile cover at a long-term stockpile location unless the stockpile is located on a reinforced concrete slab at least five inches thick.

65.8(3) *Dry bedded manure stockpiling.* A person shall comply with all of the following when stockpiling dry bedded manure on karst terrain or above an alluvial aquifer:

a. Maintain a minimum five-foot vertical separation distance between the bottom of the stockpile and the underlying limestone, dolomite, or other soluble rock in karst terrain or the underlying sand and gravel aquifer in an alluvial aquifer area.

b. Stockpiles shall be placed on a reinforced concrete slab that is a minimum of five inches thick.

567—65.9(455B,459,459A,459B) Floodplains. The provisions of this rule shall apply to the following structures: (1) confinement feeding operation structures, (2) settled open feedlot effluent basins at open feedlot operations requiring a construction permit, (3) egg washwater structures, (4) AT systems, and (5) animal truck wash effluent structures.

65.9(1) *Floodplains.* A person shall not construct a manure storage structure in the one hundred year floodplain of a major water source. The one hundred year floodplain of major water source designations are included on the AFO Siting Atlas. For construction of facilities located in the counties that do not have a Federal Emergency Management Agency (FEMA) flood insurance rate map (FIRM), which are Black Hawk, Johnson, Louisa, Winneshiek, and Woodbury, a person shall have the ability to contest the one hundred year floodplain determination by supplying supporting documents to the department for further evaluation. Placing fill material on floodplain land to elevate the land above the one hundred year flood elevation will not be considered as removing the land from the one hundred year floodplain for the purpose of this subrule. Even if the proposed location of the manure storage structure is not on the one hundred year floodplain of a major water source, the site may be on the floodplain of a nonmajor water source and the department may require a floodplain development permit pursuant to 567—Chapters 70 through 76 if the drainage area of the nonmajor water source adjacent to the proposed structure is greater than ten square miles in a rural location or two square miles in an urban location. The proposed construction can be screened through the department’s online floodplain database siting tool.

65.9(2) *Flooding protection.* A confinement feeding operation or open feedlot structure proposed to be constructed on land that would be inundated by Q100 shall meet requirements as specified in 567—Chapters 70 through 76, unless otherwise prohibited according to subrule 65.9(1).

65.9(3) *Submittal requirements.* The person planning the construction shall submit a printed map from the AFO Siting Atlas indicating the location of the structure, with the one hundred year floodplain layer turned on, with the construction permit application documents or with the construction design statement if a construction permit is not required.

65.9(4) *Exemptions to prohibition on one hundred year floodplain construction and separation distance requirements from water sources, major water sources, known sinkholes, agricultural drainage wells, designated wetlands confinement structures and animal truck wash effluent structures.* As specified in Iowa Code sections 459.310(4) and 459A.404(3), a separation distance required in subrules 65.106(3) and 65.106(4) or the prohibition against construction of a confinement feeding operation structure on a one hundred year floodplain as provided in subrule 65.9(1) shall not apply to a confinement feeding operation or animal truck wash that includes a confinement feeding operation structure or animal truck wash effluent structure that was constructed prior to March 1, 2003, if any of the following apply:

a. One or more unformed manure storage structures or animal truck wash effluent structures that are part of the confinement feeding operation or animal truck wash are replaced with one or more formed manure storage structures or formed animal truck wash effluent structures on or after April 28, 2003, and all of the following apply:

(1) The animal weight capacity or animal unit capacity, whichever is applicable, is not increased for that portion of the confinement feeding operation or animal truck wash that utilizes all replacement formed manure storage structures or animal truck wash effluent structures.

(2) The use of each replaced unformed manure storage structure is discontinued within one year after the construction of the replacement formed manure storage structure or formed animal truck wash effluent structure.

(3) The capacity of all replacement formed manure storage structures or animal truck wash effluent structures does not exceed the amount required to store manure produced by that portion of the confinement feeding operation or animal truck wash utilizing the replacement formed manure storage structures or animal truck wash effluent structures during any 18-month period.

(4) No portion of the replacement formed manure storage structure or animal truck wash effluent structure is closer to the location or object from which separation is required under subrules 65.106(3) and 65.106(4) than any other confinement feeding operation structure or animal truck wash effluent structure which is part of the operation.

(5) The replacement formed manure storage structure or animal truck wash effluent structure meets or exceeds the requirements of Iowa Code section 459.307 and subrule 65.108(10).

b. A replacement formed manure storage structure that is part of the confinement feeding operation or animal truck wash is constructed on or after April 28, 2003, if it complies with the following provisions:

(1) The replacement formed manure storage structure or animal truck wash effluent structure replaces the confinement feeding operation or animal truck wash's existing manure storage and handling facilities.

(2) The replacement formed manure storage structure or animal truck wash effluent structure complies with standards adopted pursuant to Iowa Code section 459.307 and subrule 65.108(10).

(3) The replacement formed manure storage structure or animal truck wash effluent structure more likely than not provides a higher degree of environmental protection than the confinement feeding operation or animal truck wash's existing manure storage and handling facilities. If the formed manure storage structure or animal truck wash effluent structure will replace any existing manure storage structure or animal truck wash effluent structure, the department shall require that the replaced manure storage structure or animal truck wash effluent structure be properly closed.

567—65.10 to 65.99 Reserved.

DIVISION II

CONFINEMENT FEEDING OPERATIONS AND DRY BEDDED CONFINEMENT FEEDING OPERATIONS

567—65.100(455B,459,459B) Minimum manure control requirements. Confinement feeding operations shall be constructed, managed and maintained to meet the minimum manure control requirements stated in subrules 65.100(1) to 65.100(6). A release shall be reported to the department as provided in subrule 65.2(1). Dry manure stockpiling requirements are stated in subrule 65.100(7). Dry bedded manure stockpiling requirements are stated in subrule 65.100(8).

65.100(1) The minimum level of manure control for a confinement feeding operation shall be the retention of all manure produced in the confinement enclosures between periods of manure application and as specified in this rule. In no case shall manure from a confinement feeding operation be discharged directly into a water of the state or into a tile line that discharges to waters of the state.

a. Control of manure from confinement feeding operations may be accomplished through use of manure storage structures or other manure control methods. Sufficient capacity shall be provided in the manure storage structure to store all manure between periods of manure application. A confinement feeding operation, other than a SAFO, that is constructed or expanded on or after July 1, 2009, shall not surface-apply liquid manure on frozen or snow-covered ground when there is an emergency, as described in subrule 65.101(4), unless the operation has a minimum of 180 days of manure storage

capacity. Additional capacity shall be provided if precipitation, manure or wastes from other sources can enter the manure storage structure.

b. Manure shall be removed from the control facilities as necessary to prevent overflow or discharge of manure from the facilities. Manure stored in unformed manure storage structures or unformed egg washwater storage structures shall be removed from the structures as necessary to maintain a minimum of two feet of freeboard in the structure, unless a greater level of freeboard is required to maintain the structural integrity of the structure or prevent manure overflow. Manure stored in unroofed formed manure storage structures or formed egg washwater storage structures shall be removed from the structures as necessary to maintain a minimum of one foot of freeboard in the structure unless a greater level of freeboard is required to maintain the structural integrity of the structure or prevent manure overflow.

c. To ensure that adequate capacity exists in the manure storage structure to retain all manure produced during periods when manure application cannot be conducted (due to inclement weather conditions, lack of available land disposal areas, or other factors), the manure shall be removed from the manure storage structure as needed prior to these periods.

d. Dry manure or dry bedded manure originating at a confinement feeding operation may be retained as a stockpile so long as the stockpiled dry manure or dry bedded manure meets the following:

(1) Dry manure stockpiling requirements provided in subrule 65.100(7) or dry bedded manure stockpiling requirements provided in subrule 65.100(8).

(2) Applicable NPDES requirements pursuant to the Act.

(3) The dry manure or dry bedded manure is removed from the stockpile and applied in accordance with rule 567—56.101(459,459B) within six months after the dry manure or dry bedded manure is first stockpiled.

(4) Dry manure stockpiles are not required to meet the requirements in subparagraphs 65.100(1)“d”(1) to 65.100(1)“d”(3) above if the dry manure originates from a confinement feeding operation that was constructed prior to January 1, 2006, unless any of the following apply:

1. The confinement feeding operation is expanded after January 1, 2006.

2. Dry manure is stockpiled in violation of subrule 65.100(1).

3. Precipitation-induced runoff from the stockpile has drained off the property.

65.100(2) If site topography, operation procedures, experience, or other factors indicate that a greater or lesser level of manure control than that specified in subrule 65.100(1) is required to provide an adequate level of water pollution control for a specific AFO, the department may establish different minimum manure control requirements for that operation.

65.100(3) In lieu of using the manure control methods specified in subrule 65.100(1), the department may allow the use of manure treatment or other methods of manure control if it determines that an adequate level of manure control will result.

65.100(4) No direct discharge shall be allowed from an AFO into a publicly owned lake, a sinkhole, or an agricultural drainage well.

65.100(5) All manure removed from an AFO or its manure control facilities shall be land-applied in a manner that will not cause surface or groundwater pollution. Application in accordance with the provisions of state law and this chapter shall be deemed as compliance with this requirement.

65.100(6) As soon as practical but not later than six months after the use of an AFO is discontinued, all manure shall be removed from the discontinued AFO and its manure control facilities and be land applied.

65.100(7) Dry manure stockpiling requirements for a confinement feeding operation.

a. *Requirements for terrain, other than karst terrain.* Dry manure stockpiled on terrain, other than karst terrain, for more than 15 consecutive days shall comply with either of the following:

(1) Dry manure shall be stockpiled using any of the following:

1. A qualified stockpile structure; or

2. A qualified stockpile cover. Long-term stockpiles utilizing a qualified stockpile cover shall be placed on a constructed impervious base that can support the load of the equipment used under all weather conditions. The coefficient of permeability of the impervious base shall be less than 1×10^{-7}

cm/sec (0.00028 feet/day). Permeability results shall be submitted to the department prior to use of the stockpile site.

(2) A stockpile inspection statement shall be delivered to the department as follows:

1. The department must receive the statement by the fifteenth day of each month.

2. The stockpile inspection statement shall provide the location of the stockpile and document the results of an inspection conducted during the previous month. The inspection must evaluate whether precipitation-induced runoff is draining away from the stockpile and, if so, describe actions taken to prevent the runoff. If an inspection by the department documents that precipitation-induced runoff is draining away from a stockpile, the dry manure must be immediately removed from the stockpile or comply with all directives of the department to prevent the runoff.

3. The stockpile inspection statement must be in writing and may be on a form prescribed by the department.

b. Dry manure stockpile siting prohibitions.

(1) Grassed waterway. A stockpile or stockpile structure shall not be placed in a grassed waterway.

(2) Sloping land. A stockpile or stockpile structure shall not be placed on land having a slope of more than 3 percent, unless the dry manure is stockpiled using methods, structures, or practices that contain the stockpile, including but not limited to silt fences, temporary earthen berms, or other effective measures, and that prevent or diminish precipitation-induced runoff from the stockpile.

65.100(8) Prohibitions and siting restrictions for dry bedded manure stockpiling requirements for a dry bedded confinement feeding operation.

a. Prohibition in a grassed waterway. A stockpile or stockpile structure shall not be placed in a grassed waterway, where water pools on the soil surface, or in any location where surface water will enter the stockpile.

b. Siting restrictions. A stockpile or stockpile structure shall not be placed on land having a slope of more than 3 percent, unless the dry manure or dry bedded manure is stockpiled using methods, structures, or practices that contain the stockpile, including but not limited to hay bales, silt fences, temporary earthen berms, or other effective measures that prevent or diminish precipitation-induced runoff from the stockpile. A stockpile or stockpile structure located in karst terrain must comply with the karst requirements in subrule 65.8(3).

567—65.101(455B,459,459B) Requirements for land application of manure from a confinement feeding operation.

65.101(1) *General requirements for application rates and practices for confinement feeding operations.*

a. For manure originating from an anaerobic lagoon or aerobic structure, application rates and practices shall be used to minimize groundwater or surface water pollution resulting from application, including pollution caused by runoff or other manure flow resulting from precipitation events. In determining appropriate application rates and practices, the person land-applying the manure shall consider the site conditions at the time of application including anticipated precipitation and other weather factors, field residue and tillage, site topography, the existence and depth of known or suspected tile lines in the application field, and crop and soil conditions, including a good-faith estimate of the available water-holding capacity given precipitation events, the predominant soil types in the application field and planned manure application rate.

b. Spray irrigation equipment shall be operated in a manner and with an application rate and timing that does not cause runoff of the manure onto the property adjoining the property where the spray irrigation equipment is being operated.

c. For manure from an earthen waste slurry storage basin, earthen manure storage basin, or formed manure storage structure, restricted spray irrigation equipment shall not be used unless the manure has been diluted with surface water or groundwater to a ratio of at least 15 parts water to 1 part manure.

Emergency use of spray irrigation equipment without dilution shall be allowed to minimize the impact of a release as approved by the department.

65.101(2) Separation distance requirements for land application of manure. Land application of manure shall be separated from objects and locations as specified in this subrule.

a. For liquid manure from a confinement feeding operation, the required separation distance from a residence not owned by the titleholder of the land, a business, a church, a school, or a public use area is 750 feet, as specified in Iowa Code section 459.204. The separation distance for application of manure by spray irrigation equipment shall be measured from the actual wetted perimeter and the closest point of the residence, business, church, school, or public use area.

b. The separation distance specified in paragraph 65.101(2)“*a*” shall not apply if any of the following apply:

(1) The liquid manure is injected into the soil or incorporated within the soil not later than 24 hours after the original application.

(2) The titleholder of the land benefitting from the separation distance requirement executes a written waiver with the titleholder of the land where the manure is applied.

(3) The liquid manure originates from a SAFO.

(4) The liquid manure is applied by low-pressure spray irrigation equipment pursuant to paragraph 65.101(2)“*a*.”

c. Separation distance for spray irrigation from property boundary line. Spray irrigation equipment shall be set up to provide for a minimum distance of 100 feet between the wetted perimeter as specified in the spray irrigation equipment manufacturer’s specifications and the boundary line of the property where the equipment is being operated. The actual wetted perimeter, as determined by wind speed and direction and other operating conditions, shall not exceed the boundary line of the property where the equipment is being operated. For property that includes a road right-of-way, railroad right-of-way or an access easement, the property boundary line shall be the boundary line of the right-of-way or easement.

d. Distance from structures for low-pressure irrigation systems. Low-pressure irrigation systems shall have a minimum separation distance of 250 feet between the actual wetted perimeter and the closest point of a residence, a business, church, school or public use area.

e. Waivers. Waivers to paragraph 65.101(2)“*c*” may be granted by the department if sufficient and proposed alternative information is provided to substantiate the need and propriety for such action. Waivers may be granted on a temporary or permanent basis. The request for a waiver shall be in writing and include information regarding:

(1) The type of manure storage structure from which the manure will be applied by spray irrigation equipment.

(2) The spray irrigation equipment to be used in the application of manure.

(3) Other information as the department may request.

f. Agricultural drainage wells. Manure shall not be applied by spray irrigation equipment on land located within an agricultural drainage well area.

g. Designated areas. A person shall not apply manure on land within 200 feet from a designated area or in the case of a high-quality water resource, within 800 feet, unless one of the following applies:

(1) The manure is land-applied by injection or incorporation on the same date as the manure was land-applied.

(2) An area of permanent vegetation cover, including filter strips and riparian forest buffers, exists for 50 feet surrounding the designated area other than an unplugged agricultural drainage well or surface intake to an unplugged agricultural drainage well, and the area of permanent vegetation cover is not subject to manure application.

h. Setback requirements for confinement feeding operations with NPDES permits. For confinement feeding operations with NPDES permits, the following is adopted by reference: 40 CFR 412.4(a), (b) and (c)(5).

65.101(3) Surface application of liquid manure on frozen or snow-covered ground. A person who applies liquid manure on frozen or snow-covered ground shall comply with applicable NPDES permit requirements pursuant to the Act and also shall comply with the following requirements:

a. Snow-covered ground. During the period beginning December 21 and ending April 1, a person may apply liquid manure originating from a manure storage structure that is part of a confinement feeding operation on snow-covered ground only when there is an emergency.

b. Frozen ground. During the period beginning February 1 and ending April 1, a person may apply liquid manure originating from a manure storage structure that is part of a confinement feeding operation on frozen ground only when there is an emergency.

c. What constitutes an emergency. For the purposes of this subrule, an emergency application is only allowed when there is an immediate need to apply manure to comply with the manure retention requirement of subrule 65.100(1) due to unforeseen circumstances affecting the storage of the liquid manure. The unforeseen circumstances must be beyond the control of the owner of the confinement feeding operation, including but not limited to natural disaster, unusual weather conditions, or equipment or structural failure. The authorization to apply liquid manure pursuant to this subrule does not apply to either of the following:

(1) An immediate need to apply manure in order to comply with the manure retention requirement of subrule 65.100(1) caused by the improper design or management of the manure storage structure, including but not limited to a failure to properly account for the volume of the manure to be stored. Based on the restrictions described in paragraphs 65.101(3)“a” and “b” and the possibility that the ground could be snow-covered and frozen for the entire period of December 21 to April 1, an operation should not plan to apply liquid manure during that time period. Confinement feeding operations with manure storage structures constructed after May 26, 2009, and without alternatives to manure application must have sufficient storage capacity to retain manure generated from December 21 to April 1 under normal circumstances in order to properly account for the volume of manure to be stored. For confinement feeding operations that have no manure storage structures constructed after May 26, 2009, the department will accept insufficient manure storage capacity as a reason for emergency application in the notification required in subrule 65.101(3).

(2) Liquid manure originating from a confinement feeding operation constructed or expanded on or after July 1, 2009, if the confinement feeding operation has a capacity to store manure for less than 180 days.

d. Procedure for emergency application. A person who is authorized to apply liquid manure on snow-covered ground or frozen ground when there is an emergency shall comply with all of the following:

(1) The person must notify the appropriate department field office by telephone prior to the application. The department will not consider the notification complete unless the owner’s name, facility name, facility ID number, reason for emergency application, application date, estimated number of gallons of manure to be applied, and application fields as listed in the MMP are given. In cases where the emergency is not easily confirmed by weather reports, the owner must make documentation of the emergency available to the field office upon request.

(2) The liquid manure must be applied on land identified for such application in the current MMP maintained by the owner of the confinement feeding operation as required in subrule 65.111(7). The land must be identified in the current MMP prior to the application, and that change must also be reflected in the next annual update or complete MMP submitted to the department and county boards of supervisors following the application as required in paragraph 65.110(3)“b.”

(3) The liquid manure must be applied on a field with a phosphorus index rating of 2 or less.

(4) Any surface water drain tile intake that is on land in the owner’s MMP and located downgradient of the application must be temporarily blocked beginning not later than the time that the liquid manure is first applied and ending not earlier than two weeks after the completion of the application.

(5) Additional measures to contain runoff may be necessary in order to prevent violation of federal effluent standards in subrule 62.4(12).

e. Exceptions. Paragraphs 65.101(3)“a” through “d” do not apply to any of the following:

- (1) The application of liquid manure originating from a SAFO.
- (2) The application of liquid manure injected or incorporated into the soil on the same date.

567—65.102(455B,459,459B) Departmental evaluation.

65.102(1) The department may evaluate any AFO to determine if any of the following conditions exist:

- a.* Manure from the operation is being discharged into a water of the state and the operation is not providing the applicable minimum level of manure control as specified in subrule 65.100(1);
- b.* Manure from the operation is causing or may reasonably be expected to cause pollution of a water of the state; or
- c.* Manure from the operation is causing or may reasonably be expected to cause a violation of state water quality standards.

65.102(2) If departmental evaluation determines that any of the conditions listed in subrule 65.102(1) exist, the operation shall institute necessary remedial actions to eliminate the conditions if the operation receives a written notification from the department of the need to correct the conditions. This subrule shall apply to all permitted and unpermitted AFOs, regardless of animal capacity.

567—65.103(455B,459,459B) Construction permits—required approvals and permits. A person required to obtain a construction permit pursuant to subrule 65.103(1) or a construction approval letter pursuant to subrule 65.103(7) shall not begin construction, expansion or modification of a confinement feeding operation structure until the department issues a construction permit or a construction approval letter for a proposed or existing confinement feeding operation. In addition, the owner of a SAFO with formed manure storage structures who is not required to obtain a construction permit pursuant to subrule 65.103(1) or a construction approval letter pursuant to subrule 65.103(7) shall comply with the applicable construction approval requirements pursuant to subrule 65.103(8).

65.103(1) *Confinement feeding operations required to obtain a construction permit prior to any of the following.* Except as provided in subrule 65.103(2), a confinement feeding operation shall obtain a construction permit prior to any of the following:

- a.* Constructing or installing a confinement building that uses an unformed manure storage structure or constructing, installing or modifying an unformed manure storage structure.
- b.* Constructing or installing a confinement building that uses a formed manure storage structure or constructing, installing or modifying a formed manure storage structure if, after construction, installation or modification, the animal unit capacity of the operation is 1,000 animal units or more. This paragraph also applies to confinement feeding operations that store manure exclusively in a dry form.
- c.* Initiating a change, even if no construction of, or physical alteration to, an unformed manure storage structure is necessary, that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in any unformed manure storage structure. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or animal unit capacity up to the limits specified in a previously issued construction permit do not require a new construction permit.
- d.* Initiating a change, even if no construction of or physical alteration to, a formed manure storage structure is necessary, that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in a formed manure storage structure if, after the change, the animal unit capacity of the operation is 1,000 animal units or more. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or animal unit capacity up to the limits specified in a previously issued construction permit do not require a new construction permit.
- e.* Purchasing or acquiring an adjacent animal feeding confinement operation if after acquisition the animal unit capacity of the combined operation is 1,000 animal units or more. The construction permit application must be submitted within 60 days of the acquisition or purchase.
- f.* Constructing or modifying an egg washwater storage structure or a confinement building at a confinement feeding operation that includes an egg washwater storage structure.

g. Initiating a change, even if no construction of, or physical alteration to, an egg washwater storage structure is necessary, that would result in an increase in the volume of egg washwater or a modification in the manner in which egg washwater is stored. Increases in the volume of egg washwater due to an increase in animal capacity, animal weight capacity or animal unit capacity up to the limits specified in a previously issued construction permit do not require a new construction permit.

h. Repopulating a confinement feeding operation that had been a discontinued AFO for 24 months or more and if any of the following apply:

(1) The confinement feeding operation uses an unformed manure storage structure or egg washwater storage structure;

(2) The confinement feeding operation includes only confinement buildings and formed manure storage structures and has an animal unit capacity of 1,000 animal units or more.

i. Installing a permanent manure transfer piping system, unless the department determines that a construction permit is not required.

j. Initiating a remedial change, upgrade, replacement or construction when directed by the department as a result of departmental evaluation pursuant to rule 567—65.102(455B,459,459B) or as required by an administrative order or court order pursuant to Iowa Code section 455B.112 or 455B.175. Repairs to a confinement building or additions such as fans, slats, gates, roofs, or covers do not require a construction permit. In some instances, the department may determine that a construction permit is not required to increase the volume of manure or egg washwater or a modification in the manner in which manure or egg washwater is stored if the increase or modification is deemed insignificant. Plans for repairs or modifications to a manure storage structure shall be submitted to the department to determine if a permit is required.

65.103(2) *Confinement feeding operations not required to obtain a construction permit.*

a. A construction permit shall not be required for a formed manure storage structure or for a confinement building that uses a formed manure storage structure in conjunction with a SAFO. However, this paragraph shall not apply to a SAFO that uses an unformed manure storage structure.

b. A construction permit shall not be required for a confinement feeding operation structure related to research activities and experiments performed under the authority and regulations of a research college.

c. A construction permit is not required to construct a formed manure storage structure at a confinement feeding operation having an animal unit capacity of more than 500 but less than 1,000 animal units; however, a construction approval letter is required from the department pursuant to subrule 65.103(8) and rule 567—65.104(455B,459,459B).

d. A construction permit is not required for a confinement feeding operation that exclusively confines fish and elects to comply with the permitting requirements of Iowa Code section 455B.183.

65.103(3) *Operations that shall not be issued construction permits.*

a. The department shall not issue a construction permit to a person if an enforcement action by the department, relating to a violation of this chapter concerning a confinement feeding operation in which the person has an interest, is pending.

b. The department shall not issue a construction permit to a person for five years after the date of the last violation committed by a person or confinement feeding operation in which the person holds a controlling interest during which the person or operation was classified as a habitual violator under Iowa Code sections 459.317 and 459.604.

c. The department shall not issue a construction permit to expand or modify a confinement feeding operation for 120 days after completion of the last construction or modification at the operation, if a permit was not required for the last construction or modification.

65.103(4) *Construction permit application plan review criteria.* Review of plans and specifications submitted with a construction permit application shall be conducted to determine the potential of the proposed manure control system to achieve the level of manure control being required of the confinement feeding operation. In conducting this review, applicable criteria contained in federal law, state law, these rules, NRCS design standards and specifications unless inconsistent with federal or state law or these rules, and U.S. Department of Commerce precipitation data shall be used. If the proposed facility plans

are not adequately covered by these criteria, applicable criteria contained in current technical literature shall be used.

65.103(5) *Expiration of construction permits.* A construction permit shall expire if construction, as defined in rule 567—65.6(455B,459,459A,459B), is not begun within one year and completed within four years of the date of issuance. The director may grant an extension of time to begin or complete construction if it is necessary or justified, upon showing of such necessity or justification to the director, unless a person who has an interest in the proposed operation is the subject of a pending enforcement action or a person who has a controlling interest in the proposed operation has been classified as a habitual violator. If a permitted site has not completed all proposed permitted structures within the four-year limit, then the approved animal unit capacity in the construction permit shall be lowered to be equal to what was constructed and the department shall issue a construction permit amendment for what was constructed. Once all permitted construction has been completed, no amendments for new construction may be issued even though the four-year period has not expired. A new construction permit must be issued for the new proposed construction.

65.103(6) *Revocation of construction permits.* The department may revoke a construction permit or refuse to renew a permit expiring according to subrule 65.103(5) if it determines that the operation of the confinement feeding operation constitutes a clear, present and impending danger to public health or the environment.

65.103(7) *Confinement feeding operations required to obtain a construction approval letter.* A person planning to construct a confinement feeding operation, other than a SAFO as defined in rule 567—65.1(455B,459,459A,459B) or other than an operation required to obtain a construction permit pursuant to subrule 65.103(1), shall obtain from the department a construction approval letter as provided in subrule 65.104(2) prior to beginning construction of a formed manure storage structure or a confinement building. The construction approval letter shall expire if construction, as defined in subrule 65.6(1), is not begun within one year and completed within four years of the date of the construction approval letter.

65.103(8) *SAFOs.* The following requirements apply to SAFOs:

a. A construction permit shall not be required for a SAFO utilizing a formed manure storage structure; however, a construction permit is required for any unformed manure storage structures utilized at a SAFO.

b. If a SAFO cannot meet the required separation distance provided in Iowa Code section 459.310(1), a SAFO must comply with secondary containment barrier design in accordance with subrule 65.104(5).

c. A SAFO must comply with drain tile removal requirements if the SAFO utilizes an unformed manure storage structure in accordance with subrule 65.108(1).

d. SAFO confinement structures must comply with applicable separation distance requirements in rule 567—65.106(455B,459,459B).

65.103(9) *Compliance with permit conditions.* A person who constructs, modifies or expands a confinement feeding operation structure pursuant to a construction permit shall comply with all terms and conditions of the construction permit.

567—65.104(455B,459,459B) *Preconstruction submittal requirements.* Prior to beginning construction, expansion or modification of a confinement feeding operation structure, a person shall obtain from the department a construction permit pursuant to subrule 65.103(1), a construction approval letter pursuant to subrule 65.103(7) or approval of a secondary containment barrier design pursuant to subrule 65.104(5), according to procedures established in this rule.

65.104(1) *Construction permit application.* Application for a construction permit for a confinement feeding operation shall be made on a form provided by the department. The application shall include all of the information required in the form. At the time the department receives a complete application, the department shall make a determination regarding the approval or denial of the permit in accordance with subrule 65.105(5). A construction permit application for a confinement feeding operation shall be filed as instructed on the form and shall include the following:

- a.* The name of the applicant and the name of the confinement feeding operation, including mailing address and telephone number.
- b.* The name of the current landowner or the proposed landowner of the land where the confinement feeding operation will be located.
- c.* The contact person for the confinement feeding operation, including mailing address and telephone number.
- d.* The location of the confinement feeding operation.
- e.* Whether the application is for the expansion of an existing operation or the construction of a proposed confinement feeding operation, and the date when it was first constructed if an existing operation.
- f.* The animal unit capacity by animal species of the current confinement feeding operation to be expanded, if applicable, and of the proposed confinement feeding operation. If the confinement feeding operation includes a confinement feeding operation structure that was constructed prior to March 1, 2003, the animal weight capacity by animal species of the current confinement feeding operation to be expanded, if applicable, and of the proposed confinement feeding operation shall also be included.
- g.* Engineering documents. A confinement feeding operation that utilizes an unformed manure storage structure, an egg washwater storage structure or a formed manure storage structure at an operation that meets the threshold requirements for an engineer as defined in rule 567—65.1(455B,459,459A,459B) shall include an engineering report, construction plans and specifications. The engineering report, construction plans and specifications must be prepared and signed by a licensed PE or by an NRCS-qualified staff person, must detail the proposed structures, and must include a statement certifying that the manure storage structure complies with the requirements of Iowa Code chapter 459. In addition, a qualified soils or groundwater professional, licensed PE or NRCS-qualified staff person shall submit a hydrogeologic report on soil corings in the area of the unformed manure storage structure or egg washwater storage structure as described in subrules 65.108(5) and 65.108(9).
- h.* Construction design statement or PE design certification. A confinement feeding operation that uses a formed manure storage structure and that is below the threshold requirements for an engineer as defined in rule 567—65.1(455B,459,459A,459B) shall submit a construction design statement pursuant to subrule 65.104(3) or a PE design certification pursuant to subrule 65.104(4). All elevations shall be in NAV 88 datum for sites with alluvial soils or floodplain requirements.
- i.* Payment to the department of the indemnity fund fee as required in Iowa Code section 459.502.
- j.* If the construction permit application is for three or more confinement feeding operation structures, a drainage tile certification shall be submitted as follows:
 - (1) If the application is for an unformed manure storage structure, an egg washwater storage structure or a formed manure storage structure that meets the threshold requirements for an engineer as defined in rule 567—65.1(455B,459,459A,459B), a licensed PE shall certify that either the construction of the structure will not impede the drainage through established drainage tile lines which cross property boundary lines or that if the drainage is impeded during construction, the drainage tile will be rerouted to reestablish the drainage prior to operation of the structure.
 - (2) If the application is for a formed manure storage structure that does not meet the threshold engineering requirements, a drainage tile certification shall be submitted as part of the construction design statement pursuant to subrule 65.104(3) or as part of the PE design certification pursuant to subrule 65.104(4).
- k.* Information (e.g., maps, drawings, aerial photos) that clearly shows the proposed location of the confinement feeding operation structures; any existing confinement feeding operation structures; any locations or objects from which a separation distance is required by Iowa Code sections 459.202, 459.203 and 459.310; and that the structures will meet all applicable separation distances. If applicable, a copy of a recorded separation distance waiver, pursuant to paragraph 65.107(1) “*b*,” must be included with the application. Also, if applicable, a secondary containment barrier design, pursuant to subrules 65.104(5) and 65.107(7), shall be included.

l. The names of all parties with an interest or controlling interest in the confinement feeding operation who also have an interest or controlling interest in at least one other confinement feeding operation in Iowa, and the names and locations of such other operations; for a partnership or corporation owning the confinement feeding operation, a list of all members and their percentage of ownership in the partnership or corporation.

m. Copies of the MMP pursuant to rule 567—65.110(455B,459,459B).

n. A construction permit application fee of \$250 and the MMP filing fee of \$250 as required in subrule 65.110(7).

o. A copy of the AFO Siting Atlas indicating the location of the proposed structure, with the one hundred year floodplain and karst layers included.

p. A copy of any master matrix evaluation provided to the county.

q. A livestock odor mitigation evaluation certificate issued by Iowa State University as provided in Iowa Code section 266.49. The applicant is not required to submit the certificate if any of the following apply:

(1) The confinement feeding operation is twice the minimum separation distance required from the nearest object or location from which a separation distance is required pursuant to Iowa Code section 459.202 on the date of the application, not including a public thoroughfare.

(2) The owner of each object or location that is less than twice the minimum separation distance required pursuant to Iowa Code section 459.202 from the confinement feeding operation on the date of the application, other than a public thoroughfare, executes a document consenting to the construction.

(3) The applicant submits a document swearing that Iowa State University has failed to furnish a certificate to the applicant within 45 days after the applicant requested Iowa State University to conduct a livestock odor mitigation evaluation as provided in Iowa Code section 266.49.

(4) The application is for a permit to expand a confinement feeding operation, if the confinement feeding operation was first constructed before January 1, 2009.

(5) Iowa State University does not provide for a livestock odor mitigation evaluation effort as provided in Iowa Code section 266.49, for any reason, including because funding is not available.

r. Documentation that copies of all the construction permit application documents have been provided to the county board of supervisors or county auditor in the county where the operation or structure subject to the permit is to be located, and documentation of the date received by the county.

65.104(2) Construction approval letter.

a. A confinement feeding operation that, pursuant to subrule 65.103(7), is required to obtain a construction approval letter as defined in rule 567—65.1(455B,459,459A,459B), but that is not required to obtain a construction permit pursuant to subrule 65.103(1), shall file with the department, at least 30 days prior to the date the proposed construction is scheduled to begin, all of the following:

(1) A construction design statement pursuant to subrule 65.104(3). In lieu of a construction design statement, a PE design certification pursuant to subrule 65.104(4) may be submitted.

(2) A copy of the MMP pursuant to rule 567—65.110(455B,459,459B).

(3) Information (e.g., maps, drawings, aerial photos) that clearly shows the intended location of the confinement feeding operation structures and animal weight capacities of any other confinement feeding operations within a distance of 2,500 feet in which the owner has an ownership interest or which the owner manages.

(4) A fee of \$250 for filing an MMP pursuant to subrule 65.110(7) and a manure storage indemnity fee pursuant to subrule 65.110(6).

(5) Documentation that the board of supervisors or auditor of the county where the confinement feeding operation structure is proposed to be located received a copy of the MMP.

b. After submission of items in subparagraphs 65.104(2)“a”(1) through 65.104(2)“a”(5) and prior to issuance of the construction approval letter, the confinement feeding operation may make nonsubstantial revisions to the items and maintain the date construction is scheduled to begin.

65.104(3) Construction design statement. Prior to beginning construction of a formed manure storage structure, a person planning construction at a confinement feeding operation, other than a SAFO, that is below the threshold requirements for an engineer as defined in rule

567—65.1(455B,459,459A,459B) shall file with the department a construction design statement, as follows:

a. A confinement feeding operation with an animal unit capacity of more than 500 but less than 1,000 animal units that is required to obtain a construction approval letter from the department pursuant to subrule 65.103(7) but that is not required to obtain a construction permit pursuant to subrule 65.103(1) shall file with the department a construction design statement, as required in subrule 65.104(2). Within 30 days after the filing of a construction design statement, the department may issue a construction approval letter as defined in rule 567—65.1(455B,459,459A,459B) if the proposed formed manure storage structure meets the requirements of this chapter.

b. A confinement feeding operation that has an animal unit capacity of 1,000 animal units or more but that is below the threshold requirements for an engineer as defined in rule 567—65.1(455B,459,459A,459B) shall file a construction design statement as part of the construction permit application and as required in subrule 65.104(1).

c. The construction design statement shall be filed on a form provided by the department and shall include all of the following:

(1) The name of the person planning construction at the confinement feeding operation, the name of the confinement feeding operation, the location of the proposed formed manure storage structure, a detailed description of the type of confinement feeding operation structure being proposed, the dimensions of the structure, and whether the structure will be constructed of reinforced concrete or steel.

(2) An MMP pursuant to rule 567—65.110(455B,459,459B).

(3) A certification signed by the person responsible for constructing the formed manure storage structure that the proposed formed manure storage structure will be constructed according to the minimum concrete standards set forth in subrule 65.108(10). Otherwise, if the formed manure storage structure is to be constructed of steel, including a Slurrystore® tank, a certification signed by the person responsible for constructing the formed manure storage structure that the proposed formed manure storage structure will be constructed according to the requirements of Iowa Code chapter 459 and this chapter.

(4) If the confinement feeding operation is also required to obtain a construction permit at a confinement feeding operation proposing three or more confinement feeding operation structures, the construction design statement shall include a drainage tile certification signed by the person responsible for constructing or excavating the formed manure storage structure, shall certify that construction will not impede established existing drainage, and shall verify that if existing drainage tiles are found, corrective actions will be implemented to immediately reestablish existing drainage.

d. The following operations are not required to file a construction design statement with the department:

(1) A SAFO that constructs a formed manure storage structure.

(2) A confinement feeding operation that submits a PE design certification pursuant to this subrule.

(3) A confinement feeding operation that meets or exceeds threshold requirements for an engineer as defined in rule 567—65.1(455B,459,459A,459B).

(4) A confinement feeding operation that utilizes an unformed manure storage structure or an egg washwater storage structure.

65.104(4) PE design certification. In lieu of a construction design statement prior to beginning construction of a formed manure storage structure, a confinement feeding operation, other than a SAFO, that is below the threshold requirements for an engineer pursuant to rule 567—65.1(455B,459,459A,459B) may file with the department a PE design certification and design plans signed by a PE licensed in the state of Iowa or an NRCS-qualified staff person. The PE design certification shall be site-specific and shall be filed on a form provided by the department as follows:

a. A confinement feeding operation with an animal unit capacity of more than 500 but less than 1,000 animal units that is not required to obtain a construction permit pursuant to subrule 65.103(1) shall file with the department, at least 30 days before beginning construction of a formed manure storage structure, the PE design certification as required in subrule 65.104(2). Within 30 days after the filing of

a PE design certification, the department may issue a construction approval letter if the proposed formed manure storage structure meets the requirements of this chapter.

b. A confinement feeding operation with an animal unit capacity of 1,000 animal units or more that is required to obtain a construction permit pursuant to subrule 65.103(1) but that is below the threshold requirements for an engineer pursuant to rule 567—65.1(455B,459,459A,459B) shall file with the department the PE design certification as part of the construction permit application and as required in subrule 65.104(1).

65.104(5) Secondary containment barrier design submittal requirements. The design for a secondary containment barrier to qualify any confinement feeding operation for the separation distance exemption provision in subrule 65.107(7) shall be filed with the department for approval prior to beginning construction of a formed manure storage structure that is part of a SAFO, shall accompany the construction design statement pursuant to subrule 65.104(2) if a construction permit is not required, or shall be filed as part of the construction permit application pursuant to subrule 65.104(1). The secondary containment barrier shall meet the design standards of subrule 65.108(11) and shall be prepared according to the following:

a. If a manure storage structure stores liquid or semiliquid manure, the secondary containment barrier design shall include engineering drawings prepared and signed by a PE licensed in the state of Iowa or an NRCS-qualified staff person. For purposes of this subrule only, “semiliquid manure” means manure that contains a percentage of dry matter that results in manure too solid for pumping but too liquid for stacking.

b. If the manure storage structure will store only dry manure or dry bedded manure, the owner or a representative of a confinement feeding operation may submit to the department detailed drawings of the design for a secondary containment barrier.

567—65.105(455B,459,459B) Construction permit application review process, site inspections and complaint investigations.

65.105(1) Delivery of application to county. The applicant for a construction permit for a confinement feeding operation or related AFO structure shall deliver in person or by certified mail a copy of the permit application and MMP to the county board of supervisors of the county where the confinement feeding operation or related AFO structure is proposed to be constructed. Receipt of the application and MMP by the county auditor or other county official or employee designated by the county board of supervisors is deemed receipt of the application and MMP by the county board of supervisors. Documentation of the delivery or mailing of the permit application and MMP shall be forwarded to the department.

65.105(2) Public notice and county comment.

a. *Public notice.* The county board of supervisors shall publish a notice that the board has received the construction permit application in a newspaper having general circulation in the county. The county board shall publish the notice as soon as possible but no later than 14 days after receiving instructions from the department that a complete application has been received. The notice shall include all of the following:

- (1) The name of the person applying to receive the construction permit;
- (2) The name of the township where the confinement feeding operation structure is to be constructed;
- (3) Each type of confinement feeding operation structure proposed to be constructed;
- (4) The animal unit capacity of the confinement feeding operation if the construction permit were to be approved;
- (5) The time when and the place where the application may be examined as provided in Iowa Code section 22.2;
- (6) Procedures for providing public comments to the board as provided by the board.

The county shall submit to the department, within 30 days of receipt of the construction permit application, proof of publication to verify that the county provided public notice as required in this paragraph.

b. County comment. Regardless of whether the county board of supervisors has adopted a construction evaluation resolution, the board may submit to the department comments by the board and the public regarding compliance of the construction permit application and MMP with the requirements in this chapter and Iowa Code chapter 459 for obtaining a construction permit. Comments may include but are not limited to the following:

(1) The existence of an object or location not included in the construction permit application that benefits from a separation distance requirement as provided in Iowa Code section 459.202 or 459.310.

(2) The suitability of soils and the hydrology of the site where construction or expansion of a confinement feeding operation or related AFO structure is proposed.

(3) The availability of land for the application of manure originating from the confinement feeding operation.

(4) Whether the construction or expansion of a proposed AFO structure will impede drainage through established tile lines, laterals, or other improvements which are constructed to facilitate the drainage of land not owned by the person applying for the construction permit.

65.105(3) Master matrix. A county board of supervisors may adopt a construction evaluation resolution relating to the construction of a confinement feeding operation structure. The board must submit such resolution to the director of the department for filing. Adoption and filing of a construction evaluation resolution authorizes a county board of supervisors to conduct an evaluation of a construction permit application using the master matrix as follows:

a. Enrollment periods.

(1) The county board of supervisors must file an adopted construction evaluation resolution with the department between January 1 and January 31 of each year to evaluate construction permit applications received by the department between February 1 of that year and January 31 of the following year.

(2) Filed construction evaluation resolutions shall remain in effect until the applicable enrollment period expires or until such time as the county board of supervisors files with the department a resolution rescinding the construction evaluation resolution, whichever is earlier.

(3) Filing of an adopted construction evaluation resolution requires a county board of supervisors to conduct an evaluation of a construction permit application using the master matrix. However, if the board fails to submit an adopted recommendation to the department or fails to comply with the evaluation requirements in paragraph 65.105(3)“b,” the department shall disregard any adopted recommendation from that board until the board timely submits a new construction evaluation resolution.

b. Use of the master matrix. If a county board of supervisors has adopted and filed with the department a construction evaluation resolution, as provided in paragraph 65.105(3)“a,” the board shall evaluate all construction permit applications filed during the applicable period using the master matrix as follows:

(1) In completing the master matrix, the board shall not score criteria on a selective basis. The board must score all criteria that are part of the master matrix according to the terms and conditions relating to construction as specified in the application or commitments for manure management that are to be incorporated into an MMP as provided in Iowa Code section 459.312.

(2) The board shall include with the adopted recommendation a copy of the master matrix analysis, calculations, and scoring for the application. The board’s adopted recommendation submitted to the department may be based on the master matrix or on comments received by the board. The adopted recommendation shall include the specific reasons and any supporting documentation for the decision to recommend approval or disapproval of the application.

(3) The board shall not use the master matrix to evaluate a construction permit application for the construction or expansion of a confinement feeding operation structure if the construction or expansion is for expansion of a confinement feeding operation that includes a confinement feeding operation structure constructed prior to April 1, 2002, and, after the expansion of the confinement feeding operation, its animal unit capacity is 1,666 animal units or less. The board may still submit comments regarding the application.

65.105(4) Inspection of proposed construction site. The department may conduct an inspection of the site on which construction of the confinement feeding operation is proposed after providing

a minimum of 24 hours' notice to the construction permit applicant or sooner with the consent of the applicant. If the county in which the proposed facility is located has adopted and submitted a construction evaluation resolution pursuant to subrule 65.105(3) and has not failed subsequently to submit an adopted recommendation, the county may designate a county employee to accompany a department official during the site inspection. In such cases, the department shall notify the county board of supervisors or county designee at least three days prior to conducting an inspection of the site where construction of the confinement feeding operation is proposed. The county designee shall have the same right to access to the site's real estate on which construction of the confinement feeding operation is proposed as the departmental official conducting the inspection during the period that the county designee accompanies the departmental official. The departmental official and the county designee shall comply with standard biosecurity requirements customarily required by the owner of the confinement feeding operation that are necessary in order to control the spread of disease among an animal population.

65.105(5) *Determination by the department.* The department must receive the county board of supervisors' comments or evaluation for approval or disapproval of an application for a construction permit not later than 30 days following the applicant's delivery of a complete application to the department. Regardless of whether the department receives comments or an evaluation by a county board of supervisors, the department must render a determination or a preliminary determination to approve or disapprove an application for a construction permit within 60 days following the applicant's delivery of a complete application to the department. However, the applicant may deliver a notice requesting a continuance. Upon receipt of a notice, the time required for the county or department to act upon the application shall be suspended for the period provided in the notice but for not more than 30 days after the department's receipt of the notice. The applicant may submit more than one notice. However, the department may terminate an application if no action is required by the department for one year following delivery of the application to the board. The department may also provide for a continuance when it considers the application. The department shall provide notice to the applicant and the board of the continuance. The time required for the department to act upon the application shall be suspended for the period provided in the notice but for not more than 30 days. However, the department shall not provide for more than one continuance. If review of the application is delayed because the application is incomplete, and the applicant fails to supply requested information within a reasonable time prior to the deadline for action on the application, the permit may be denied and a new application will be required if the applicant wishes to proceed. The department will approve or disapprove an application as follows:

a. If the county board of supervisors does not submit a construction evaluation resolution to the department, fails to submit an adopted recommendation, submits only comments, or fails to submit comments, the department shall approve the application if the application meets the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B. The department will disapprove the application if it does not meet such requirements.

b. If the board of supervisors for the county in which the confinement feeding operation is proposed to be constructed has filed a county construction evaluation resolution and submits an adopted recommendation to approve the construction permit application, which may be based on a satisfactory rating produced by the master matrix, to the department, the department shall preliminarily approve an application for a construction permit if the department determines that the application meets the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B. The department shall preliminarily disapprove an application that does not satisfy the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B regardless of the adopted recommendation of the board of supervisors. The department shall consider any timely filed comments made by the board as provided in this subrule to determine if an application meets the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B.

c. If the board submits to the department an adopted recommendation to disapprove an application for a construction permit that is based on a rating produced by the master matrix, the department shall first determine if the application meets the requirements of this chapter and Iowa Code

chapters 455B, 459, 459A and 459B. The department shall preliminarily disapprove an application that does not satisfy the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B, regardless of any result produced by using the master matrix. If the application meets the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B, the department shall conduct an independent evaluation of the application using the master matrix. The department shall preliminarily approve the application if it achieves a satisfactory rating according to the department's evaluation. The department shall preliminarily disapprove the application if it produces an unsatisfactory rating regardless of whether the application satisfies the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B. The department shall consider any timely filed comments made by the board as provided in this subrule to determine if an application meets the requirements of this chapter and Iowa Code chapters 455B, 459, 459A and 459B.

65.105(6) *Departmental notification of permit application decision.* Within three days following the department's determination or preliminary determination to approve or disapprove the application for a construction permit, the department shall deliver a notice of the decision to the applicant.

a. If the county board of supervisors has submitted to the department an adopted recommendation for the approval or disapproval of a construction permit application, the department shall notify the board of the department's preliminary decision to approve or disapprove the application at the same time. For a preliminary decision to approve an application, the notice shall consist of a copy of the draft construction permit. For a preliminary decision to disapprove an application, the notice shall consist of a copy of the department's letter of preliminary denial. The preliminary decision to approve or disapprove an application becomes final without further proceedings if neither the county board of supervisors nor the applicant demands a hearing before the commission or appeals pursuant to subrules 65.105(7) and 65.105(8).

b. If the county board of supervisors has not submitted to the department an adopted recommendation for the approval or disapproval of a construction permit application, the department notice shall include the construction permit or letter of denial. The applicant may appeal the permit or denial as provided in subrule 65.105(8).

65.105(7) *County board of supervisors' demand for hearing.*

a. A county board of supervisors that has submitted an adopted recommendation to the department may contest the department's preliminary decision to approve or disapprove an application for permit by filing a written intent to demand a hearing and a demand for a hearing before the commission. The intent to demand a hearing shall be sent to the director of the department and must be postmarked no later than 14 days following the board's receipt of the department's notice of preliminary decision. The demand for hearing shall be sent to the director of the department and must be postmarked no later than 30 days following the board's receipt of the department's notice of preliminary decision. A county board of supervisors that has submitted an adopted recommendation to the department may waive the right to file a demand for hearing following the receipt of the department's notice of preliminary decision by filing a written notice of waiver with the department.

b. The demand for hearing shall include a statement setting forth all of the county board of supervisors' reasons why the application for a permit should be approved or disapproved, including legal briefs and all supporting documentation, and a further statement indicating whether an oral presentation before the commission is requested.

65.105(8) *Applicant's demand for hearing.* The applicant may contest the department's preliminary decision to approve or disapprove an application for permit by filing a written intent to demand a hearing and a demand for a hearing. The applicant may elect, as part of the written demand for hearing, to have the hearing conducted before the commission pursuant to paragraph 65.105(8) "a" or before an administrative law judge pursuant to paragraph 65.105(8) "b." If no such election is made, the demand for hearing shall be considered to be a request for hearing before the commission. If both the applicant and the county board of supervisors are contesting the department's preliminary decision, the applicant may request that the commission conduct the hearing on a consolidated basis.

a. *Applicant demand for hearing before the commission.* The intent to demand a hearing shall be sent to the director of the department and must be postmarked no later than 14 days following the

board's receipt of the department's notice of preliminary decision. The demand for hearing shall be sent to the director of the department and must be postmarked no later than 30 days following the applicant's receipt of the department's notice of preliminary decision. If the county board of supervisors has filed a demand for hearing, the times for facsimile notification and filing a demand for hearing are extended an additional three business days. It is the responsibility of the applicant to communicate with the department to determine if a county demand for hearing has been filed. The demand for hearing shall include a statement setting forth all of the applicant's reasons why the application for permit should be approved or disapproved, including legal briefs and all supporting documentation, and a further statement indicating whether an oral presentation before the commission is requested.

b. Applicant contested case appeal before an administrative law judge. The applicant may contest the department's preliminary decision to approve or disapprove an application according to the contested case procedures set forth in 561—Chapter 7; however, if the county board of supervisors has demanded a hearing pursuant to subrule 65.105(7), the applicant shall provide facsimile notification to the department within the time frame set forth in paragraph 65.105(7) "a" that the applicant intends to contest the department's preliminary decision according to contested case procedures. In that event, the applicant may request that the hearings be consolidated and conducted as a contested case.

65.105(9) Hearing and decision by the commission.

a. Hearing before the commission.

(1) All hearings before the commission requested pursuant to subrules 65.105(7) and 65.105(8) shall be handled as other agency action and not as a contested case.

(2) Upon receipt of a timely demand for a hearing before the commission pursuant to subrules 65.105(7) or 65.105(8), the director shall set a hearing during a regular meeting of the commission scheduled no more than 35 days from the date the director receives the first such request. However, if the next regular meeting of the commission will take place more than 35 days after receipt of the demand for hearing, the director shall schedule a special in-person meeting or an electronic meeting of the commission pursuant to Iowa Code section 21.8.

(3) No later than five days from the date the director receives a demand for hearing, the director shall post on the department's website the demand for hearing and associated documents, letters notifying the parties of the hearing date, and the department's complete file on the application under review. The director shall provide hard copies of these documents to members of the commission as requested by each member. The director shall contact the applicant and the county board of supervisors and provide copies of documents they request.

(4) No later than 15 days from the date set for hearing, the applicant, the county board of supervisors and the department shall, if any chooses to do so, send one copy of a reply brief to respond to issues raised in the demand for hearing and any supporting documentation to the department. The director shall post the briefs and associated written documents on the department's website and provide hard copies to members of the commission as requested by each member. No further briefs or documents shall be permitted except upon request and permission of the commission.

(5) No later than 15 days from the date set for hearing, any person may submit written material for the commission to review. Whether such material is accepted into the record will be the decision of the chairperson of the commission depending on whether the chairperson deems it relevant to the appeal.

(6) The commission shall use the following hearing procedures:

1. All written material accepted by the chairperson of the commission for inclusion in the record at the hearing shall be marked as coming from the person or entity presenting the document.

2. Objections to submitted written material shall be noted for the record.

3. Oral participation before the commission shall be limited to time periods specified by the chairperson of the commission and, unless otherwise determined by the commission, to presentations by representatives for the applicant, the county board of supervisors and the department and by technical consultants or experts designated by the commission. Representatives of the department shall not advocate for either the county board of supervisors or the applicant but may summarize the basis for the department's preliminary decision and respond to questions by members of the commission.

4. Members of the commission, and the commission's legal counsel, may ask questions of the representatives for the applicant, the county board of supervisors and the department and of technical consultants or experts designated by the commission. The members and counsel may also ask questions of any other person or entity appearing or in attendance at the hearing. Representatives for the applicant and the county board of supervisors may ask questions of technical consultants or experts designated by the commission. No other persons or entities may ask questions of anyone making a presentation or comment at the hearing except upon request and permission by the chairperson of the commission.

(7) The commission shall use the following hearing format:

1. Announcement by the chairperson of the commission of the permit application under review.

2. Receipt into the hearing record of the demand or demands for hearing, a copy of the department's complete file on the application under review and the briefs and written documents previously provided by the applicant and county board of supervisors pursuant to subparagraph 65.105(9) "a" (4).

3. Oral presentation, if any, by the applicant if that party timely requested the hearing. If the applicant did not timely request the hearing, then the county board of supervisors shall make the first presentation.

4. Oral presentation, if any, by the applicant or county board of supervisors, whichever party did not have the opportunity to make the first presentation.

5. Oral presentation, if any, by the department.

6. Oral presentation, if any, by technical consultants or experts designated by the commission to assist in its establishment of a record at the hearing. No later than seven days prior to the hearing, the commission shall notify the applicant and the board of the names, addresses and professional capacity of any such technical experts or consultants.

7. Discussion by the commission, motion and final decision on whether the application for permit is approved or disapproved.

(8) Only the issues submitted by the parties in the demand for hearing and responses shall be considered by the commission as a basis for its decision.

b. Decision by the commission. The decision by the commission shall be stated on the record and shall be final agency action pursuant to Iowa Code chapter 17A. If the commission reverses or modifies the department's decision, the department shall issue the appropriate permit or letter of denial to the applicant. The letter of decision shall contain the reasons for the action regarding the permit.

567—65.106(455B,459,459B) Confinement feeding operation and stockpile separation distance requirements. All confinement feeding operation structures, stockpiles and qualified stockpile structures shall be separated from locations and objects as specified in this rule regardless of whether a construction permit is required. The separation distance requirements of this rule shall apply to all confinement feeding operation structures, unless specifically stated otherwise. If two or more confinement feeding operations are considered one operation as provided in rule 567—65.1(455B,459,459A,459B), definitions of "adjacent—air quality" and "adjacent—water quality," the combined animal unit capacities of the individual operations shall be used for the purpose of determining the required separation. Exemptions to the following requirements are allowed to the extent provided in rule 567—65.107(455B,459,459B).

65.106(1) *Separation distance from residences, businesses, churches, schools and public use areas for new confinement feeding operations.* Separation from residences, businesses, churches, schools and public use areas shall be as specified in Iowa Code section 459.202 and summarized in Table 6 located at iowadnr.gov/af/rules. The residence, business, church, school or public use area must exist at the time an applicant submits an application for a construction permit to the department, at the time an MMP or construction design statement is filed with the department if a construction permit is not required, or at the time construction of the confinement feeding operation structure begins if a construction permit or construction approval letter is not required.

65.106(2) *Separation distance from residences, businesses, churches, schools and public use areas for the expansion of prior constructed operations.* Except as provided in rule

567—65.107(455B,459,459B) or as specified in Iowa Code section 459.203, an existing confinement feeding operation may be expanded if any of the following applies:

a. For a confinement feeding operation constructed prior to January 1, 1999, any construction or expansion of a confinement feeding operation structure complies with the distance requirements applying to that structure as provided in Iowa Code sections 459.202(1) and 459.202(3) and summarized in Tables 6c (for swine, sheep, horses and poultry) and 6d (for beef and dairy cattle) located at iowadnr.gov/afo/rules.

b. For a confinement feeding operation constructed on or after January 1, 1999, but prior to March 1, 2003, any construction or expansion of a confinement feeding operation structure complies with the distance requirements applying to that structure as provided in Iowa Code sections 459.202(2) and 459.202(3) and summarized in Tables 6a (for swine, sheep, horses and poultry) and 6b (for beef and dairy cattle) located at iowadnr.gov/afo/rules.

c. For a confinement feeding operation constructed on or after March 1, 2003, any construction or expansion of a confinement feeding operation structure complies with the distance requirements applying to that structure as provided in Iowa Code sections 459.202(4) and 459.202(5) and summarized in Table 6 located at iowadnr.gov/afo/rules.

65.106(3) *Separation distance from water sources, major water sources, known sinkholes and agricultural drainage wells.* Separation distances specified in this subrule shall apply to any confinement feeding operation structure, including a SAFO. Separation distances from any confinement feeding operation structure to surface intakes, wellheads or cisterns of agricultural drainage wells, known sinkholes, water sources and major water sources shall be as specified in Iowa Code section 459.310 and summarized in Tables 6 to 6d located at iowadnr.gov/afo/rules. For the required separation distance to a major water source to apply, the major water source must be included in Table 1 located at iowadnr.gov/afo/rules at the time an applicant submits an application for a construction permit to the department, at the time an MMP or construction design statement is filed with the department if a construction permit is not required, or at the time construction of the AFO structure if a construction permit, MMP or construction design statement is not required.

65.106(4) *Separation distance from designated wetlands.* Separation distances specified in this subrule shall apply to any confinement feeding operation structure, including a SAFO. A confinement feeding operation structure shall not be constructed closer than 2,500 feet away from a “designated wetland” as defined and referenced in rule 567—65.1(455B,459,459A,459B). This requirement shall not apply to a confinement feeding operation structure if any of the following occur before the wetland is included in “Designated Wetlands in Iowa”:

a. The confinement feeding operation structure already exists. This exemption also applies to additional confinement feeding operation structures constructed at the site of such an existing confinement feeding operation structure after a wetland is included in “Designated Wetlands in Iowa.”

b. Construction of a confinement feeding operation structure has begun as provided in subrule 65.6(1).

c. An application for a permit to construct a confinement feeding operation structure has been submitted to the department.

d. An MMP concerning a proposed confinement feeding operation structure for which a construction permit is not required has been submitted to the department.

65.106(5) *Separation distance from water wells.* For a confinement feeding operation structure constructed after March 20, 1996, the separation distance to water wells shall be as specified in Tables 6 to 6d located at iowadnr.gov/afo/rules.

65.106(6) *Separation distance from public thoroughfares.* A confinement feeding operation structure shall not be constructed or expanded within 100 feet from the right-of-way or a public easement of a public thoroughfare.

65.106(7) *Stockpile and qualified stockpile structures—separation distance from residences.* A stockpile or qualified stockpile structure shall not be placed closer than 1,250 feet from a residence not owned by the titleholder of the land where the stockpile is located, a commercial enterprise, a bona fide religious institution, an educational institution, or a public use area.

65.106(8) *Stockpile and qualified stockpile structures—separation distance from tile inlets, designated areas, high-quality water resources, agricultural drainage wells and known sinkholes.* A stockpile or qualified stockpile structure shall not be placed within the following distances from any of the following:

a. A terrace tile inlet or surface tile inlet, 200 feet, unless the dry manure is stockpiled in a manner that does not allow precipitation-induced runoff to drain from the stockpile to the terrace tile inlet or surface tile inlet. A terrace tile inlet or surface tile inlet does not include a tile inlet that is not directly connected to a tile line that discharges directly into a water of the state.

b. Designated area, 400 feet. However, an increased separation distance of 800 feet shall apply to all of the following:

- (1) A high-quality water resource.
- (2) An agricultural drainage well (400 feet for dry bedded manure).
- (3) A known sinkhole (400 feet for dry bedded manure).

c. Paragraph 65.106(8)“*b*” does not apply if dry manure is stockpiled in a manner that does not allow precipitation-induced runoff to drain from the stockpile to the designated area.

65.106(9) *Measurement of separation distances.* Except as provided in paragraph 65.106(9)“*f*,” the distance between confinement feeding operation structures and locations or objects from which separation is required shall be measured horizontally by standard survey methods between the closest point of the location or object (not a property line) and the closest point of the confinement feeding operation structure. The department may require that a separation distance be measured and certified by a licensed land surveyor, a PE licensed in the state of Iowa, or an NRCS-qualified staff person in cases where the department cannot confirm a separation distance. For purposes of this subrule, structure shall not include areas that do not house animals or store manure or litter.

a. Measurement to an unformed manure storage structure shall be to the point of maximum allowable level of manure pursuant to paragraph 65.100(1)“*b*.”

b. Measurement to a public use area shall be to the facilities that attract the public to congregate and remain in the area for significant periods of time, not to the property line.

c. Measurement to a major water source or water source shall be to the top of the bank of the stream channel of a river or stream or the ordinary high-water mark of a lake, reservoir or designated wetland.

d. Measurement to a public thoroughfare shall be to the closest point of the right-of-way.

e. The separation distance for a confinement feeding operation structure qualifying for the exemption to separation distances under paragraphs 65.107(4)“*b*” and “*c*” shall be measured from the closest point of the confinement feeding operation structure.

f. Measurement to a cemetery shall be to the closest point of its property line.

g. Measurement to a stockpile shall be to the closest point of the stockpile.

567—65.107(455B,459,459B) Exemptions to confinement feeding operation and stockpile separation distance requirements and prohibition of construction on the one hundred year floodplain.

65.107(1) *Exemptions to separation distance requirements from a residence, business, church, school and public use area.* As specified in Iowa Code section 459.205, the separation distances required from residences, businesses, churches, schools and public use areas specified in Iowa Code sections 459.202 and 459.204B and required in subrules 65.106(1), 65.106(2), and 65.106(7), including Tables 6 to 6d located at iowadnr.gov/afo/rules, shall not apply to the following:

a. A confinement feeding operation structure, other than an unformed manure storage structure, if the structure is part of a SAFO or if the stockpile consists of dry manure originating from a SAFO.

b. A confinement feeding operation structure that is constructed or expanded, if the titleholder of the land benefiting from the distance separation requirement executes a written waiver with the titleholder of the land where the structure, stockpile or qualified stockpile structure is located, under such terms and conditions that the parties negotiate. The waiver shall be specific to the construction or expansion project for which it is submitted. The waiver may include specific language to include future projects or

expansions. The written waiver becomes effective only upon the recording of the waiver in the office of the recorder of deeds of the county in which the benefited land is located. The benefited land is the land upon which is located the residence, business, church, school or public use area from which separation is required. The filed waiver shall preclude enforcement by the department of the separation distance requirements of Iowa Code section 459.202. A copy of the recorded waiver shall be submitted with the construction design statement pursuant to subrule 65.104(2) if a construction permit is not required or as part of the construction permit application documents pursuant to subrule 65.104(1).

c. A confinement feeding operation structure that is constructed or expanded closer than the separation distances required in subrule 65.106(1) and 65.106(2), including Tables 6 to 6d located at iowadnr.gov/afo/rules, if the residence, business, church or school was constructed or expanded after the date that the confinement feeding operation commenced operating or if the boundaries of the public use area or the city expanded after the date that the confinement feeding operation commenced operating. A confinement feeding operation commences operating when it is first occupied by animals. A change in ownership or expansion of the confinement feeding operation does not change the date the operation commenced operating.

d. The stockpile consists of dry manure originating exclusively from a confinement feeding operation that was constructed before January 1, 2006, unless the confinement feeding operation is expanded after that date.

65.107(2) Exemptions to separation distance requirements from public thoroughfares. As specified in Iowa Code section 459.205, the separation required from public thoroughfares specified in Iowa Code section 459.202 and summarized in Tables 6 to 6d located at iowadnr.gov/afo/rules shall not apply to any of the following:

a. A confinement building or a formed manure storage structure that is part of a SAFO. However, the exemptions of this subrule shall not apply if the confinement feeding operation structure is an unformed manure storage structure.

b. If the state or a political subdivision constructing or maintaining the public thoroughfare executes a written waiver with the titleholder of the land where the confinement feeding operation structure is located. The written waiver becomes effective only upon the recording of the waiver in the office of the recorder of deeds of the county in which the benefited land is located. The recorded waiver shall be submitted with the construction design statement pursuant to subrule 65.104(2) if a construction permit is not required, or as part of the construction permit application documents pursuant to subrule 65.104(1).

65.107(3) Exemptions to separation distance requirements for prior constructed operations and for operations that expand based on prior separation distance requirements. As specified in Iowa Code section 459.203, a confinement feeding operation constructed or expanded prior to the date that a distance requirement became effective under Iowa Code section 459.202 and that does not comply with the statute's distance requirement may continue to operate regardless of the distance requirement and may expand as provided in subrule 65.106(2).

65.107(4) Exemptions to separation distance requirements for prior constructed operations that expand and cannot comply with prior separation distance requirements. As specified in Iowa Code section 459.203, a confinement feeding operation constructed or expanded prior to the date that a distance requirement became effective under Iowa Code section 459.202 and that does not comply with the distance requirements established in rule 567—65.106(455B,459,459B) and the exemption in subrule 65.107(3) may be expanded if all of the following apply to the expansion:

a. No portion of the confinement feeding operation after expansion is closer than before expansion to a location or object for which separation is required in Iowa Code section 459.202.

b. For a confinement feeding operation that includes a confinement feeding operation structure constructed prior to March 1, 2003, the animal weight capacity of the confinement feeding operation as expanded is not more than the lesser of the following:

(1) Double its animal weight capacity on the following dates:

1. May 31, 1995, for a confinement feeding operation that includes a confinement feeding operation structure constructed prior to January 1, 1999.

2. January 1, 1999, for a confinement feeding operation that only includes a confinement feeding operation structure constructed on or after January 1, 1999, but does include a confinement feeding operation structure constructed prior to March 1, 2003.

(2) Either of the following:

1. An animal weight capacity of 625,000 pounds for animals other than cattle.
2. An animal weight capacity of 1,600,000 pounds for cattle.

c. For a confinement feeding operation that does not include a confinement feeding operation structure constructed prior to March 1, 2003, the animal unit capacity of the confinement feeding operation as expanded is not more than the lesser of the following:

- (1) Double its animal unit capacity on March 1, 2003.
- (2) 1,000 animal units.

65.107(5) *Exemptions to separation distance requirements for prior constructed operations that replace an unformed manure storage structure.* As specified in Iowa Code section 459.203, a confinement feeding operation that includes a confinement feeding operation structure that is constructed prior to March 1, 2003, may be expanded by replacing one or more unformed manure storage structures with one or more formed manure storage structures if all of the following apply:

a. The animal weight capacity or animal unit capacity, whichever is applicable, is not increased for that portion of the confinement feeding operation that utilizes all replacement formed manure storage structures.

b. Use of each replaced unformed manure storage structure is discontinued within one year after the construction of the replacement formed manure storage structure.

c. The capacity of all replacement formed manure storage structures does not exceed the amount required to store manure produced by that portion of the confinement feeding operation utilizing the formed manure storage structures during any 14-month period.

d. No portion of the replacement formed manure storage structure is closer to an object or location for which separation is required under Iowa Code section 459.202 than any other confinement feeding operation structure that is part of the operation.

65.107(6) *Exemption to separation distance requirements from cemeteries.* As specified in Iowa Code section 459.205, the separation distance required between a confinement feeding operation structure and a cemetery shall not apply if the confinement feeding operation structure was constructed or expanded prior to January 1, 1999.

65.107(7) *Exemptions to separation distance requirements from water sources, major water sources, known sinkholes, agricultural drainage wells and designated wetlands and secondary containment.* As specified in Iowa Code section 459.310(3), the separation distance required from surface intakes, wellheads or cisterns of agricultural drainage wells, known sinkholes, water sources, major water sources and designated wetlands, specified in Iowa Code section 459.310 and summarized in Tables 6 to 6d located at iowadnr.gov/afo/rules, shall not apply to a farm pond or privately owned lake as defined in Iowa Code section 462A.2, or to a confinement building, a manure storage structure or an egg washwater storage structure constructed with a secondary containment barrier according to subrule 65.108(11). To qualify for this separation distance exemption, the design of the secondary containment barrier shall be filed in accordance with subrule 65.104(5) prior to beginning construction of the confinement feeding operation structure.

65.107(8) *Exemptions to prohibition on one hundred year floodplain construction and separation distance requirements from water sources, major water sources, known sinkholes, agricultural drainage wells and designated wetlands—replacement formed manure storage structures.* As specified in Iowa Code section 459.310(4), a separation distance required in subrules 65.106(3) and 65.106(4) or the prohibition against construction of a confinement feeding operation structure on a one hundred year floodplain as provided in subrule 65.9(1) shall not apply to a confinement feeding operation that includes a confinement feeding operation structure that was constructed prior to March 1, 2003, if any of the following apply:

a. One or more unformed manure storage structures that are part of the confinement feeding operation are replaced with one or more formed manure storage structures on or after April 28, 2003, and all of the following apply:

(1) The animal weight capacity or animal unit capacity, whichever is applicable, is not increased for that portion of the confinement feeding operation that utilizes all replacement formed manure storage structures.

(2) The use of each replaced unformed manure storage structure is discontinued within one year after the construction of the replacement formed manure storage structure.

(3) The capacity of all replacement formed manure storage structures does not exceed the amount required to store manure produced by that portion of the confinement feeding operation utilizing the replacement formed manure storage structures during any 18-month period.

(4) No portion of the replacement formed manure storage structure is closer to the location or object from which separation is required under subrules 65.106(3) and 65.106(4) than any other confinement feeding operation structure that is part of the operation.

(5) The replacement formed manure storage structure meets or exceeds the requirements of Iowa Code section 459.307 and subrule 65.108(10).

b. A replacement formed manure storage structure that is part of the confinement feeding operation is constructed on or after April 28, 2003, pursuant to a waiver granted by the department. In granting the waiver, the department shall make a finding of all of the following:

(1) The replacement formed manure storage structure replaces the confinement feeding operation's existing manure storage and handling facilities.

(2) The replacement formed manure storage structure complies with standards adopted pursuant to Iowa Code section 459.307 and subrule 65.108(10).

(3) The replacement formed manure storage structure more likely than not provides a higher degree of environmental protection than the confinement feeding operation's existing manure storage and handling facilities. If the formed manure storage structure will replace any existing manure storage structure, the department shall, as a condition of granting the waiver, require that the replaced manure storage structure be properly closed.

567—65.108(455B,459,459B) Manure storage structure design requirements. The requirements in this rule apply to all confinement feeding operation structures unless specifically stated otherwise.

65.108(1) Drainage tile removal for new construction of a manure storage structure. Prior to constructing a manure storage structure, other than storage of manure in an exclusively dry form, the site for the AFO structure shall be investigated for drainage tile lines as provided in this subrule. All applicable records of known drainage tiles shall be examined for the existence of drainage tile lines.

a. An inspection trench of at least ten inches wide shall be dug around the structure to a depth of at least 6 feet below the original grade and within 25 feet of the proposed outside of the toe of the berm prior to excavation for an unformed manure storage structure.

b. Drainage tile lines discovered during the tile inspection of an unformed manure storage structure shall be removed and rerouted in or in an area outside the inspection trench. All tiles within the inspection trench perimeter shall be removed or completely plugged with concrete, grout or similar materials. Drainage tile lines installed at the time of construction to lower the groundwater may remain in place as long as they are outside of the proposed toe of berm.

c. The applicant for a construction permit for a formed manure storage structure shall investigate for tile lines during excavation for the structure. Drainage tile lines discovered upgrade from the structure shall be rerouted around the formed manure storage structure to continue the flow of drainage. All other drainage tile lines discovered shall be rerouted, capped, or plugged with concrete, Portland cement concrete grout or similar materials. Drainage tile lines installed at the time of construction to lower a groundwater table may remain where located even if located under the floor; however, the tile lines must be tied into the perimeter drain tile.

d. Other proven methods approved by the department may be utilized to discover drainage tile lines.

e. The requirements of this subrule do not apply if sufficient information is provided that allows the department to conclude that the location does not have a history of drainage tile.

65.108(2) Drainage tile removal around an existing manure storage structure. The owner of an aerobic structure, anaerobic lagoon or earthen manure storage basin or earthen waste slurry storage basin, other than an egg washwater storage structure, that is part of a confinement feeding operation with a construction permit granted before March 20, 1996, but after December 31, 1992, shall inspect for drainage tile lines as provided in this subrule, and all applicable records of known drainage tiles shall be examined. The owner of an aerobic structure, anaerobic lagoon, earthen manure storage basin or earthen waste slurry storage basin, other than an egg washwater storage structure, that is part of a confinement feeding operation with a construction permit granted before January 1, 1993, but after May 31, 1985, shall inspect for drainage tiles as provided in this subrule, and all applicable records of known drainage tiles shall be examined. Drainage tile lines shall not be installed within the separation distance provided in paragraph 65.108(1) "b" once the basin has been constructed.

a. Inspection shall be by digging an inspection trench of at least ten inches wide around the structure to a depth of at least 6 feet from the original grade and within 25 feet from the outside edge of the berm. The owner first shall inspect the area where trenching is to occur and manure management records to determine if there is any evidence of leakage and, if so, shall contact the department for further instructions as to proper inspection procedures. The owner of a confinement feeding operation shall either obtain permission from an adjoining property owner or trench up to the boundary line of the property if the distance of 25 feet would require the inspection trench to go onto the adjoining property.

b. The owner of the confinement feeding operation may utilize other proven methods approved by the department to discover drainage tile lines.

c. The drainage tile lines discovered near an aerobic structure, anaerobic lagoon, earthen manure storage basin or earthen waste slurry storage basin, other than an egg washwater storage structure, shall be removed within 25 feet of the outside edge of the berm. Drainage tile lines discovered upgrade from the aerobic structure, anaerobic lagoon or earthen manure storage basin shall be rerouted within 25 feet from the berm to continue the flow of drainage. All other drainage tile lines discovered shall be rerouted, capped, plugged with concrete, or Portland cement concrete grout or similar materials, or reconnected to upgrade tile lines. Drainage tile lines that were installed at the time of construction to lower a groundwater table may either be avoided if the location is known or may remain at the location if discovered.

d. The owner of an aerobic structure, anaerobic lagoon, earthen manure storage structure or an earthen waste slurry storage basin with a tile drainage system to artificially lower the groundwater table shall have a device to allow monitoring of the water in the drainage tile lines that lower the groundwater table and to allow shutoff of the drainage tile lines if the drainage tile lines do not have a surface outlet accessible on the property where the aerobic structure, anaerobic lagoon, earthen manure storage basin or earthen waste slurry storage basin is located.

e. If the owner of the confinement feeding operation discovers drainage tile that projects underneath the berm, the owner shall follow one of the following options:

(1) Contact the department to obtain permission to remove the drainage tile under the berm. The manure in the structure must be lowered to a point below the depth of the tile prior to removing the drainage tile from under the berm. Prior to using the structure, a new percolation test must be submitted to the department and approval received from the department.

(2) Grout the length of the tile under the berm to the extent possible. The material used to grout shall include concrete, Portland cement concrete grout or similar materials.

f. A waiver to this subrule may be granted by the director if sufficient information is provided that the location does not have a history of drainage tile.

g. A written record describing the actions taken to determine the existence of tile lines, the findings, and actions taken to comply with this subrule shall be prepared and maintained as part of the MMP records.

65.108(3) Earthen waste slurry storage basins. An earthen waste slurry storage basin shall have accumulated manure removed at least twice each year, unless there is sufficient basin capacity to

allow removal of manure once each year and maintain freeboard as determined pursuant to paragraph 65.100(1)“b.”

65.108(4) *Earthen manure storage basins.* An earthen manure storage basin shall have accumulated manure removed at least once each year. An earthen manure storage basin constructed after June 19, 2024, must have enough manure storage capacity for eight months. An earthen manure storage basin may have enough manure storage capacity to contain the manure from the confinement feeding operation for up to 14 months and maintain freeboard as determined pursuant to paragraph 65.100(1)“b.”

65.108(5) *Soil testing for earthen structures.* Applicants for construction permits for earthen manure storage structures shall submit soils information according to this subrule for the site of the proposed structure. All subsurface soil classification shall be based on American Society for Testing and Materials Designations D 2487-06, effective May 1, 2006, or D 2488-06, effective November 1, 2006. Soil corings shall be taken to determine subsurface soil characteristics and groundwater elevation and direction of flow of the proposed site for an anaerobic lagoon, aerobic structure, earthen egg washwater storage structure, or earthen manure storage basin. Soil corings shall be conducted by a qualified person normally engaged in soil testing activities. Data from the soil corings shall be submitted with a construction permit application and shall include a description of the geologic units encountered; a discussion of the effects of the soil and groundwater elevation and direction of flow on the construction and operation of the anaerobic lagoon, aerobic structure, earthen egg washwater storage structure, or earthen manure storage basin and a discussion that addresses the suitability of the proposed structure at the site. All soil corings shall be taken by a method that identifies the continuous soil profile and does not result in the mixing of soil layers. The number and location of the soil corings will vary on a case-by-case basis as determined by the designing engineer and accepted by the department. The following are minimum requirements:

a. A minimum of four soil corings reflecting the continuous soil profile is required for each anaerobic lagoon, aerobic structure, earthen egg washwater storage structure, or earthen manure storage basin. Corings which are intended to represent soil conditions at the corner of the structure must be located within 50 feet of the bottom edge of the structure and spaced so that one coring is as close as possible to each corner. Should there be no bottom corners, corings shall be equally spaced around the structure to obtain representative soil information for the site. An additional coring will be required if necessary to ensure that one coring is at the deepest point of excavation. For an anaerobic lagoon, aerobic structure, earthen egg washwater storage structure, or earthen manure storage basin larger than four acres water surface area, one additional coring per acre is required for each acre above four acres surface area.

b. All corings shall be taken to a minimum depth of ten feet below the bottom elevation of the anaerobic lagoon, aerobic structure, earthen egg washwater storage structure, or earthen manure storage basin.

c. At least one coring shall be taken to a minimum depth of 25 feet below the bottom elevation of the anaerobic lagoon, aerobic structure, earthen egg washwater storage structure, or earthen manure storage basin or into bedrock, whichever is shallower.

d. Upon abandonment of the soil core holes, all soil core holes including those developed as temporary water level monitoring wells shall be plugged with concrete, Portland cement concrete grout, bentonite, or similar materials.

65.108(6) *Hydrology.*

a. Groundwater table. A minimum separation of four feet between the top of the liner for any unformed manure storage structure or earthen egg washwater storage structure and the groundwater table is recommended; however, in no case shall the top of the liner for an unformed manure storage structure or earthen egg washwater storage structure be below the groundwater table. If the groundwater table is less than two feet below the top of the liner for an unformed manure storage structure or earthen egg washwater storage structure, the unformed manure storage structure or earthen egg washwater storage structure shall be provided with a synthetic liner as described in paragraph 65.108(8)“f.”

b. Permanent artificial lowering of groundwater table.

(1) Unformed manure storage structures. The groundwater table around an unformed manure storage structure or earthen egg washwater storage structure may be artificially lowered to levels

required in paragraph 65.108(6)“a” by using a gravity flow tile drainage system or other permanent nonmechanical system for artificial lowering of the groundwater table. Detailed engineering and soil drainage information shall be provided with a construction permit application for an unformed manure storage structure or earthen egg washwater storage structure if a drainage system for artificially lowering the groundwater table will be installed. The level to which the groundwater table will be lowered will be considered to represent the seasonal high-water table. If a drainage tile around the perimeter of the basin is installed a minimum of two feet below the top of the basin liner to artificially lower the seasonal high-water table, the top of the basin’s liner may be a maximum of four feet below the seasonal high-water table which existed prior to installation of the perimeter tile system. Drainage tile lines shall be installed between the outside of the proposed toe of the berm and within 25 feet of the outside of the toe of the berm. Drainage tile lines shall be placed in a vertical trench and encased in granular material which extends upward to the level of the seasonal high-water table which existed prior to installation of the perimeter tile system. A device to allow monitoring of the water in the drainage tile lines installed to lower the groundwater table and a device to allow shutoff of the drainage tile lines shall be installed if the drainage tile lines do not have a surface outlet accessible on the property where the unformed manure storage structure is located.

(2) Formed manure storage structures. For a formed manure storage structure or a formed egg washwater storage structure, partially or completely constructed below the normal soil surface, a perimeter tile drainage system or other permanent system for artificial lowering of groundwater levels shall be installed around the structure if the groundwater table is above the bottom of the structure. The perimeter tile shall include a sample port to allow monitoring of the water in the drainage tile lines and a device to allow shutoff of the drainage tile lines if the drainage tile lines do not have a surface outlet accessible on the property where the formed manure storage structure is located or if the perimeter tile is connected to an existing tile. The perimeter tile may be tied into the monitoring port or a sump; however, there shall be a permanent automatic pump installed.

c. Determination of groundwater table. For purposes of this rule, groundwater table is the seasonal high-water table determined by a licensed PE, a groundwater professional certified pursuant to 567—Chapter 134, or qualified staff from the department or NRCS. If a construction permit is required, the department must approve the groundwater table determination.

(1) Current groundwater levels shall be measured using at least one of the following for either formed or unformed manure storage structures:

1. Temporary monitoring wells. A minimum of three temporary monitoring wells shall be installed. The top of the well screen shall be within five feet of the ground surface. Each well shall be extended to at least two feet below the bottom of the liner of an unformed manure storage structure or to at least two feet below the footings of a formed manure storage structure.

- Unformed manure storage structures. For an unformed manure storage structure, each monitoring well may be installed in the existing core holes resulting from the corings required in subrule 65.108(5).

- Formed manure storage structures. For a formed manure storage structure, at least three temporary monitoring wells shall be installed as close as possible to three corners of the structure, with one of the wells close to the corner of deepest excavation. If the formed manure storage structure is circular, the three monitoring wells shall be equally spaced and one well shall be placed at the point of deepest excavation.

2. Test pits. The department may allow use of test pits in lieu of temporary monitoring wells if seasonal variation in climatic patterns, soil and geologic conditions prevent accurate determination of the seasonal high-water table or prior to the construction of an unformed manure storage structure liner to ensure that the required separation distance to the groundwater table is being met. The bottom of each test pit shall be at least two feet below the floor of the manure storage structure or egg washwater storage structure. Each pit shall be allowed to remain open and unaltered for a minimum of seven days for viewing by the department or NRCS-qualified staff person for the determination of soil characteristics and related groundwater influence. Adequate protection (temporary berms and covers) shall be provided to prevent surface runoff from entering the test pits. One test pit shall be located in each corner and one

in the center of the proposed manure control structure, unless otherwise specified by the department. Test pits shall be backfilled and compacted to achieve the seepage loss as outlined in subrule 65.108(7). A description of the materials present in the test pit shall be documented by all of the following:

- Digital photos;
- Description of soils including mottling;
- Construction specifications; and
- Weather conditions both prior to and during the period in which test pits are open.

(2) The seasonal high-water table shall be determined by measuring the groundwater level in the temporary monitoring wells not earlier than seven days following installation and shall include consideration of NRCS soil survey information, soil characteristics such as color and mottling, other existing water table data, and other pertinent information. If a drainage system for artificially lowering the groundwater table will be installed in accordance with the requirements of paragraph 65.108(6) “b,” the level to which the groundwater table will be lowered will be considered to represent the seasonal high-water table.

65.108(7) *Seals for unformed manure storage structures and unformed egg washwater storage structures.* An unformed manure storage structure or egg washwater storage structure shall be sealed such that seepage loss through the seal shall not exceed 1/16 inch per day at the design depth of the structure. Following construction of the structure, the results of a testing program that indicates the adequacy of the seal shall be provided to that department in writing prior to start-up of a permitted operation.

65.108(8) *Unformed manure storage structure and unformed egg washwater storage structure liner design and construction standards.* An unformed manure storage structure or unformed egg washwater storage structure that receives a construction permit after January 21, 1998, shall comply with the following minimum standards in addition to subrule 65.108(7).

a. If the location of the proposed unformed manure storage structure or unformed egg washwater storage structure contains suitable materials as determined by the soil corings taken pursuant to subrule 65.108(5), those materials shall be compacted to establish a minimum of a 12-inch liner. A minimum initial overexcavation of six inches of material shall be required. The underlying material shall be scarified, reworked and compacted to a depth of six inches. The overexcavated materials shall be replaced and compacted.

b. If the location of the proposed unformed manure storage structure or unformed egg washwater storage structure does not contain suitable materials as determined by the soil corings taken pursuant to subrule 65.108(5), suitable materials shall be obtained from another location approved by the department and shall be compacted to establish a minimum of a 24-inch liner.

c. Where sand seams, gravel seams, organic soils or other materials that are not suitable are encountered during excavation, the area where they are discovered shall be overexcavated a minimum of 24 inches and replaced with suitable materials and compacted.

d. All loose lift material must be placed in lifts of nine inches or less and compacted. The material shall be compacted at or above optimum moisture content and meet a minimum of 95 percent of the maximum density as determined by the Standard Proctor test after compaction.

e. For purposes of this rule, suitable materials means soil, soil combinations or other similar material that is capable of meeting the permeability and compaction requirements. Sand seams, gravel seams, organic soils or other materials generally not suitable for unformed manure storage structure or unformed egg washwater storage structure construction are not considered suitable liner materials.

f. As an alternative to the above standards, a synthetic liner may be used. If the use of a synthetic liner is planned for an unformed manure storage structure or unformed egg washwater storage structure, the permit application shall outline how the site will be prepared for placement of the liner, the physical, chemical, and other pertinent properties of the proposed liner, and information on the procedures to be used in liner installation and maintenance. In reviewing permit applications that involve use of synthetic liners, the department will consider relevant synthetic liner standards adopted by industry, governmental agencies, and professional organizations as well as technical information provided by liner manufacturers and others.

g. For berm erosion control, the following requirements apply to unformed manure storage structures and unformed egg washwater storage structures constructed after May 12, 1999:

(1) Concrete, riprap, synthetic liners or similar erosion control materials or measures shall be used on the berm surface below pipes where manure will enter the structure.

(2) Concrete, riprap, synthetic liners or similar erosion control materials or measures of sufficient thickness and area to accommodate manure removal equipment and to protect the integrity of the liner shall be placed at all locations on the berm, side slopes, and base of the structure where agitation or pumping may cause damage to the liner.

(3) Erosion control materials or measures shall be used at the corners of the structure.

(4) To control erosion, perennial (grass) vegetation must be maintained on the outer, top and inner dikes up to the two-foot freeboard level of the unformed storage structure or earthen egg washwater storage structure, unless covered by concrete, riprap, synthetic liners or similar erosion control materials or measures.

(5) The owner of a confinement feeding operation with an unformed manure storage structure or an unformed egg washwater storage structure shall inspect the structure berms at least semiannually for evidence of erosion. Erosion problems found that may impact either structural stability or liner integrity shall be corrected in a timely manner.

h. After May 29, 1997, a person shall not construct a new or expand an existing unformed manure storage structure or an unformed egg washwater storage structure within an agricultural drainage well area.

i. The top width of any dike shall be a minimum of ten feet wide. The interior and exterior dike slopes shall not be steeper than three feet horizontal to one foot vertical.

65.108(9) Anaerobic lagoon design standards. An anaerobic lagoon shall meet the requirements of this subrule.

a. *General.*

(1) Depth. Liquid depth shall be at least 8 feet, but 15 to 20 feet is preferred if soil and other site conditions allow.

(2) Inlet. One subsurface inlet at the center of the lagoon or dual (subsurface and surface) inlets are preferred to increase dispersion. If a center inlet is not provided, the inlet structure shall be located at the center of the longest side of the anaerobic lagoon.

(3) Shape. Long, narrow anaerobic lagoon shapes decrease manure dispersion and should be avoided. Anaerobic lagoons with a length-to-width ratio of greater than 3:1 shall not be allowed.

(4) Aeration. Aeration shall be treatment as an “add-on process” and shall not eliminate the need for compliance with all anaerobic lagoon criteria contained in these rules.

(5) Manure loading frequency. The anaerobic lagoon shall be loaded with manure and dilution water at least once per week.

(6) Design procedure. Total anaerobic lagoon volume shall be determined by summation of minimum stabilization volume; minimum dilution volume (not less than 50 percent of minimum stabilization volume); manure storage between periods of disposal; and storage for eight inches of precipitation.

(7) Manure storage period. Annual or more frequent manure removal from the anaerobic lagoon, preferably prior to May 1 or after September 15 of the given year, shall be practiced to minimize odor production. Design manure storage volume between disposal periods shall not exceed the volume required to store 14 months’ manure production. Manure storage volume shall be calculated based on the manure production values found in Table 5 located at iowadnr.gov/afo/rules.

b. *Minimum stabilization volume and loading rate.*

(1) For all animal species other than beef cattle, there shall be 1,000 cubic feet minimum design volume for each 5 pounds of volatile solids produced per day if the volatile solids produced per day are 6,000 pounds or fewer and for each 4 pounds if the volatile solids produced per day are more than 6,000 pounds. For beef cattle, there shall be 1,000 cubic feet minimum design volume for each 10 pounds of volatile solids produced per day.

(2) In Lyon, Sioux, Plymouth, Woodbury, Osceola, Dickinson, Emmet, Kossuth, O'Brien, Clay, Palo Alto, Cherokee, Buena Vista, Pocahontas, Humboldt, Ida, Sac, Calhoun, and Webster Counties for all animal species other than beef there shall be 1,000 cubic feet minimum design volume for each 4.5 pounds of volatile solids per day if the volatile solids produced per day are 6,000 pounds or fewer. However, if a water analysis as required in subparagraph 65.108(9) "c"(2) below indicates that the sulfate level is below 500 milligrams per liter, then the rate is 1,000 cubic feet for each 5.0 pounds of volatile solids per day.

(3) Credit shall be given for removal of volatile solids from the manure stream prior to discharge to the lagoon. The credit shall be in the form of an adjustment to the volatile solids produced per day. The adjustments shall be at the rate of 0.5 pound for each pound of volatile solids removed. For example, if a swine facility produces 7,000 pounds of volatile solids per day, and if 2,000 pounds of volatile solids per day are removed, the volatile solids produced per day would be reduced by 1,000 pounds, leaving an adjusted pounds of volatile solids produced per day of 6,000 pounds (for which the loading rate would be 5 pounds according to subparagraph 65.108(9) "b"(1) above).

(4) Credit shall be given for mechanical aeration if the upper one-third of the lagoon volume is mixed by the aeration equipment and if at least 50 percent of the oxygen requirement of the manure is supplied by the aeration equipment. The credit shall be in the form of an increase in the maximum loading rate (which is the equivalent of a decrease in the minimum design volume) in accordance with Table 8 located at iowadnr.gov/afo/rules.

(5) If a credit for solids removal is given in accordance with subparagraph 65.108(9) "b"(3) above, the credit for qualified aeration shall still be given. The applicant shall submit evidence of the five-day biochemical oxygen demand (BOD5) of the manure after the solids removal so that the aeration credit can be calculated based on an adjustment rate of 0.5 pound for each pound of solids removed.

(6) American Society of Agricultural and Biological Engineers standards, "Manure Production and Characteristics," D384.2, effective March 2005, or Midwest Plan Service-18, Table 2-1, effective January 2004, shall be used in determining the BOD5 production and volatile solid production of various animal species.

c. Water supply.

(1) The source of the dilution water discharged to the anaerobic lagoon shall be identified.

(2) The sulfate concentration of the dilution water to be discharged to the anaerobic lagoon shall be identified. The sulfate concentration shall be determined by standard methods as defined in rule 567—60.2(455B).

(3) A description of available water supplies shall be provided to prove that adequate water is available for dilution. It is recommended that, if the sulfate concentration exceeds 250 mg/l, then an alternate supply of water for dilution should be sought.

d. Initial lagoon loading. Prior to the discharge of any manure to the anaerobic lagoon, the lagoon shall be filled to a minimum of 50 percent of its minimum stabilization volume with fresh water.

e. Lagoon manure and water management during operation. Following initial loading, the manure and water content of the anaerobic lagoon shall be managed according to either of the following:

(1) For single-cell lagoons or multicell lagoons without a site-specific lagoon operation plan. The total volume of fresh water for dilution added to the lagoon annually shall equal one-half the minimum stabilization volume. At all times, the amount of fresh water added to the lagoon shall equal or exceed the amount of manure discharged to the lagoon.

(2) For a two- or three-cell anaerobic lagoon. The manure and water content of the anaerobic lagoon may be managed in accordance with a site-specific lagoon operation plan approved by the department. The lagoon operation plan must describe in detail the operational procedures and monitoring program to be followed to ensure proper operation of the lagoon. Operational procedures shall include identifying the amounts and frequencies of planned additions of manure, fresh water and recycle water, and amount and frequencies of planned removal of solids and liquids. Monitoring information shall include locations and intervals of sampling, specific tests to be performed, and test parameter values used to indicate proper lagoon operation. As a minimum, annual sampling and testing

of the first lagoon cell for electrical conductivity and either chemical oxygen demand (COD) or total ammonia (NH₃ + NH₄) shall be required.

f. Manure removal. If the anaerobic lagoon is to be dewatered once a year, manure should be removed to approximate the annual manure volume generated plus the dilution water used. If the anaerobic lagoon is to be dewatered more frequently, the anaerobic lagoon liquid level should be managed to maintain adequate freeboard.

65.108(10) Concrete standards.

a. A formed manure storage structure that is constructed of concrete on or after March 24, 2004, and that is part of a confinement feeding operation other than a SAFO shall meet the following minimum design and concrete standards and be designed by either of the two methods listed below:

(1) Design of a formed manure storage structure prepared and sealed by a PE or an NRCS engineer shall be in accordance with the American Concrete Institute (ACI) Building Code ACI 318-19, effective May 3, 2019, ACI 360R-10, effective April 2010, or ACI 350-20, effective November 6, 2020; Portland Cement Association (PCA) publication EB075, effective April 19, 2021, or PCA EB001.16, effective September 2016; or Midwest Plan Service (MWPS) publication MWPS-36 2nd Edition, effective 2005, or MWPS TR-9, effective 1999, and shall also meet the minimum design and concrete standards in paragraph 65.108(10) “b.”

(2) If a formed manure storage structure is not designed by a PE or NRCS engineer, the design and specifications shall be in conformance with MWPS-36 2nd Edition (for a belowground rectangular tank), with MWPS TR-9 (for a circular tank) or in accordance with Appendix C located at iowadnr.gov/afo/rules (for a belowground, laterally braced rectangular tank). A formed manure storage structure with a depth greater than 12 feet shall be designed by a PE or NRCS engineer.

b. Formed manure storage structures used to store liquid manure, dry manure or dry bedded manure shall meet all of the following minimum requirements:

(1) All concrete shall have the following minimum as-placed compressive strengths and shall meet American Society for Testing and Materials (ASTM) standard ASTM C 94-18, effective December 15, 2018:

1. 4,000 pounds per square inch (psi) for walls, floors, beams, columns and pumpouts;
2. 3,000 psi for the footings.

The average concrete strength by testing shall not be below design strength. No single test result shall be more than 500 psi less than the minimum compressive strength.

(2) Cementitious materials shall consist of Portland cement conforming to ASTM C 150, effective July 1, 2022. Aggregates shall conform to ASTM C 33-18, effective March 15, 2018. Blended cements in conformance with ASTM C 595, effective December 15, 2008, are allowed only for concrete placed between March 15 and October 15. Portland-pozzolan cement or Portland blast furnace slag blended cements shall contain at least 75 percent, by mass, of Portland cement.

(3) All concrete placed for walls shall be consolidated or vibrated, by manual or mechanical means, or a combination, in a manner that meets ACI 309R, effective January 2005.

(4) All steel rebar used shall be a minimum of grade 40 steel. All rebar, with the exception of rebar dowels connecting the walls to the floor or footings, shall be secured and tied in place prior to the placing of concrete.

(5) Waterstops shall be installed in all areas where fresh concrete meets hardened concrete. Waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department. Only embedded waterstops are allowed in vertical joints. Adhesive or self-sticking waterstops shall not be used on vertical joints.

(6) The finished subgrade of a formed manure storage structure shall be graded and compacted to provide a uniform and level base and shall be free of vegetation, manure and debris. For the purpose of this subrule, “uniform” means a finished subgrade with similar soils.

(7) When the groundwater table, as determined in paragraph 65.108(6) “c” is above the bottom of the formed manure storage structure, a drain tile shall be installed along the footings to artificially lower the groundwater table pursuant to paragraph 65.108(6) “b.” The drain tile shall be placed within three feet of the footings as indicated in Appendix C, Figure C-1, located at iowadnr.gov/afo/rules, and shall

be covered with a minimum of two inches of gravel, granular material, fabric or a combination of these materials to prevent plugging the drain tile.

(8) All floor slabs shall be a minimum of five inches thick and have minimum primary reinforcement using one of the following methods:

1. Grade 40 #4 steel rebar, placed at a maximum of 18 inches on center each way in a single mat. Floor slab reinforcement shall be located in the middle of the thickness of the floor slab.

2. Glass fiber-reinforced polymer (GFRP) rebar, fiber-reinforced polymer (FRP) rebar or composite rebar may be used in floor slabs only and shall conform to ACI 440.11.22, effective September 2, 2022, and Table 3 of ASTM 7957, effective February 1, 2022. Supporting documentation shall be submitted for nonsteel rebar demonstrating the equivalency to #4 steel rebar at 18 inches on center each way. GFRP rebar shall not be manufactured using a polyester-based resin system per ASTM D7957 and shall meet the additional following ASTM D7957 parameters:

- Mean Tensile Modulus of Elasticity.....>6,500,000 psi (44,800 MPa)
- Guaranteed Bond Strength.....>1,100 psi (7.6 MPa)

3. Fiber-reinforced concrete (FRC) may be used in floor slabs only and shall conform to the requirements of ASTM C1116/C1116M Type I (steel FRC) and Type III (synthetic FRC), effective September 1, 2023. FRC shall provide a minimum average equivalent strength ratio (Re3) of 30 percent when tested in accordance with ASTM C1812/1812M, effective December 15, 2022.

4. Fiber mesh shall not be substituted for primary reinforcement.

5. Nondestructive methods to verify the floor slab thickness may be required by the department. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than four and one-half inches.

(9) The footing or the area where the floor comes in contact with the walls and columns shall have a thickness equal to the wall thickness, but in no case be less than eight inches, and the width shall be at least twice the thickness of the footing. All exterior walls shall have footings below the frostline. Tolerances shall not exceed negative one-half inch of the minimum footing dimensions.

(10) The vertical steel of all walls shall be extended into the footing and be bent at 90° or a separate dowel shall be installed as a #4 rebar that is bent at 90° with at least 20 inches of rebar in the wall and extended into the footing within 3 inches of the bottom of the footing and extended at least 3 inches horizontally, as indicated in Appendix C, Figure C-1, located at iowadnr.gov/afo/rules. As an alternative to the 90° bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom. Dowel spacing (bend or extended) shall be the same as the spacing for the vertical rebar. In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings.

(11) All footings, slabs, and walls shall be formed with rigid forming systems and shall not be earth-formed. Form ties shall be nonremovable to provide a liquid-tight structure. No conduits or pipes shall be installed through an outside wall below the maximum liquid level of the structure.

(12) All wall reinforcement shall be placed so as to have a rebar cover of two inches from the inside face of the wall for a belowground manure storage structure. Vertical wall reinforcement should be placed closest to the inside face. Rebar placement shall not exceed tolerances specified in ACI 318-19.

(13) All construction joints in exterior walls shall be constructed to prevent discontinuity of steel and have properly spliced rebar placed through the joint.

(14) All concrete shall be cured for at least seven days after placing, in a manner which meets ACI 308R-16, effective May 2016, by maintaining adequate moisture or preventing evaporation. Proper curing shall be done by ponding, spraying or fogging water; by using a curing compound that meets ASTM C 309, effective August 22, 2019; or by using wet burlap, plastic sheets or similar materials.

(15) Backfilling of the walls shall not start until the floor slabs or permanent bracing has been installed and grouted. Backfilling shall be performed with material free of vegetation, large rocks or debris.

(16) If air temperature is below 40 degrees Fahrenheit, the ACI Standard 306R-16, "Recommended Practice for Cold Weather Concreting," effective September 2016, should be followed. If ready-mix concrete temperature is above 90 degrees Fahrenheit, the ACI Standard 305R-20, "Recommended Practice for Hot Weather Concreting," effective date September 2020, should be followed.

c. Formed manure storage structures constructed of steel or pre-cast concrete shall be designed by a PE and certified by the PE and the manufacturer's representative that the structure was built in accordance with the manufacturer's requirements.

65.108(11) Secondary containment barriers for manure storage structures. Secondary containment barriers used to qualify any confinement feeding operation for the exemption provision in subrule 65.107(7) shall be filed with the department according to subrule 65.104(5) and shall meet the following design standards:

a. A secondary containment barrier shall consist of a structure surrounding or downslope of a manure storage structure and shall be designed according to either of the following:

(1) If the manure storage structure is used to store liquid or semiliquid manure, the secondary containment barrier shall be designed to contain 120 percent of the volume of manure stored above the manure storage structure's final grade or 50 percent of the volume of manure stored belowground or partially belowground, whichever is greater. Engineering drawings prepared by a PE licensed in Iowa or an NRCS-qualified staff person must be submitted according to procedures set forth in subrule 65.104(5) and must show compliance with subrule 65.108(11). If the containment barrier does not surround the manure storage structure, upland drainage must be diverted. For purposes of this subrule only, semiliquid manure means manure that contains a percentage of dry matter that results in manure too solid for pumping but too liquid for stacking.

(2) If the manure storage structure is used for the storage of only dry manure or dry bedded manure, the secondary containment barrier shall be designed to contain at least 10 percent of the volume of manure stored. Detailed drawings prepared by the owner or a representative must be submitted according to procedures set forth in subrule 65.104(5) and must show compliance with subrule 65.108(1). If the containment barrier does not surround the manure storage structure, upland drainage must be diverted. Any dry manure retained by the secondary containment barrier shall be removed and properly disposed of within 14 days.

b. The barrier may be constructed of earth, concrete, or a combination of both. If a relief outlet or valve is installed, the relief outlet or valve shall remain closed. Any accumulated liquid due to an overflow shall be land-applied as stated in the operation's MMP.

c. The base shall slope to a collecting area where storm water can be pumped out. If storm water is contaminated with manure, it shall be land-applied at normal fertilizer application rates in compliance with rule 567—65.101(455B,459,459B).

d. Secondary containment barriers constructed entirely or partially of earth shall comply with the following requirements:

(1) The soil surface, including dike, shall be constructed to prevent downward water movement at rates greater than 1×10^{-6} cm/sec and shall be maintained to prevent downward water movement at rates greater than 1×10^{-5} cm/sec.

(2) Dikes shall not be steeper than 45 degrees and shall be protected against erosion. If the slope is 19 degrees or less, grass can be sufficient protection, provided it does not interfere with the required soil seal.

(3) The top width of the dike shall be no less than three feet.

e. Secondary containment barriers constructed of concrete shall be watertight and comply with the following requirements:

(1) The base of the containment structure shall be designed to support the manure storage structure and its contents.

(2) The concrete shall be routinely inspected for cracks, which shall be repaired with a suitable sealant.

f. Nothing shall be stored within a secondary containment barrier, including but not limited to machinery or feedstock.

65.108(12) Human sanitary waste. Human sanitary waste shall not be discharged to a manure storage structure or egg washwater storage structure.

65.108(13) Requirements for qualified operations. A confinement feeding operation that meets the definition of a qualified operation shall only use an aerobic structure for manure storage and treatment.

This requirement does not apply to the following types of confinement feeding operations: (1) one that only handles dry manure; (2) an egg washwater storage structure; (3) a confinement feeding operation that was constructed before May 31, 1995, and does not expand; or (4) a confinement feeding operation that processes manure using an anaerobic digester system.

65.108(14) *Aboveground formed manure storage structures with external outlet or inlet below the liquid level.* A formed manure storage structure that is constructed to allow the storage of manure wholly or partially above ground and that has an external outlet or inlet below the liquid level shall have all of the following:

a. Two or more shutoff valves on any external outlet or inlet below the liquid level. At least one shutoff valve shall be located inside the structure and be operable if the external valve becomes inoperable or broken off. Alternative options may be considered by the department.

b. All external outlets or inlets below the liquid level shall be barricaded, encased in concrete, or otherwise protected to minimize accidental destruction.

c. Construction shall comply with the manufacturer's requirements.

d. An emergency response plan for retaining manure at the site and cleanup if the manure storage structure fails or there is any other type of accidental discharge. The plan shall consist of telephone numbers to comply with subrule 65.2(1) and a list of contractors, equipment, equipment technical support, and alternative manure storage or land application sites that can be used during inclement weather.

567—65.109(455B,459,459B) Construction certification. A confinement feeding operation that obtains a construction permit after March 20, 1996, shall submit to the department a construction certification according to the following:

65.109(1) For a confinement feeding operation that is below the threshold requirements for an engineer prior to using a permitted confinement feeding operation structure, the person responsible for constructing a formed manure storage structure or the permittee shall submit to the department a construction certification, as specified in the construction permit.

65.109(2) For a confinement feeding operation that uses an unformed manure storage structure or an egg washwater storage structure, or an operation that meets or exceeds the threshold requirements for an engineer, a certification from a licensed PE that the confinement feeding operation structure was:

a. Constructed in accordance with the design plan. Any changes to the approved plans must first be authorized by the department and must include a certification that the proposed changes are consistent with the standards of these rules or statute;

b. Supervised by the licensed PE or a designee of the PE during critical points of the construction. A designee shall not be the permittee, the owner of the confinement feeding operation, a direct employee of the permittee or owner, or the contractor or an employee of the contractor;

c. Inspected by the licensed PE after completion of construction and before commencement of operation; and

d. Constructed in accordance with the drainage tile removal standards of subrule 65.108(1) and including a report of the findings and actions taken to comply with subrule 65.108(1).

567—65.110(455B,459,459B) Manure management plan (MMP) requirements.

65.110(1) In accordance with Iowa Code section 459.312, the following persons are required to submit MMPs to the department, including an original MMP and an updated MMP, as required by this rule:

a. An applicant for a construction permit for a confinement feeding operation. However, an MMP shall not be required of an applicant for an egg washwater storage structure or for a SAFO.

b. The owner of a confinement feeding operation, other than a SAFO, if one of the following applies:

(1) The confinement feeding operation was constructed or expanded after May 31, 1985, regardless of whether the confinement feeding operation structure was required to have a construction permit.

(2) The owner constructs a manure storage structure, regardless of whether the person is required to be issued a permit for the construction pursuant to Iowa Code section 459.303 or whether the person has submitted a prior MMP. If the new manure storage structure does not result in an increase in manure volume for the confinement feeding operation and there is no change in animal category for determining animal units, then a new MMP is not required to be submitted.

c. A person who applies manure in Iowa that was produced in a confinement feeding operation, other than a small operation, located outside of Iowa.

d. A new owner of a confinement feeding operation may apply manure under the most recent owner's MMP until the new owner develops and submits an original MMP. The new owner must develop and submit an original MMP within 60 days after acquiring the operation.

e. Exceptions.

(1) A research college is exempt from this subrule and the MMP requirements of rule 567—65.111(455B,459,459B) for research activities and experiments performed under the authority of the research college and related to confinement feeding operations.

(2) An AFO otherwise required to submit an updated MMP and pay an annual compliance fee may make an election to be considered a SAFO for purposes of filing updated MMPs and annual compliance fees if the confinement feeding operation maintains an animal unit capacity of 500 or fewer animal units. The election shall automatically terminate when more than 500 animal units are housed at the confinement feeding operation at any one time. If the confinement feeding operation exceeds more than 500 animal units, an MMP shall be submitted.

65.110(2) The owner of a proposed confinement feeding operation who is not required to obtain a construction permit pursuant to subrule 65.103(1) but who is required to file an MMP pursuant to paragraph 65.110(1) "b" shall file a construction design statement and provide the information required in subrule 65.104(2), including the confinement feeding operation's MMP, to the department at least 30 days before the construction of an AFO structure begins, as defined in subrules 65.6(1) and 65.6(2).

65.110(3) Scope of MMP; updated plans; annual compliance fee.

a. Each confinement feeding operation required to submit an MMP shall be covered by a separate MMP.

b. The owner of a confinement feeding operation who is required to submit an MMP under this rule shall submit an updated MMP on an annual basis to the department. The updated MMP may be submitted by hard copy or by electronic submittal. The updated plan must reflect all amendments made during the period of time since the previous MMP submission.

(1) If the plan is submitted by hard copy, the submittal process shall be as follows: The owner of the AFO shall also submit the updated MMP on an annual basis to the board of supervisors of each county where the confinement feeding operation is located and to the board of supervisors of each county where manure from the confinement feeding operation is land-applied. If the owner of the AFO has not previously submitted an MMP to the board of supervisors of each county where the confinement feeding operation is located and each county where manure is land-applied, the owner must submit a complete MMP to each required county. The county auditor or other county official or employee designated by the county board of supervisors may accept the updated plan on behalf of the board. The updated plan shall include documentation that the county board of supervisors or other designated county official or employee received the MMP update.

(2) If the plan is submitted electronically, the submittal process shall be as follows: The owner of the AFO shall submit the updated MMP to the department through the department's electronic web application. Once the submittal has been completed, the department shall provide electronic access of the updated MMP to the board of supervisors of each county where the confinement feeding operation is located and each county where manure is land-applied.

(3) The department will stagger the dates by which the updated MMPs are due and will notify each confinement feeding operation owner of the date on which the updated MMP is due. To satisfy the requirements of an updated MMP, an owner of a confinement feeding operation must submit one of the following:

1. A complete MMP;

2. A department-approved document stating that the MMP submitted in the prior year has not changed; or

3. A department-approved document listing all the changes made since the previous MMP was submitted and approved.

c. An annual compliance fee of \$0.15 per animal unit at the AFO shall accompany an annual MMP update submitted to the department for approval. The annual compliance fee is based on the animal unit capacity of the confinement feeding operation stated in the updated annual MMP submission. If the person submitting the MMP is a contract producer, as provided in Iowa Code chapter 202, the active contractor shall pay the annual compliance fee.

65.110(4) The department shall review and approve or disapprove all complete MMPs within 60 days of the date they are received.

65.110(5) Manure shall not be removed from a manure storage structure which is part of a confinement feeding operation required to submit an MMP until the department has approved the plan. Manure shall be applied in compliance with rule 567—65.100(455B,459,459B).

65.110(6) Manure storage indemnity fee. All persons required to submit an MMP to the department shall also pay to the department an indemnity fee as required in Iowa Code section 459.503 except those operations constructed prior to May 31, 1995, which were not required to obtain a construction permit.

65.110(7) Filing fee. Any person submitting an original MMP must also pay to the department an MMP filing fee of \$250. This fee shall be included with each original MMP being submitted. If the confinement feeding operation is required to obtain a construction permit and to submit an original MMP as part of the construction permit requirements, the applicant must pay the MMP filing fee together with the construction permit application fee, which total \$500.

567—65.111(455B,459,459B) MMP content requirements. All MMPs are to be submitted on forms or electronically as prescribed by the department. The plans shall include all of the information specified in Iowa Code section 459.312 and as described below.

65.111(1) General.

a. A confinement feeding operation that is required to submit an MMP to the department shall not apply manure in excess of the nitrogen use levels necessary to obtain optimum crop yields. A confinement feeding operation shall not apply manure in excess of the rates determined in conjunction with the phosphorus index. Information to complete the required calculations may be obtained from the tables in this chapter, actual testing samples or from other credible sources reviewed and approved by the department including but not limited to Iowa State University, the United States Department of Agriculture (USDA), a licensed PE, or an individual certified as a crop consultant under the American Registry of Certified Professionals in Agronomy, Crops, and Soils program, the Certified Crop Advisors program, or the Registry of Environmental and Agricultural Professionals program.

b. MMPs shall include all of the following:

(1) The name of the owner and the name of the confinement feeding operation, including mailing address and telephone number.

(2) The name of the contact person for the confinement feeding operation, including mailing address and telephone number.

(3) The location of the confinement feeding operation identified by county, township, section, ¼ section and, if available, the 911 address.

(4) The animal unit capacity of the confinement feeding operation and, if applicable, the animal weight capacity.

c. A person who submits an MMP shall include a phosphorus index as part of the MMP as required in subrule 65.111(12).

d. A new owner of a confinement feeding operation may apply manure under the most recent owner's MMP until the new owner develops and submits an original MMP. The new owner must develop and submit an original MMP within 60 days after acquiring the confinement feeding operation.

e. A research college is exempt from this subrule for research activities and experiments performed under the authority of the research college and related to confinement feeding operations.

65.111(2) MMP contents. Confinement feeding operations that will not sell all of their manure shall submit the following for that portion of the manure which will not be sold:

a. The name of the owner and the name of the confinement feeding operation, including mailing address and telephone number.

b. The name of the contact person for the confinement feeding operation, including mailing address and telephone number.

c. The location of the confinement feeding operation identified by county, township, section, $\frac{1}{4}$ section and, if available, the 911 address.

d. An estimate of the nitrogen and phosphorus concentration of the manure and estimate of annual manure production.

e. Application rate calculations based on regulations in subrule 65.111(12).

f. The location of manure application.

g. Soil loss calculations using methods specified for Iowa phosphorus index.

h. A phosphorus index of each field in the MMP, as defined in paragraph 65.111(12)“a,” including the factors used in the calculation. A copy of the NRCS phosphorus index detailed report shall satisfy the requirement to include the factors used in the calculation.

65.111(3) Estimate of manure concentration and production. An MMP must include an estimate of nitrogen and phosphorus concentration and an estimate of annual manure production by one of the following methods.

a. Table values in Table 4 located at iowadnr.gov/afo/rules or other credible sources.

b. Actual concentration and production values from the operation or a similar operation. If an actual sample is used to represent the nutrient content of manure, the sample shall be taken in accordance with Iowa State University Extension and Outreach publication AE 3550, “How to Sample Manure for Nutrient Analysis.” The department may require documentation of the manure sampling protocol or take a split sample to verify the nutrient content of the operation’s manure. If actual nitrogen and phosphorus are used for concentration in the MMP, actual manure production must also be used. Any sample used to estimate the concentration of manure must be less than four years old.

65.111(4) Optimum crop yield and crop schedule.

a. To determine the optimum crop yield, the applicant may either exclude the lowest crop yield for the period of the crop schedule in the determination or allow for a crop yield increase of 10 percent. In using these methods, adjustment to update yield averages to current yield levels may be made if it can be shown that the available yield data is not representative of current yields. The optimum crop yield shall be determined using any of the following methods for the cropland where the manure is to be applied:

(1) Soil survey interpretation record. The plan shall include a map showing soil map units for the fields where manure will be applied. The optimum crop yield for each field shall be determined by using the weighted average of the soil interpretation record yields for the soils on the cropland where the manure is to be applied. Soil interpretation records from NRCS shall be used to determine yields based on soil map units.

(2) USDA county crop yields. The plan shall use the county yield data from the USDA Iowa Agricultural Statistics Service.

(3) Proven yield methods. Proven yield methods may only be used if a minimum of the most recent three years of yield data for the crop is used. These yields can be proven on a field-by-field or farm-by-farm basis. To be considered a farm-by-farm basis, the fields must be owned, rented or leased for crop production by the person required to keep records pursuant to subrule 65.111(8) or included in a manure application agreement in that person’s MMP. Crop disaster years may be excluded when there is a 30 percent or more reduction in yield for a particular field or farm from the average yield over the most recent five years. Excluded years shall be replaced by the most recent nondisaster years. Proven yield data used to determine application rates shall be maintained with the current MMP. Any of the following proven yield methods may be used:

1. Proven yields for USDA Farm Service Agency. The plan shall use proven yield data or verified yield data for Farm Service Agency programs.

2. Proven yields for multiperil crop insurance. Yields established for the purpose of purchasing multiperil crop insurance shall be used as proven yield data.

3. Proven yields from other methods. The plan shall use the proven yield data and indicate the method used in determining the proven yield.

b. Crop schedule. Crop schedules shall include the name and total acres of the planned crop on a field-by-field or farm-by-farm basis where manure application will be made. A map may be used to indicate crop schedules by field or farm. The planned crop schedule shall name the crop(s) planned to be grown for the length of the crop rotation beginning with the crop planned or actually grown during the year this plan is submitted or the first year manure will be applied. The confinement feeding operation owner shall not be penalized for exceeding the nitrogen or phosphorus application rate for an unplanned crop if crop schedules are altered because of weather, farm program changes, market factor changes, or other unforeseeable circumstances. However, the penalty preclusion in the previous sentence does not apply to a confinement feeding operation owner subject to the NPDES permit program.

65.111(5) Location of manure application.

a. The MMP shall identify each field where the manure will be applied, the number of acres that will be available for the application of manure from the confinement feeding operation, and the basis under which the land is available.

b. A copy of each written agreement executed with the owner of the land where manure will be applied shall be maintained with the current MMP. The written agreement shall indicate the number of acres on which manure from the confinement feeding operation may be applied and the length of the agreement. A written agreement is not required if the land is owned or rented for crop production by the owner of the confinement feeding operation. Owners of dry bedded confinement feeding operations required to have an MMP may execute a written agreement with the landowner or the person renting the land for crop production where the dry bedded manure will be applied.

65.111(6) Soil loss calculations for phosphorus index. The MMP shall indicate for each field in the plan the crop rotation, tillage practices and supporting practices used to calculate sheet and rill erosion for the phosphorus index. A copy of an NRCS RUSLE2 erosion calculation record shall satisfy this requirement. The plan shall also identify the highly erodible cropland where manure will be applied.

65.111(7) Current MMP. The owner of a confinement feeding operation who is required to submit an MMP shall maintain a current MMP at the site of the confinement feeding operation or at a residence or office of the owner or operator of the operation within 30 miles of the site. The MMP may be an electronic or hard copy. The MMP should include completed manure sales forms if the manure is sold. If manure management practices change, a person required to submit an MMP shall make appropriate changes consistent with this chapter. If values other than the standard table values are used for MMP calculations, the source of the values used shall be identified.

65.111(8) Recordkeeping. Records shall be maintained by the owner of a confinement feeding operation who is required to submit an MMP. Records shall be maintained for five years following the year of application or for the length of the crop rotation, whichever is greater. Records shall be maintained at the site of the confinement feeding operation or at a residence or office of the owner or operator of the facility within 30 miles of the site. Electronic records are acceptable in lieu of paper records at the facility or the office. Records to demonstrate compliance with the MMP shall include the following:

a. Factors used to calculate the manure application rate:

(1) Optimum yield for the planned crop.

(2) Types of nitrogen credits and amounts.

(3) Remaining crop nitrogen needed.

(4) Nitrogen and phosphorus concentration and first-year nitrogen availability of the manure. If an actual sample is used, documentation shall be provided.

b. If phosphorus-based application rates are used, the following shall be included:

(1) Crop rotation.

- (2) Phosphorus removed by crop harvest of that crop rotation.
- c. Maximum allowable manure application rate.
- d. Actual manure application information:
 - (1) Methods of application when manure from the confinement feeding operation was applied.
 - (2) Date(s) when the manure from the confinement feeding operation was applied.
 - (3) Location of the field where the manure from the confinement feeding operation was applied, including the number of acres.
 - (4) The manure application rate.
- e. The date(s) and application rate(s) of commercial nitrogen and phosphorus on fields that received manure. However, if the date and application rate information is for fields that are not owned for crop production or that are not rented or leased for crop production by the person required to keep records pursuant to this subrule, an enforcement action for noncompliance with an MMP or the requirements of this subrule shall not be pursued against the person required to keep records pursuant to this subrule or against any other person who relied on the date and application rate in records required to be kept pursuant to this subrule, unless that person knew or should have known that nitrogen or phosphorus would be applied in excess of maximum levels set forth in paragraph 65.111(1)“a.” If manure is applied to fields not owned, rented or leased for crop production by the person required to keep records pursuant to this subrule, that person shall obtain from the person who owns, rents or leases those fields a statement specifying the planned commercial nitrogen and phosphorus fertilizer rates to be applied to each field receiving the manure.
- f. A copy of the current soil test lab results for each field in the MMP.
- g. For sales of manure under paragraph 65.111(15)“b,” recordkeeping requirements of subparagraph 65.111(15)“b”(7) shall be followed.
- h. The name and certification number of the certified manure applicator.

65.111(9) Record inspection. The department may inspect a confinement feeding operation at any time during normal working hours and may inspect the MMP and any records required to be maintained. As required in Iowa Code section 459.312(12), Iowa Code chapter 22 shall not apply to the records which shall be kept confidential by the department and its agents and employees. The contents of the records are not subject to disclosure except as follows:

- a. Upon waiver by the owner of the confinement feeding operation.
- b. In an action or administrative proceeding commenced under this chapter. Any hearing related to the action or proceeding shall be closed.
- c. When required by subpoena or court order.

65.111(10) Enforcement action. An owner required to provide the department an MMP pursuant to this rule who fails to provide the department an MMP or who is found in violation of the terms and conditions of the MMP shall not be subject to an enforcement action other than assessment of a civil penalty pursuant to Iowa Code section 455B.191.

65.111(11) Soil sampling requirements for fields where the phosphorus index must be used. Soil samples shall be obtained from each field in the MMP, and the soil samples shall be four years old or less. Each soil sample shall be analyzed for phosphorus and pH. The soil sampling protocol shall meet all of the following requirements:

- a. Acceptable soil sampling strategies include but are not limited to grid sampling, management zone sampling, and soil type sampling. Procedural details can be taken from Iowa State University Extension and Outreach publication CROP 31-8, “Take a Good Soil Sample to Help Make Good Fertilization Decisions,” NCR-13 Report 348, “Soil Sampling for Variable-Rate Fertilizer and Lime Application,” effective January 1, 2001, or other credible soil sampling publications.
- b. Each soil sample must be a composite of at least ten soil cores from the sampling area, with each core containing soil from the top six inches of the soil profile.
- c. Each soil sample shall represent no more than ten acres. For fields less than or equal to 15 acres, only one soil sample is necessary.
- d. Soil analysis must be performed by a lab enrolled in the Iowa department of agriculture and land stewardship (IDALS) soil testing certification program.

e. The soil phosphorus test method must be an appropriate method for use with the phosphorus index. If soil pH is greater than or equal to 7.4, soil phosphorus data from the Bray-1 extraction method is not acceptable for use with the phosphorus index.

f. If manure is applied as phosphorus-based rates within soil sampling periods, each soil sample may represent up to 20 acres for the next required soil sampling.

65.111(12) Use of the phosphorus index. Manure application rates shall be determined in conjunction with the use of the Iowa Phosphorus Index as specified by NRCS Iowa Technical Note No. 25 Iowa Phosphorus Index.

a. When sheet and rill erosion is calculated for the Iowa Phosphorus Index, the soil map unit used for the calculation shall be the predominant soil map unit of the steepest slope class that comprises at least 10 percent of the total field area. For fields less than 25 acres in size, the predominant soil map unit of the steepest slope class that comprises at least 20 percent of the total field area shall be used. In all MMPs submitted to the department for approval, the soil map unit used for the sheet and rill erosion calculation will be consistent with NRCS Iowa Agronomy Technical Note No. 29 Dominant Critical Area. For the calculations of ephemeral gullies, the provisions of NRCS Iowa Technical Note No. 25 Iowa Phosphorus Index with in-field measurement or estimates from review of at least four aerial photographs shall be used. If aerial photographs are used for the evaluation, aerial photography from the spring prior to crop canopy or fall after harvest must be included in the evaluation when available.

b. When sheet and rill erosion is calculated for the phosphorus index, the soil map unit used for the calculation shall be the predominant highly erodible soil map unit when planning for a highly erodible field and the predominant non-highly erodible soil map unit when planning for a non-highly erodible field. For the calculations of ephemeral gullies, the provisions of NRCS Iowa Technical Note No. 25 Iowa Phosphorus Index shall be used with: (1) supporting documents and spreadsheets or (2) aerial photographs from at least four separate years, with at least one of the photographs being from the most vulnerable time of the year.

c. The average (arithmetic mean) soil phosphorus concentration of a field shall be used in the phosphorus index.

d. Soil phosphorus concentration data is considered valid for use in the phosphorus index if the data is four years old or less and meets the requirements of subrule 65.111(11).

e. For an original MMP, previous soil sampling data that does not meet the requirements of subrule 65.111(11) may be used in the phosphorus index if the data is four years old or less. In the case of fields for which soil sampling data is used that does not meet the requirements of subrule 65.111(11), the fields must be soil-sampled according to the requirements of subrule 65.111(11) no more than one year after the original MMP is approved and an updated original MMP shall be submitted with the results of the new samples at the time of the next MMP update.

f. The following are the manure application rate requirements for fields that are assigned the phosphorus index site vulnerability ratings below as determined by the NRCS Iowa Technical Note No. 25 Iowa Phosphorus Index to the NRCS 590 standard rounded to the nearest one-hundredth:

(1) Very Low or Low (0-2). Manure shall not be applied in excess of a nitrogen-based rate in accordance with subrule 65.111(13).

(2) Medium (>2-5). Manure shall not be applied (1) in excess of two times the phosphorus removed with crop harvest over the period of the crop rotation or (2) to exceed the nitrogen-based rate of the planned crop receiving the particular manure application.

(3) High or Very High (>5). Manure shall not be applied on a field with a rating greater than 5.

g. Additional commercial fertilizer may be applied as follows on fields receiving manure:

(1) Phosphorus fertilizer may be applied in addition to phosphorus provided by the manure up to amounts recommended by soil tests and Iowa State University Extension and Outreach publication PM 1688, "A General Guide for Crop Nutrient and Limestone Recommendations in Iowa."

(2) Nitrogen fertilizer may be applied in addition to nitrogen provided by the manure to meet the remaining nitrogen need of the crop as calculated in the current MMP. Additional nitrogen fertilizer may be applied up to the amounts indicated by soil test nitrogen results or crop nitrogen test results as necessary to obtain the optimum crop yield.

h. Updating the phosphorus index.

(1) When any inputs to the phosphorus index change, an operation shall recalculate the phosphorus index and adjust the application rates if necessary.

(2) If additional land becomes available for manure application, the phosphorus index shall be calculated to determine the manure application rate before manure is applied.

(3) An operation must submit a complete MMP using a new phosphorus index, including soil sampling as required in subrule 65.111(11), for each field in the MMP a minimum of once every four years.

65.111(13) Requirements for application of a nitrogen-based manure rate to a field.

a. Nitrogen-based application rates shall be based on the total nitrogen content of the manure unless the calculations are submitted to show that nitrogen crop usage rates based on plant-available nitrogen have not been exceeded for the crop schedule submitted.

b. The correction factor for nitrogen losses shall be determined for the method of application by the following or from other credible sources for nitrogen volatilization correction factors.

Knifed in or soil injection of liquids	0.98
Surface-apply liquid or dry with incorporation within 24 hours	0.95
Surface-apply liquid or dry with incorporation after 24 hours	0.80
Surface-apply liquids with no incorporation	0.75
Surface-apply dry with no incorporation	0.70
Irrigated liquids with no incorporation	0.60

c. Nitrogen-based applications rates shall be based on the optimum crop yields as determined in subrule 65.111(4) and crop nitrogen usage rate factor values in Table 4 located at iowadnr.gov/afo/rules or other credible sources. The calculations of manure applied from the facility must account for fertilizer from all other manure and nonmanure sources. Liquid manure applied to land that is currently planted to soybeans or to land where the current crop has been harvested and that will be planted to soybeans the next crop season shall not exceed 100 pounds of available nitrogen per acre. Further, the 100-pounds-per-acre application limitation in the previous sentence does not apply on or after June 1 of each year; in that event, subrule 65.111(4) and Table 4 would apply as provided in the first sentence of this paragraph.

d. A nitrogen-based manure rate shall account for legume production in the year prior to growing corn or other grass crops and shall account for any planned commercial fertilizer application.

65.111(14) Requirements for application of a phosphorus-based manure rate to a field.

a. Phosphorus removal by harvest for each crop in the crop schedule shall be determined using the optimum crop yield as determined in subrule 65.111(4) and phosphorus removal rates of the harvested crop from Table 4a located at iowadnr.gov/afo/rules or other credible sources. Phosphorus crop removal shall be determined by multiplying optimum crop yield by the phosphorus removal rate of the harvested crop.

b. Phosphorus removal by the crop schedule shall be determined by summing the phosphorus crop removal values determined in paragraph 65.111(14) “*a*” for each crop in the crop schedule.

c. The phosphorus applied over the duration of the crop schedule shall be less than or equal to the phosphorus removed with harvest during that crop schedule as calculated in paragraph 65.111(14) “*b*” unless additional phosphorus is recommended by soil tests and Iowa State University Extension and Outreach publication PM 1688, “A General Guide for Crop Nutrient and Limestone Recommendations in Iowa.”

d. Additional requirements for phosphorus-based rates.

(1) No single manure application shall exceed the nitrogen-based rate of the planned crop receiving the particular manure application.

(2) No single manure application shall exceed the rate that applies to the expected amount of phosphorus removed with harvest by the next four anticipated crops in the crop schedule.

e. If the actual crop schedule differs from the planned crop schedule, then any surplus or deficit of phosphorus shall be accounted for in the subsequent manure application.

f. Phosphorus in manure should be considered 100 percent available unless soil phosphorus concentrations are below optimum levels for crop production. If soil phosphorus concentrations are below optimum levels for crop production phosphorus availability, values suggested in Iowa State University Extension and Outreach publication PMR 1003, "Using Manure Nutrients for Crop Production" or other credible sources shall be used.

65.111(15) MMPs for sales of manure. Selling manure means the transfer of ownership of the manure for monetary or other valuable consideration. Selling manure does not include a transaction where the consideration is the value of the manure or where an easement, lease or other agreement granting the right to use the land only for manure application is executed.

a. Confinement feeding operations that will sell dry manure as a commercial fertilizer or soil conditioner regulated by IDALS under Iowa Code chapter 200 or bulk dry manure animal nutrient product regulated by IDALS under Iowa Code chapter 200A shall submit a copy of their site-specific IDALS license or documentation that manure will be sold pursuant to Iowa Code chapter 200 or 200A, along with the department-approved MMP form for sales of dry manure. Operations completely covered by this paragraph are not required to meet other MMP requirements in this rule.

b. A confinement feeding operation not fully covered by paragraph 65.111(15)"a" that has an established practice of selling manure, or a confinement feeding operation that contains an animal species for which selling manure is a common practice, shall submit an MMP that includes the following:

(1) An estimate of the number of acres required for manure application calculated by one of the following methods:

1. Dividing the total phosphorus (as P₂O₅) available to be applied from the confinement feeding operation by the corn crop removal of phosphorus. The corn crop removal of phosphorus may be estimated by using the phosphorus removal rate in Table 4a located at iowadnr.gov/afo/rules and an estimate of the optimum crop yield for the property in the vicinity of the operation.

2. Totaling the quantity of manure that can be applied to each available field based on application rates determined in conjunction with the phosphorus index in accordance with subrule 65.111(12), and ensuring that the total quantity that can be applied is equal to or exceeds the manure annually generated at the operation.

(2) The total nitrogen available to be applied from the confinement feeding operation.

(3) The total phosphorus (as P₂O₅) available to be applied from the confinement feeding operation if the phosphorus index is required in accordance with paragraph 65.111(1)"c."

(4) An estimate of the annual animal production and manure volume or weight produced.

(5) A manure sales form. If manure will be sold, the manure sales form shall include the following information:

1. A place for the name and address of the buyer of the manure.

2. A place for the quantity of manure purchased.

3. The planned crop schedule and optimum crop yields.

4. A place for the manure application methods and the timing of manure application.

5. A place for the location of the field, including the number of acres where the manure will be applied.

6. A place for the manure application rate.

7. A place for a phosphorus index of each field receiving manure, as defined in paragraph 65.111(12)"a," including the factors used in the calculation. A copy of the NRCS phosphorus index detailed report shall satisfy the requirement to include the factors used in the calculation.

(6) Statements of intent if the manure will be sold. The number of acres indicated in the statements of intent shall be sufficient according to the MMP to apply the manure from the confinement feeding operation. The permit holder for an existing confinement feeding operation with a construction permit may submit past records of manure sales instead of statements of intent. The statements of intent shall include the following information:

1. The name and address of the person signing the statement.

2. A statement indicating the intent of the person to purchase the confinement feeding operation's manure.

3. The location of the farm where the manure can be applied, including the total number of acres available for manure application.

4. The signature of the person who may purchase the confinement feeding operation's manure.

(7) The owner shall maintain in the owner's records a current MMP and copies of all of the manure sales forms, the sales forms must be completed and signed by each buyer of the manure and the applicant, and the copies must be maintained in the owner's records for three years after each sale. The owner shall maintain in the owner's records copies of all of the manure sales forms for five years after each sale. An owner of a confinement feeding operation shall not be required to maintain current statements of intent as part of the MMP.

567—65.112(455B,459,459B) Manure applicators certification.

65.112(1) Certification. A commercial manure service or a commercial manure service representative shall not transport, handle, store or apply dry or liquid manure to land unless the person is certified. A confinement site manure applicator shall not apply dry or liquid manure to land unless the person is certified. A person is not required to be certified as a confinement site manure applicator if the person applies manure that originates from a manure storage structure that is part of a SAFO. Certification of a commercial manure service representative under this rule will also satisfy the commercial license requirement under 567—Chapter 68 only as it applies to manure removal and application. Each person who operates a manure applying vehicle or equipment must be certified individually except as allowed in subrule 65.112(7).

65.112(2) Fees.

a. Commercial manure service. The fee for a new or renewed certification of a service is \$200. The commercial manure service shall designate one manager for the service and shall provide the department with documentation of the designation.

b. Commercial manure service representative. The fee for a new or renewed representative certification is \$75. The manager of a commercial manure service must be certified as a commercial manure service representative but is exempt from paying the \$75 certification fee.

c. Confinement site manure applicator. The fee for a new or renewed certification is \$100. However, the fee is not required if all of the following apply:

(1) The person indicates that the person is a family member as defined in this chapter by submitting a completed form provided by the department;

(2) The person is certified as a confinement site manure applicator within one year of the date another family member was certified or whose certification as a confinement site manure applicator was renewed;

(3) The other family member certified as a confinement site manure applicator has paid the certification fee.

d. Educational fee. Commercial manure service representatives, managers and confinement site manure applicators shall pay an educational fee to be determined annually by the department.

e. Late fee. Renewal applications received after March 1 require that an additional \$12.50 fee be paid before the certification is renewed. An application is considered to be received on the date it is postmarked.

f. Duplicate certificate. The fee for a duplicate certificate is \$15.

65.112(3) Certification requirements. To be certified by the department as a commercial manure service, a commercial manure service representative or a confinement site manure applicator, a person must do all of the following:

a. Apply for certification on a form provided by the department.

b. Pay the required fees set forth in subrule 65.112(2).

c. Pass the examination given by the department or, in lieu of the examination, attend continuing instruction courses as described in subrule 65.112(6).

65.112(4) Certification term, renewal and grace period.

a. Certification term. Certification for a commercial manure service and commercial manure service representative shall be for a period of one year and shall expire on March 1 of each year. Certification for a confinement site manure applicator shall be for a period of three years and shall expire on December 31 of the third year.

b. Renewal. Application for renewal of a commercial manure service certification or a commercial manure service representative certification must be received by the department no later than March 1 of the year the certification expires. Application for renewal of a confinement site manure applicator certification must be received by the department or postmarked no later than March 1 after the year the certification expires. Application shall be on forms provided by the department and shall include:

(1) Certification renewal and educational fees.

(2) A passing grade on the certification examination or proof of attending the required hours of continuing instructional courses.

c. Substitution of employees. If a commercial manure service pays the certification fee for a representative, the service may substitute representatives. The substituted representative must be certified pursuant to subrule 65.112(3). The service shall provide documentation to the department, on forms provided by the department, that the substitution is valid.

d. Grace period. Except as provided in this paragraph, a commercial manure service, a commercial manure service representative or a confinement site manure applicator may not continue to apply manure after expiration of a certificate. A confinement site manure applicator may continue to apply manure until March 1 following the year the certification expires, provided a complete renewal application, as provided in paragraph 65.112(4)“b,” is postmarked or received by the department prior to March 1. Commercial manure services and representatives must submit an application for certification renewal by March 1 of each year.

65.112(5) Examinations.

a. A person wishing to take the examination required to become a certified commercial manure service representative or certified confinement site manure applicator may request an appointment. The applicant must have a photo identification card at the time of taking the examination.

b. If a person fails the examination, the person may retake the examination but not on the same business day.

c. Upon written request by an applicant, the director will consider the presentation of an oral examination on an individual basis when the applicant has failed the written examination at least twice and the applicant has shown difficulty in reading or understanding written questions but may be able to respond to oral questioning.

65.112(6) Continuing instruction courses in lieu of examination.

a. To establish or maintain certification, between March 1 and March 1 of the next year, a commercial manure service representative must each year either pass an examination or attend three hours of continuing instructional courses.

b. To establish or maintain certification, a confinement site manure applicator must either pass an examination every three years or attend two hours of continuing instructional courses each year. A confinement site manure applicator who chooses to attend instructional courses but fails to attend instructional courses each year must pass an examination as provided in subrule 65.112(5) to maintain certification.

65.112(7) Exemption from certification.

a. Certification as a commercial manure service representative is not required of a person who is any of the following:

(1) Actively engaged in farming and who trades work with another such person.

(2) Employed by a person actively engaged in farming not solely as a manure applicator but who applies manure as an incidental part of the person’s general duties.

(3) Engaged in applying manure as an incidental part of a custom farming operation.

(4) Engaged in applying manure as an incidental part of the person’s duties.

(5) Applying, transporting, handling or storing manure within a period of 30 days from the date of initial employment as a commercial manure service representative if the person applying the manure

is acting under direct instructions and control of a certified commercial manure service representative who is physically present at the manure application site by being in sight or immediate communication distance of the supervised person where the certified commercial service representative can communicate with the supervised person at all times. If the prospective employee was previously certified for a commercial manure service, the 30-day exemption does not apply.

(6) Employed by a research college to apply manure from AFOs that are part of the research activities or experiments of the research college.

b. Certification as a confinement site manure applicator is not required of a person who is either of the following:

(1) A part-time employee or family member of a confinement site manure applicator and is acting under direct instruction and control of a certified confinement site manure applicator who is physically present at the manure application site by being in sight or hearing distance of the supervised person where the certified confinement site manure applicator can physically observe and communicate with the supervised person at all times.

(2) Employed by a research college to apply manure from an AFO that is part of the research activities or experiments of the research college.

65.112(8) *Obligations.* Certified commercial manure services have the following obligations:

a. Maintain the following records of manure disposal operations for a period of three years:

(1) A copy of instructions for manure application provided by the owner of the AFO.

(2) Dates that manure was applied or sold.

(3) The manure application rate.

(4) Location of fields where manure was applied.

b. Comply with the provisions of the MMP prepared for the confinement feeding operation and the requirements of rules 567—65.100(455B,459,459B) and 567—65.101(455B,459,459B). If an MMP does not exist, the requirements of rules 567—65.100(455B,459,459B) and 567—65.101(455B,459,459B) must still be met.

c. Any tanks or equipment used for hauling manure shall not be used for hauling hazardous or toxic wastes, as defined in 567—Chapter 131, or other wastes detrimental to land application and shall not be used in a manner that would contaminate a potable water supply or endanger the food chain or public health.

d. Pumps and associated piping on manure handling equipment shall be installed with watertight connections to prevent leakage.

e. Any vehicle used by a certified commercial manure service or commercial manure service representative to transport manure on a public road shall display the certification number of the commercial manure service with three-inch or larger letters and numbers on the side of the tank or vehicle. The name and address of the certified commercial manure service representative designated as the manager shall also be prominently displayed on the side of the tank or vehicle.

f. Direct connection shall not be made between a potable water source and the tank or equipment on the vehicle.

65.112(9) *Discipline of certified applicators.*

a. Disciplinary action may be taken against a certified commercial manure service, a commercial manure service representative or a confinement site manure applicator on any of the following grounds:

(1) Violation of state law or rules applicable to a certified commercial manure service, a commercial manure service representative, or a confinement site manure applicator or the handling or application of manure.

(2) Failure to maintain required records of manure application or other reports required by this rule.

(3) 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.

b. Disciplinary sanctions allowable are:

(1) Revocation of a certificate.

(2) Probation under specified conditions relevant to the specific grounds for disciplinary action. Additional training or reexamination may be required as a condition of probation.

c. The procedure for discipline is as follows:

(1) The director shall initiate disciplinary action.

(2) Written notice shall be given to an applicator against whom disciplinary action is being considered. The notice shall state the informal and formal procedures available for determining the matter. The applicator shall be given 20 days to present any relevant facts and indicate the person's position in the matter and to indicate whether informal resolution of the matter may be reached.

(3) An applicator who receives notice shall communicate verbally or in writing or in person with the director, and efforts shall be made to clarify the respective positions of the applicator and director.

(4) Failure to communicate facts and position relevant to the matter by the required date may be considered when determining appropriate disciplinary action.

(5) If agreement as to appropriate disciplinary sanction, if any, can be reached with the applicator and the director, a written stipulation and settlement between the department and the applicator shall be entered. The stipulation and settlement shall recite the basic facts and violations alleged, any facts brought forth by the applicator, and the reasons for the particular sanctions imposed.

(6) If an agreement as to appropriate disciplinary action, if any, cannot be reached, the director may initiate formal hearing procedures. Notice and formal hearing shall be in accordance with 561—Chapter 7 related to contested and certain other cases pertaining to license discipline.

65.112(10) *Revocation of certificates.*

a. Upon revocation of a certificate, application for commercial manure service representative or confinement site applicator certification may be allowed after two years from the date of revocation. Any such applicant must successfully complete an examination and be certified in the same manner as a new applicant.

b. Upon revocation of a certificate, application for a commercial manure service certification may be allowed after three years from the date of revocation. Any such applicant must successfully complete an examination and be certified in the same manner as a new applicant.

65.112(11) *Record inspection.* The department may inspect, with reasonable notice, the records maintained by a commercial manure service. If the records are for an operation required to maintain records to demonstrate compliance with an MMP, the confidentiality provisions of subrule 65.111(9) and Iowa Code section 459.312 shall extend to the records maintained by the commercial manure service.

567—65.113(455B,459,459B) Livestock remediation fund. The livestock remediation fund created in Iowa Code section 459.501 will be administered by the department. Moneys in the fund shall be used for the exclusive purpose of administration of the fund and the cleanup of eligible facilities at confinement feeding operation sites.

65.113(1) *Eligible facility site.* The site of a confinement feeding operation that contains one or more AFO structures is an eligible site for reimbursement of cleanup costs if one of the following conditions exists:

a. A county has acquired title to real estate containing the confinement feeding operation following nonpayment of taxes and the site includes a manure storage structure that contains stored manure or site contamination originating from the confinement feeding operation.

b. A county or the department determines that the confinement feeding operation has caused a clear, present and impending danger to the public health or environment.

65.113(2) *Site cleanup.* Site cleanup includes the removal and land application or disposal of manure from an eligible facility site according to manure management procedures approved by the department. Cleanup may include remediation of documented contamination that originates from the confinement feeding operation. Cleanup may also include demolishing and disposing of AFO structures if their existence or further use would contribute to further environmental contamination and their removal is included in a cleanup plan approved by the department. Buildings and equipment must be demolished or disposed of according to rules adopted by the department in 567—Chapter 101 that apply to the disposal of farm buildings or equipment by an individual or business organization.

65.113(3) Claims against the fund. Claims for cleanup costs may be made by a county that has acquired real estate containing an eligible facility site pursuant to a tax deed. A county claim shall be signed by the chairperson of the county board of supervisors. Cleanup may be initiated by the department or may be authorized by the department based on a claim by a county.

a. Advance notice of claim. Prior to or after acquiring a tax deed to an eligible facility site, a county shall notify the department in writing of the existence of the facility and the title acquisition. The county shall request in this notice that the department evaluate the site to determine whether the department will order or initiate cleanup pursuant to its authority under Iowa Code chapter 455B.

b. Emergency cleanup condition. If a county determines that there exists at a confinement feeding operation site a clear, present and impending danger to the public health or environment, the county shall notify the department of the condition. The danger should be documented as to its presence and the necessity to avoid delay due to its increasing threat. If no cleanup action is initiated by the department within 24 hours after being notified of an emergency condition requiring cleanup, the county may provide cleanup and submit a claim against the fund.

65.113(4) Contents of a claim against the fund.

a. A county claim against the fund for an eligible site acquired by a county following nonpayment of taxes shall be submitted to the department for approval prior to the cleanup action and shall contain the following information:

(1) A copy of the advance notice of claim as described in paragraph 65.113(3)“a.”

(2) A copy of a bid by a qualified person, other than a governmental entity, to perform a site cleanup. The bid shall include a summary of the qualifications of the bidder including but not limited to prior experience in removal of hazardous substances or manure, experience in construction of confinement feeding operation facilities or manure storage structures, equipment available for conducting the cleanup, or any other qualifications bearing on the ability of the bidder to remove manure from a site. The bid must reference complying with a cleanup plan. The bid shall include a certification that the bidder has liability insurance in an amount not less than \$1 million.

(3) A copy of the tax deed to the real estate containing the eligible facility site.

(4) Name and address, if known, of the former owner(s) of the site. The claim shall also include a description of any efforts to contact the former owner regarding the removal of manure and any other necessary cleanup at the site.

(5) A response to the request in the advance notice described in paragraph 65.113(3)“a” that the department will not initiate cleanup action at the site, or that 60 days have passed from the advance notice and request.

(6) A proposed cleanup plan describing all necessary activity including manure to be removed, application rates and sites, any planned remediation of site contamination, and any structure demolition and justification.

b. A county claim against the fund for an emergency cleanup condition may be submitted following the cleanup and shall contain the following information:

(1) A copy of a bid as described in subparagraph 65.113(4)“a”(2).

(2) Name and address of the owner(s), or former owner(s), of the site or any other person who may be liable for causing the condition.

(3) Information on the response from the department to the notice given as described in paragraph 65.113(3)“b,” or, if none was received, documentation of the time notice was given to the department.

(4) A cleanup plan or description of the cleanup activities performed.

65.113(5) Department processing of claims against the fund.

a. Processing of claims. The department will process claims in the order they are received.

b. The cleanup plan will be reviewed for acceptability to accomplish necessary actions according to subrule 65.113(2).

c. Review of bid. Upon receipt of a claim, the department will review the bid accompanying the claim. The department may consult with any person in reviewing the bid. Consideration will be given to the experience of the bidder, the bid amount, and the work required to perform the cleanup plan. If the department is satisfied that the bidder is qualified to perform the cleanup and costs are reasonable,

the department will provide written approval to the county within 60 days from the date of receipt of the claim.

d. Obtaining a lower bid. If the department determines that it should seek a lower bid to perform the cleanup, it may obtain the names of qualified persons who may be eligible to perform the cleanup. One or more of those persons will be contacted and invited to view the site and submit a bid for the cleanup. If a lower bid is not received, the original bid may be accepted. If a bid is lower than the original bid submitted by the county, the department will notify the county that it should proceed to contract with that bidder to perform the cleanup.

65.113(6) Certificate of completion. Upon completion of the cleanup, the county shall submit a certificate of completion to the department. The certificate of completion shall indicate that the manure has been properly land-applied according to the cleanup plan and that any site contamination identified in the approved cleanup plan has been remediated and any approved structure demolition has been performed.

65.113(7) Payment of claims. Upon receipt of the certificate of completion, the department shall promptly authorize payment of the claim as previously approved. Payments will be made for claims in the order of receipt of certificates of completion.

65.113(8) Subrogation. The fund is subrogated to all county rights regarding any claim submitted or paid as provided in Iowa Code section 459.505.

567—65.114(455B,459,459B) Validity of rules. If any part of these rules is 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, and to that end, these rules are declared to be severable.

567—65.115 to 65.199 Reserved.

DIVISION III
OPEN FEEDLOT OPERATIONS

567—65.200(455B,459A) Minimum open feedlot effluent control requirements. An open feedlot operation shall provide for the management of manure, process wastewater, settled open feedlot effluent, settleable solids, scraped solids, and open feedlot effluent by using an open feedlot control method as provided in subrules 65.200(1) through 65.200(8). A release shall be reported to the department as provided in subrule 65.2(1).

65.200(1) All settleable solids from open feedlot effluent shall be removed prior to discharge into a water of the state.

a. The settleable solids shall be removed by use of a solids settling facility. The construction of a solids settling facility is not required where existing site conditions provide for removal of settleable solids prior to discharge into a water of the state.

b. The removal of settleable solids shall be deemed to have occurred when the velocity of flow of the open feedlot effluent has been reduced to less than one-half foot per second for a minimum of five minutes. A solids settling facility shall have sufficient capacity to store settleable solids between periods of land application and to provide required flow-velocity reduction for open feedlot effluent flow volumes resulting from a precipitation event of less intensity than a ten-year, one-hour frequency event. A solids settling facility that receives open feedlot effluent shall provide a minimum of one square foot of surface area for each eight cubic feet of open feedlot effluent per hour resulting from a ten-year, one-hour frequency precipitation event.

65.200(2) This subrule shall apply to an open feedlot operation which has obtained an NPDES permit pursuant to rule 567—65.3(455B,459,459A,459B) or 567—65.201(455B,459A).

a. An open feedlot operation may discharge manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent into any waters of the United States due to a precipitation event, if the open feedlot operation is designed, constructed, operated, and maintained to comply with the requirements of subrule 62.4(12) and 40 CFR Part 412.

b. If the open feedlot operation is designed, constructed, and operated in accordance with the requirements of subrule 2.4(12) and in accordance with any of the manure control alternatives listed in Appendix A located at iowadnr.gov/af0/rules or the AT system requirements in rule 567—65.207(455B,459A), the operation shall be considered to be in compliance with this rule, unless a discharge from the operation causes a violation of state water quality standards. If water quality standards violations occur, the department may impose additional open feedlot effluent control requirements upon the operation, as specified in subrule 65.200(3).

65.200(3) An open feedlot operation that has an animal unit capacity of 1,000 animal units or more, or an open feedlot operation that is a large CAFO, a medium CAFO, or a designated CAFO, shall not discharge manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent from an open feedlot operation structure or production area into any waters of the United States, unless the discharge is pursuant to an NPDES permit. The control of manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent originating from the open feedlot operation may be accomplished by the use of a solids settling facility, settled open feedlot effluent basin, AT system, or any other open feedlot effluent control structure or practice approved by the department. The department may require the diversion of surface drainage prior to contact with an open feedlot operation structure. Settleable solids shall be settled from open feedlot effluent before the effluent enters a settled open feedlot effluent basin or AT system.

65.200(4) Alternative control practices. If, because of topography or other factors related to the site of an open feedlot operation, it is economically or physically impractical to comply with open feedlot effluent control requirements using an open feedlot control method in subrule 65.200(4), the department shall allow an open feedlot operation covered by the NPDES permit application requirements of rule 567—65.3(455B,459,459A,459B) or 567—65.201(455B,459A) to use other open feedlot effluent control practices, provided the open feedlot operation satisfactorily demonstrates by appropriate methods that those practices will provide an equivalent level of open feedlot effluent control. Demonstration of equivalent performance must include the submission of computer modeling results that compares the predicted performance of the proposed system with that of a conventional runoff containment system over the same period. The specific requirements that must be met for an open feedlot operation to qualify for use of an AT system and the information that must be submitted to the department are outlined in rule 567—65.207(455B,459A). Design requirements have been established for a stand-alone VTA. If other AT systems are developed that meet the equivalent performance standard established under EPA's CAFO rules, the department will consider their acceptance on a case-by-case basis.

65.200(5) No direct discharge of open feedlot effluent shall be allowed from an open feedlot operation into a publicly owned lake, a known sinkhole, or an agricultural drainage well.

65.200(6) Land application.

a. *General requirements.* Open feedlot effluent shall be land-applied in a manner that will not cause pollution of surface water or groundwater. Application in accordance with the provisions of state law and the rules in this chapter shall be deemed as compliance with this requirement.

b. *Designated areas.* A person shall not apply manure on land within 200 feet from a designated area or, in the case of a high-quality water resource, within 800 feet, unless one of the following applies:

(1) The manure is land-applied by injection or incorporation on the same date as the manure was land-applied.

(2) An area of permanent vegetation cover, including filter strips and riparian forest buffers, exists for 50 feet surrounding the designated area other than an unplugged agricultural drainage well or surface intake to an unplugged agricultural drainage well, and the area of permanent vegetation cover is not subject to manure application.

c. *CAFOs.*

(1) Land application discharges from a CAFO are subject to NPDES permit requirements. The discharge of manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent to waters of the United States from a CAFO as a result of the application of that manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent by the CAFO to land areas under its control is a discharge from that CAFO subject to NPDES permit requirements,

except where the discharge is an agricultural storm water discharge as provided in 33 U.S.C. 1362(14). For the purpose of this paragraph, where the manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent has been applied in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent as specified in subrule 65.209(8), a precipitation-related discharge of manure, process wastewater, settled open feedlot effluent, settleable solids and open feedlot effluent from land areas under the control of a CAFO is an agricultural storm water discharge.

(2) Setback requirements for open feedlot operations with NPDES permits. For open feedlot operations with NPDES permits, the following is adopted by reference: 40 CFR 412.4(a), (b) and (c)(5).

65.200(7) The owner of an open feedlot operation who discontinues the use of the operation shall remove and land-apply in accordance with state law all manure, process wastewater and open feedlot effluent from the open feedlot operation structures as soon as practical but not later than six months following the date the open feedlot operation is discontinued. The owner of a CAFO shall maintain compliance with all requirements in the CAFO's NPDES permit until all manure, process wastewater and open feedlot effluent has been removed and land applied pursuant to the CAFO's NMP, and the NPDES permit has been terminated in accordance with subrule 65.202(9).

65.200(8) Stockpiling of scraped solids and settleable solids. Stockpiles of solids scraped from open feedlot operations and stockpiles of settleable solids shall comply with the following requirements:

a. Stockpiles must be land-applied in accordance with subrule 65.200(6) as soon as possible but not later than six months after they are established.

b. Stockpiles shall not be located within 400 feet from a designated area or, in the case of a high-quality water resource, within 800 feet.

c. Stockpiles shall not be located in grassed waterways or areas where water ponds or has concentrated flow.

d. Stockpiles shall not be located within 200 feet of a terrace tile inlet or surface tile inlet or known sinkhole unless the stockpile is located so that any runoff from the stockpile will not reach the inlet or sinkhole.

e. Stockpiles shall not be located on land having a slope of more than 3 percent unless methods, structures or practices are implemented to contain the stockpiled solids, including but not limited to hay bales, silt fences, temporary earthen berms, or other effective measures, and to prevent or diminish precipitation-induced runoff from the stockpiled solids.

567—65.201(455B,459A) Departmental evaluation; CAFO designation; remedial actions.

65.201(1) The department may evaluate any AFO that is not defined as a large or medium CAFO, and designate it as a CAFO if, after an on-site inspection, it is determined to be a significant contributor of manure or process wastewater to waters of the United States. In making this determination, the department shall consider the following factors:

a. The size of the operation and the amount of manure or process wastewater reaching waters of the United States;

b. The location of the operation relative to waters of the United States;

c. The means of conveyance of manure or process wastewater to waters of the United States;

d. The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of manure or process wastewater into waters of the United States; and

e. Other relevant factors.

65.201(2) No AFO with an animal capacity less than that specified for a medium CAFO shall be designated as a CAFO unless manure or process wastewater from the operation is discharged into a water of the United States:

a. Through a manmade ditch, flushing system, or other similar manmade device; or

b. That originates outside of and passes over, across or through the facility or otherwise comes into direct contact with animals confined in the operation.

65.201(3) The owner or operator of a designated CAFO shall apply for an NPDES permit no later than 90 days after receiving written notice of the designation.

65.201(4) If departmental evaluation determines that any of the conditions listed in paragraph 65.201(4) “a,” “b,” or “c” exist, the open feedlot operation shall institute necessary remedial actions within a time specified by the department to eliminate the conditions warranting the determination, if the operation receives a written notification from the department of the need to correct the conditions.

a. Settled open feedlot effluent, settleable solids from the open feedlot operation, or open feedlot effluent is being discharged into a water of the state and the operation is not providing the applicable minimum level of manure control as specified in rule 567—65.200(455B,459A);

b. Settled open feedlot effluent, settleable solids from the open feedlot operation, or open feedlot effluent is causing or may reasonably be expected to cause pollution of a water of the state; or

c. Settled open feedlot effluent, settleable solids from the open feedlot operation, or open feedlot effluent is causing or may reasonably be expected to cause a violation of state water quality standards.

567—65.202(455B,459A) NPDES permits.

65.202(1) *Existing AFOs not holding an NPDES permit.* AFOs in existence prior to April 14, 2003, that were defined as CAFOs under rules that were in effect prior to April 14, 2003, but that have not obtained a permit, should have applied for an NPDES permit by April 14, 2003. AFOs in existence on April 14, 2003, that were not defined as CAFOs under rules that were in effect prior to April 14, 2003, shall apply for an NPDES permit no later than July 31, 2007.

65.202(2) *Expansion or modification of existing AFOs.* A person intending to expand or modify an existing AFO that, upon completion of the expansion or modification, will be defined as a CAFO and if the operation discharges pollutants to waters of the United States shall apply for an NPDES permit at least 90 days prior to the scheduled expansion or modification. Operation of the expanded portion of the facility shall not begin until an NPDES permit has been issued.

65.202(3) *New AFOs.* A person intending to construct a new AFO after July 22, 1987, or resuming a discontinued operation after 24 months or more, upon resumption or completion, will be defined as a CAFO and if the operation discharges pollutants to waters of the United States shall apply for an NPDES permit at least 180 days prior to the date operation of the animal feeding facility is scheduled. Operation of the facility shall not begin until an NPDES permit has been issued.

65.202(4) *Permits required as a result of departmental designation.* An AFO that is required to apply for an NPDES permit as a result of departmental designation (in accordance with the provisions of rule 567—65.201(455B,459A)) shall apply for an NPDES permit within 90 days of receiving written notification of the need to obtain a permit. Once application has been made, the AFO is authorized to continue to operate without a permit until the application has either been approved or disapproved by the department, provided that the owner or operator has submitted all requested information and promptly taken all steps necessary to obtain coverage.

65.202(5) *Application forms and requirements.* An application for an NPDES permit shall be made on a form provided by the department. The application shall be complete and shall contain information required by the department. Applications shall include an NMP as required in rule 567—65.209(455B,459A). Applications involving AT systems shall include results of predictive computer modeling as required by subrule 65.207(6). The application shall be signed and certified by the person who is legally responsible for the AFO and its associated manure or process wastewater control system.

65.202(6) *Compliance schedule.* When necessary to comply with a standard that must be met at a future date, an NPDES permit shall include a schedule for modification of the permitted facility to meet the standard. The schedule shall not relieve the permittee of the duty to obtain a construction permit pursuant to rule 567—65.203(455B,459A).

65.202(7) *Permit conditions.* NPDES permits shall contain conditions required by 40 CFR 122.41, monitoring conditions required by 40 CFR 122.48, and conditions considered necessary by the department to ensure compliance with all applicable rules of the department; to ensure that the production area and land application areas are operated and maintained as required by Iowa law;

to protect the public health and beneficial uses of waters of the United States; and to prevent water pollution from manure storage or application operations. Any more stringent conditions of Iowa Code chapter 459A, subrule 62.4(12), and this chapter that apply to AFOs shall govern. For CAFOs that maintain cattle, swine, or poultry, the following applicable conditions shall be included:

a. NMP. Open feedlot CAFOs shall comply with the requirements of rule 567—65.209(455B,459A) and any additional NMP requirements for CAFOs in these rules. CAFOs that seek to obtain coverage under an NPDES permit shall have an NMP developed and implemented upon the date of permit coverage.

b. Inspections and recordkeeping.

(1) Visual inspections. Routine visual inspections of the CAFO production area must be conducted, and at a minimum, the following must be included:

1. Weekly inspections of all storm water diversion, runoff diversion structures, and devices channeling contaminated storm water to the open feedlot operation structure.

2. Daily inspection of water lines, including drinking water or cooling water lines.

(2) Corrective actions. Any deficiencies found as a result of the inspections required in subparagraph 65.202(7)“b”(1) or as a result of the liquid level reporting required in paragraph 65.202(7)“e” must be corrected as soon as possible.

(3) The following records must be maintained on site for a period of five years from the date they are created and must be made available to the department upon request:

1. Records documenting the inspections required in subparagraph 65.202(7)“b”(1).

2. Records of weekly liquid level observations as required in paragraph 65.202(7)“e.”

3. Records documenting any actions taken to correct deficiencies as required in subparagraph 65.202(7)“b”(2).

c. Transfer of manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent. Prior to transferring manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent to other persons, a CAFO must provide the recipient of the manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent with the most current nutrient analysis. A CAFO must retain for five years records of the date, recipient name and address, nutrient analysis and approximate amount of manure, process wastewater, settled open feedlot effluent, settleable solids or open feedlot effluent transferred to another person.

d. Minimum monitoring requirements for AT systems. Monitoring is required for the entire operational life of the AT system. The department may reduce or revise monitoring requirements after the first five years of system operation. During the first five years of operation of an AT system, the following minimum monitoring will be required:

(1) Discharge monitoring. An effluent collection point must be established at the outlet of the AT system, and the flow volume recorded and an effluent sample collected on each day a discharge from the AT system occurs. Discharge samples must be submitted to a certified laboratory and analyzed for: total Kjeldahl N, NH₄ N, total P, COD, total suspended solids, and chloride.

(2) Discharge monitoring—tile lines. If the AT system includes a perforated tile system installed under any VTA berms to enhance infiltration within the VTA, water samples shall be collected from a sampling point located downgradient of the VTA on each individual tile line or combination of tile lines on the following schedule: one sample shall be taken from each sampling point in March or April of each year when the tile system is flowing and the level of flow in the tile system recorded at the time of sampling. If there is no discharge from the tile line at a time that meets these requirements, documentation on appropriate department forms can be substituted for the sample and analysis. Collected samples shall be submitted to a certified laboratory and analyzed for Ortho-phosphate as P.

(3) Groundwater monitoring. A minimum of two groundwater monitoring wells or piezometers (one upgradient and one downgradient) must be established at each AT system. Additional wells or piezometers may be required if the department determines they are necessary to adequately assess the impacts the AT system is having on groundwater. Samples must be collected from these wells in March or April of each year and analyzed for NH₄ N, NO₃ N, Ortho phosphate as P, and chloride.

(4) Soil sampling. Both shallow and deep soil sampling is required in the VTAs of an AT system.

1. Shallow soil sampling shall be conducted prior to initial discharge of open feedlot effluent into the AT system and repeated annually. Within the VTA, a minimum of three sampling locations shall be established at the entrance to each VTA to be sampled. The three sampling locations shall be spread evenly across the entrances to adequately monitor the effluent application onto the VTAs. Samples shall be collected in the spring. Each sample shall be taken to a depth of six inches and analyzed for pH and P using the Mehlich-3 method.

2. Deep soil sampling shall be conducted prior to initial discharge of open feedlot effluent into the AT system and repeated every five years prior to the submission of an application for an NPDES permit renewal. A minimum of two sampling sites shall be established within each VTA to be sampled, one located where runoff enters the VTA, generally the same location as the shallow soil sampling location, and one where runoff is discharged from the VTA. Soil samples shall be taken from these sites to a depth of four feet, with separate samples taken to represent the 0 to 6-inch depth, the 6- to 12-inch depth, and in one-foot increments thereafter. All samples shall be analyzed for NO₃ N, NH₄ N, pH, and P by the Mehlich-3 method.

If the length of effluent flow through the VTA exceeds 400 feet, an additional soil sample representing the zero to six-inch depth should be taken for each additional 200 feet of VTA length. Samples shall be analyzed for NO₃ N, NH₄ N, pH, and P by the Mehlich-3 method.

e. Quarterly reporting requirements for large CAFOs with outside liquid impoundments. A permittee with outside liquid impoundments must submit quarterly reports by April 10, July 10, October 10, and January 10, following the respective calendar quarters; documenting daily precipitation; weekly impoundment liquid levels; volume of liquid removed from the impoundments; and the date, time, duration, and estimated volume of any overflow. Liquid levels must be obtained by observing a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour precipitation event.

f. Annual reporting requirements for all CAFOs with systems other than AT systems. Permittees with systems other than an AT system must submit an annual report to the department by January 10 of the following year. The annual report must include:

- (1) The number and type of animals in the open feedlot operation;
- (2) Estimated amount of manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent generated by the CAFO in the previous 12 months (tons/gallons);
- (3) Estimated amount of total manure transferred to other persons by the CAFO in the previous 12 months (tons/gallons);
- (4) Total number of acres for land application covered by the NMP and the total number of acres under control of the CAFO that were used for land application of manure in the previous 12 months;
- (5) Summary of all manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume;
- (6) A statement indicating whether the current version of the CAFO's NMP was developed or approved by a certified nutrient management planner;
- (7) Actual crops planted and actual yield for the preceding 12 months; and
- (8) Results of all samples of manure, litter and process wastewater for nitrogen and phosphorus content for manure, litter and process wastewater that was land-applied.

g. Quarterly reporting requirements for CAFOs with AT systems. A permittee with an AT system must submit quarterly reports by April 10, July 10, October 10, and January 10, following the respective calendar quarters. The quarterly reports shall provide all of the following information:

- (1) Daily precipitation.
- (2) Dates on which manure, process wastewater, settled open feedlot effluent, open feedlot effluent, or settleable solids were removed from the production area and estimated amounts of manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent removed (tons/gallons).
- (3) Dates on which discharges from the production area or the AT system occurred and the estimated duration and volume of discharge on each discharge date.

(4) Results of laboratory analyses of discharge samples for each date a discharge from the production area or the AT system occurred. If the results of laboratory analyses are not available by the due date of the quarterly report, the results shall be provided with the following quarter's report.

h. Annual reporting requirements for CAFOs with AT systems. A permittee shall submit an annual report by January 10 of the following year. The annual report must include all of the following:

(1) The number and type of animals in the open feedlot operation.

(2) Estimated amount of total manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent generated by the CAFO in the previous 12 months (tons/gallons).

(3) Estimated amount of total manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent transferred to other persons by the CAFO in the previous 12 months (tons/gallons).

(4) Total number of acres for land application covered by the NMP and the total number of acres under control of the CAFO that were used for land application of manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent in the previous 12 months.

(5) Summary of all manure, process wastewater, settled open feedlot effluent, settleable solids, or open feedlot effluent discharges from the production area or AT system that have occurred in the previous 12 months, including date, time, and approximate volume.

(6) Harvest dates and estimated amounts of forage removed from the AT system during the previous 12 months.

(7) Results of soil and groundwater monitoring well sampling within the AT system during the previous 12 months.

(8) A statement indicating whether the current version of the CAFO's NMP was developed or approved by a certified nutrient management planner.

65.202(8) NPDES permit renewal.

a. General requirements. An NPDES permit may be granted for any period of time not to exceed five years. An application for renewal of an NPDES permit must be submitted to the department at least 180 days prior to the date the permit expires. Each permit to be renewed shall be subject to the rules of the department in effect at the time of renewal. A permitted AFO that ceases to be a CAFO will be exempted from the need to retain an NPDES permit if the permittee can demonstrate to the satisfaction of the department that there is no remaining potential for a discharge of manure that was generated while the operation was a CAFO, other than agricultural storm water from land application areas.

b. Permits involving use of AT systems.

(1) Renewal of a permit involving use of an AT system is contingent upon proper operation and maintenance of the AT system, submittal of all required records and reports, and demonstration that the AT system is providing an equivalent level of performance to that achieved by a containment system that is designed and operated as required by statute, subrule 62.4(12) and this division of this chapter.

(2) If departmental review of an AT system indicates the system is not meeting the equivalent performance standard, the permittee may either be required to make needed system modifications to enable compliance with this standard or be required to install a conventional runoff containment system. Open feedlot operations found to be in compliance with the equivalent performance standard will be issued a five-year NPDES permit that allows continued use of the AT system.

65.202(9) Permit amendment, revocation, and reissuance or termination. The department may amend, revoke and reissue or terminate in whole or part any NPDES permit for cause, either at the request of any interested person, including the permittee, or upon the director's initiative. Any more stringent requirement pursuant to 40 CFR 122.62, 122.63 or 122.64 shall control. All requests shall be in writing and shall contain reasons for the request. Cause for permit amendment, revocation and reissuance, or termination may include but is not limited to 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 temporary or permanent reduction or elimination of the permitted discharge.

- d. Failure to retain, make available, or submit the records and information that the department requires in order to ensure compliance with the operation and discharge conditions of the permit.
- e. Failure to provide all required application material or appropriate fees.
- f. A determination by the department that the continued operation of a CAFO constitutes a clear, present and impending danger to public health or the environment.

567—65.203(455B,459A) Construction permits.

65.203(1) *Open feedlot operations required to obtain a construction permit.* An open feedlot operation must obtain a construction permit prior to any of the following:

- a. Constructing or expanding a settled open feedlot effluent basin or AT system or installing a settled open feedlot effluent transfer piping system if the open feedlot operation is required to be issued an NPDES permit.
- b. Increasing the animal unit capacity of the open feedlot operation to more than the animal unit capacity approved by the department in a previous construction permit.
- c. Increasing the volume of settled open feedlot effluent, settleable solids or open feedlot effluent stored at the open feedlot operation to more than the volume approved by the department in a previous construction permit.
- d. Repopulating the open feedlot operation if it was discontinued for 24 months or more and the animal unit capacity will be 1,000 animal units or more.

65.203(2) *When a construction permit is not required.*

- a. *Research colleges.* A construction permit is not required for construction of a settled open feedlot effluent basin or AT system if the basin or system is part of an open feedlot operation that is owned by a research college conducting research activities as provided in Iowa Code section 459A.105.
- b. *Solids settling facilities.* If only solids settling facilities are being constructed, a construction permit is not required. If solids settling facilities are proposed as part of a project that includes facilities that require a construction permit, then the proposed solids settling facilities are subject to a construction permit.

65.203(3) *Applications that cannot be approved.* The department shall not approve an application for a construction permit unless the applicant submits all of the following:

- a. An NMP as provided in rule 567—65.209(455B,459A).
- b. An engineering report, construction plans, and specifications prepared by a PE or an NRCS-qualified staff person certifying that the design of the settled open feedlot effluent basin or AT system complies with the construction design standards required in this division.

65.203(4) *Plan review criteria; time for approval or disapproval.*

a. *Plan review criteria.* Review of plans and specifications shall be conducted by the department to determine the potential of the settled open feedlot effluent basin or AT system to achieve the level of control being required of the open feedlot operation. Applicable criteria contained in federal law, state law, these rules, NRCS design standards and specifications, unless inconsistent with federal or state law or these rules, and United States Department of Commerce precipitation data will be used in the review of large CAFOs. If the proposed facility plans are not adequately covered by these criteria, applicable criteria contained in current technical literature shall be used. Medium CAFOs and designated CAFOs shall be evaluated using the department's professional judgment.

b. *Time for approval or disapproval.* The department shall approve or disapprove an application for a construction permit within 60 days after receiving the permit application. However, the applicant may deliver a notice requesting a continuance. Upon receipt of a notice, the time required for the department to act upon the application shall be suspended for the period provided in the notice but for not more than 30 days after the department's receipt of the notice. The applicant may submit more than one notice. If review of the application is delayed because the application is incomplete, and the applicant fails to supply requested information within a reasonable time prior to the deadline for action on the application, the permit may be denied and a new application will be required if the applicant wishes to proceed. The department may also provide for a continuance when it considers the application. The department shall provide notice to the applicant of the continuance. The time required for the department

to act upon the application shall be suspended for the period provided in the notice but for not more than 30 days. However, the department shall not provide for more than one continuance.

65.203(5) Expiration of construction permits. The construction permit shall expire if construction, as defined in rule 567—65.6(455B,459,459A,459B), is not begun within one year and completed within three years of the date of issuance. The director may grant an extension of time to begin or complete construction if it is necessary or justified, upon showing of such necessity or justification to the director.

65.203(6) Revocation of construction permits. The department may suspend or revoke a construction permit, modify the terms or conditions of a construction permit, or refuse to renew a permit expiring according to subrule 65.203(5) if it determines that the operation of the open feedlot operation constitutes a clear, present and impending danger to public health or the environment.

65.203(7) Permit prior to construction. An applicant for a construction permit shall notify the department prior to the start of construction for any open feedlot operation structure not required to be covered by a construction permit. The applicant shall not begin construction of a settled open feedlot effluent basin or AT system, or begin installation of a settled open feedlot effluent transfer piping system, until the person has been granted a permit for the construction by the department.

567—65.204(455B,459A) Construction permit application. An open feedlot operation required to obtain a construction permit in accordance with the provisions of subrule 65.203(1) shall apply for a construction permit at least 90 days before the date that construction, installation, or modification is scheduled to start.

65.204(1) Conceptual design. Prior to submitting an application for a construction permit, the applicant may submit a conceptual design and site investigation report to the department for review and comment.

65.204(2) Application for a construction permit for an open feedlot operation shall be made on a form provided by the department. The application shall include all of the information necessary to enable the department to determine the potential of the proposed settled open feedlot effluent basin or AT system to achieve the level of control required of the open feedlot operation. A construction permit application shall include the following:

- a. The name of the owner of the open feedlot operation and the name of the open feedlot operation, including the owner's mailing address and telephone number.
- b. The name of the contact person for the open feedlot operation, including the person's mailing address and telephone number.
- c. The location of the open feedlot operation.
- d. A statement providing that the application is for any of the following:
 - (1) The construction or expansion of a settled open feedlot effluent basin or AT system for an existing open feedlot operation that is not expanding;
 - (2) The construction or expansion of a settled open feedlot effluent basin or AT system for an existing open feedlot operation that is expanding;
 - (3) The construction of a settled open feedlot effluent basin or AT system for a proposed new open feedlot operation.
- e. The animal unit capacity for each animal species in the open feedlot operation before and after the proposed construction.
- f. An engineering report, construction plans and specifications prepared by a PE or by an NRCS-qualified staff person for the settled open feedlot effluent basin or AT system.
- g. A report on the soil and hydrogeologic information for the site, as described in subrules 65.206(2) and 65.207(4).
- h. Information including but not limited to maps, drawings and aerial photos that clearly show the location of all the following:
 - (1) The open feedlot operation and all existing and proposed settled open feedlot effluent basins or AT systems, clean water diversions, and other pertinent features or structures.
 - (2) Any other open feedlot operation under common ownership or common management and located within 1,250 feet of the open feedlot operation.

(3) Any public water supply system as defined in Iowa Code section 455B.171 or drinking water well that is located less than the distance from the open feedlot operation required by rule 567—65.205(455B,459A). Information shall also be provided as to whether the proposed settled open feedlot effluent basin or AT system will meet all applicable separation distances.

567—65.205(455B,459A) Water well separation distances for open feedlot operations.

65.205(1) *Unformed settled open feedlot effluent basins.* Unformed settled open feedlot effluent basins shall be separated from water wells as follows:

- a. *Public wells.* 1,000 feet from shallow wells and 400 feet from deep wells;
- b. *Private wells.* 400 feet from both shallow wells and deep wells.

65.205(2) *Open feedlots, solids settling facilities, formed settled open feedlot effluent basins, feed storage runoff control structures and AT systems.* Open feedlots, solids settling facilities, formed settled open feedlot effluent basins, feed storage runoff control structures and AT systems shall be separated from water wells as follows: for both public wells and private wells, 200 feet from shallow wells and 100 feet from deep wells.

567—65.206(455B,459A) Settled open feedlot effluent basins—investigation, design and construction requirements. A settled open feedlot effluent basin required to be constructed pursuant to a construction permit issued pursuant to Iowa Code section 459A.205 shall meet the design and construction requirements set forth in this rule.

65.206(1) *Drainage tile investigation and removal.* Prior to constructing a settled open feedlot effluent basin, the site for the basin shall be investigated for drainage tile lines as provided in this subrule. All applicable records of known drainage tiles shall be examined for the existence of drainage tile lines. Prior to the excavation for an unformed manure storage structure, an inspection trench of at least ten inches wide shall be dug around the structure to a depth of at least 6 feet below the original grade and within 25 feet of the proposed outside of the toe of the berm. Drainage tile lines discovered during the tile inspection of a settled open feedlot effluent basin shall be removed and rerouted in the inspection trench or in an area outside of the inspection trench. All tiles within the inspection trench perimeter shall be removed or completely plugged with concrete, grout or similar materials. Drainage tile lines installed at the time of construction to lower the groundwater may remain in place as long as they are outside of the proposed toe of the berm.

65.206(2) *Soils and hydrogeologic report.* A settled open feedlot effluent basin required to be constructed pursuant to a construction permit issued pursuant to rule 567—65.203(455B,459A) shall meet design standards as required by a soils and hydrogeologic report. The report shall be submitted with the construction permit application as provided in rule 567—65.204(455B,459A). The report shall include all of the following:

a. A description of the steps taken to determine the soils and hydrogeologic conditions at the proposed construction site, a description of the geologic units encountered, and a description of the effects of the soil and groundwater elevation and direction of flow on the construction and operation of the basin.

b. The subsurface soil classification of the site. A subsurface soil classification shall be based on ASTM international designation D 2487-06 or D 2488-06.

c. The results of a soils investigation conducted at a minimum of three locations within the area of the basin reflecting the continuous soil profile existing within the area of the basin. The soils investigation results shall be used in determining subsurface soil characteristics and groundwater elevation and direction of flow at the proposed site. The soils investigation shall be conducted and utilized as follows:

- (1) By a qualified person ordinarily engaged in the practice of performing soils investigations.
- (2) At locations that reflect the continuous soil profile conditions existing within the area of the proposed basin, including conditions found near the corners and the deepest point of the proposed basin.

The soils investigation shall be conducted to a minimum depth of ten feet below the proposed bottom elevation of the basin.

(3) By methods that identify the continuous soil profile and do not result in mixing of soil layers. Soil corings using hollow stem augers and other suitable methods that do not result in soil layer mixing may be used.

(4) Soil corings may be used to determine current groundwater levels by completing the corings as temporary monitoring wells as provided in subparagraph 65.206(3)“a”(1) and measuring the water levels in these wells no earlier than seven days after installation as provided in subparagraph 65.206(3)“a”(2).

(5) Upon abandonment of soil core holes, all soil core holes including those developed as temporary water level monitoring wells shall be plugged with concrete, Portland cement concrete grout, bentonite, or similar materials.

(6) If excavation methods are used in conducting the soils investigation, upon closure these excavations must be filled with suitable materials and adequately compacted to ensure they will not compromise the integrity of the basin liner.

65.206(3) Hydrology.

a. For purposes of this rule, groundwater table is the seasonal high-water table determined by a PE, a groundwater professional certified pursuant to 567—Chapter 134, or qualified staff from the department or NRCS. If a construction permit is required, the department must approve the groundwater table determination.

(1) Current groundwater levels shall be measured as provided in this subparagraph for either a formed settled open feedlot effluent basin or an unformed settled open feedlot effluent basin. Three temporary monitoring wells shall be developed according to paragraph 65.108(6)“c.” The top of the well screen shall be within five feet of the ground surface. Each well shall be extended to at least two feet below the proposed top of the liner of an unformed settled open feedlot effluent basin, or to at least two feet below the proposed bottom of the footings of a formed settled open feedlot effluent basin. In addition, the wells must be installed as follows:

1. Unformed basins. For an unformed settled open feedlot effluent basin, the monitoring wells may be installed in the soil core holes developed as part of conducting the soils investigation required in paragraph 65.206(2)“c.”

2. Formed basins. For a formed settled open feedlot effluent basin, at least three temporary monitoring wells shall be installed as close as possible to three corners of the structure, with one of the wells close to the corner of deepest excavation. If the formed settled open feedlot effluent basin is circular, the three monitoring wells shall be equally spaced and one well shall be placed at the point of deepest excavation.

(2) The seasonal high-water table shall be determined by considering all relevant data, including the groundwater levels measured in the temporary monitoring wells not earlier than seven days following installation, NRCS soil survey information, soil characteristics such as color and mottling, other existing water table data, and other pertinent information. If a drainage system for artificially lowering the groundwater table will be installed in accordance with the requirements of paragraph 65.206(3)“c,” the level to which the groundwater table will be lowered will be considered to represent the seasonal high-water table.

b. The settled open feedlot effluent basin shall be constructed with a minimum separation of two feet between the top of the liner of the basin and the seasonal high-water table.

c. If a drainage tile line around the perimeter of the basin is installed a minimum of two feet below the top of the basin liner to artificially lower the seasonal high-water table, the top of the basin’s liner may be a maximum of four feet below the seasonal high-water table which existed prior to installation of the perimeter tile system. The seasonal high-water table may be artificially lowered by gravity flow tile lines or other similar system. However, the following shall apply:

(1) Except as provided in subparagraph 65.206(3)“b”(2), an open feedlot operation shall not use a nongravity mechanical system that uses pumping equipment.

(2) If the open feedlot operation was constructed before July 1, 2005, the operation may continue to use its existing nongravity mechanical system that uses pumping equipment or it may construct a new nongravity mechanical system that uses pumping equipment. However, an open feedlot operation that

expands the area of its open feedlot on or after April 1, 2011, shall not use a nongravity mechanical system that uses pumping equipment.

(3) Drainage tile lines may be installed to artificially lower the seasonal high-water table at a settled open feedlot effluent basin, if all of the following conditions are satisfied:

1. A device to allow monitoring of the water in the drainage tile lines and a device to allow shutoff of the flow in the drainage tile lines are installed, if the drainage tile lines do not have a surface outlet accessible on the property where the settled open feedlot effluent basin is located.

2. Drainage tile lines are installed horizontally within 25 feet away from the outside toe of the berm of the settled open feedlot effluent basin. Drainage tile lines shall be placed in a vertical trench and encased in granular material that extends upward to the level of the seasonal high-water table which existed prior to installation of the perimeter tile system.

d. Open feedlot operation structures exceeding storage capacity or dam height thresholds may be required to obtain department permits, as specified in rule 567—71.3(455B) and 567—Chapter 73.

65.206(4) *Liner design and construction.* The liner of a settled open feedlot effluent basin shall comply with all of the following:

a. The liner shall be constructed to have a percolation rate that shall not exceed one-sixteenth inch per day at the design depth of the basin as determined by percolation tests conducted by the PE. If a clay soil liner is used, the liner shall be constructed with a minimum thickness of 12 inches or the minimum thickness necessary to comply with the percolation rate in this paragraph, whichever is greater.

b. The liner shall be constructed to have a percolation rate that shall not exceed one-sixteenth inch per day at the design depth of the basin. The design of the liner will specify a moisture content, compaction requirement, and liner thickness that will comply with the maximum allowable percolation requirement, and will be based on moisture content and percentage of maximum density as determined by a standard 5-point proctor test performed in accordance with ASTM D698 (Method A), effective November 11, 1991. The liner thickness will be based on laboratory tests of the compacted material, with a minimum liner thickness of 12 inches. Appropriate field or laboratory testing during construction shall be provided to verify the design requirements are met.

65.206(5) *Berm erosion inspection and repair.* The owner of an open feedlot operation using a settled open feedlot effluent basin shall inspect the berms of the basin at least semiannually for evidence of erosion. If the inspection reveals erosion which may impact the basin's structural stability or the integrity of the basin's liner, the owner shall repair the berms.

65.206(6) *Unformed basins containing confinement manure and open feedlot effluent.* Unformed basins containing confinement manure and open feedlot effluent shall meet the confinement construction standards and separation distance requirements provided in Division II of this chapter. The unformed basin design shall ensure adequate storage for the annual manure generation of confinement animals, the annual runoff from the open feedlot portion, including the basin surface area, and the open feedlot runoff resulting from the 25-year, 24-hour precipitation event below the two-foot freeboard level.

65.206(7) *Settled open feedlot effluent basin (SOFEB) design and operation requirements.*

a. All SOFEBs shall have a minimum ten-foot wide top of dike.

b. All SOFEBs shall have a minimum three-foot horizontal to one-foot vertical interior and exterior side slopes.

c. All SOFEBs shall have depth markers installed labeling each foot of depth and critical pumping depths noted according to the designed operating system.

d. All SOFEBs shall be designed using the latest available NOAA Atlas 14 Volume 8 Version 2, effective 2013, rainfall data for the county where the SOFEB is located. NOAA data can be obtained from the National Weather Service website.

567—65.207(455B,459A) AT systems—design requirements.

65.207(1) *Containment volume.*

a. Adequate capacity must be provided within the AT system or within the solids settling facility for the open feedlot operation to contain expected open feedlot effluent from November 1 to March 30 or to hold the precipitation event as required by paragraph 65.200(2) "a," whichever is greater. Controls

on the solids settling facility or the AT system shall prevent release of collected open feedlot effluent to waters of the United States during the period from November 1 to March 30.

b. If the containment volume required in paragraph 65.207(1)“*a*” is provided in an open feedlot operation structure whose primary purpose is to remove settleable solids from open feedlot effluent prior to discharge into an AT system, the basin shall not be required to comply with the liner design and construction requirements of subrule 65.206(4), provided the basin does not retain collected open feedlot effluent for more than seven consecutive days following a precipitation event during the period from March 30 to November 1.

65.207(2) Solids settling. Settleable solids shall be removed from open feedlot effluent prior to discharge of the effluent into an AT system. Solids settling shall be conducted in conformance with the requirements of paragraph 65.200(1)“*b.*”

65.207(3) Drainage tile investigation and removal. Prior to constructing an AT system, the owner of the open feedlot operation shall investigate the site for the AT system for drainage tile lines. The investigation shall be made by digging a core trench to a depth of at least six feet from ground level at the projected center of the berm of the AT system. A written record of the investigation shall be submitted as part of the construction certification required in rule 567—65.208(455B,459A). If a drainage tile line is discovered, one of the following solutions shall be implemented:

a. The drainage tile line shall be rerouted around the perimeter of the AT system at a distance of least 25 feet horizontally separated from the toe of the outside berm of the AT system. For an area of the system where there is not a berm, the drainage tile line shall be rerouted at least 50 feet horizontally separated from the edge of the system.

b. The drainage tile line shall be replaced with a nonperforated tile line under the AT system. The nonperforated tile line shall be continuous and without connecting joints. There must be a minimum of three feet of separation between the nonperforated tile line and the soil surface of the AT system.

65.207(4) Soils and hydrogeologic report. An AT system constructed pursuant to a construction permit issued pursuant to rule 567—65.203(455B,459A) shall meet design standards as required by a soils and hydrogeologic report. The report shall be submitted with the construction permit application as provided in rule 567—65.204(455B, 459A). The report shall include all of the following:

a. A description of the steps taken to determine the soils and hydrogeologic conditions at the proposed construction site, a description of the geologic units encountered, and a description of the effects of the soil and groundwater elevation and direction of flow on the construction and operation of the AT system.

b. Subsurface soil classification of the site. A subsurface soil classification shall be based on ASTM international designation D 2487-06 or D 2488-06.

c. The results of a soils investigation conducted at a minimum of three locations within the area of the proposed AT system for AT systems of five acres or less, with one additional soils investigation site utilized for each additional three acres of surface area or fraction thereof. The soils investigation results shall be used in determining subsurface soil characteristics and groundwater elevation and direction of flow at the proposed AT system site. The soils investigation shall be conducted and utilized as follows:

(1) By a qualified person ordinarily engaged in the practice of performing soils investigations.

(2) At locations that reflect the continuous soil profile conditions existing within the area of the proposed AT system. The soils investigation shall be conducted to a minimum depth of ten feet below the elevation of the soil surface of the proposed AT system.

(3) By methods that identify the continuous soil profile and do not result in mixing of soil layers. Investigation methods may include soil corings using hollow stem augers, soil test pits, or other suitable methods that do not result in soil layer mixing.

(4) Soil core holes may be used to determine current groundwater levels by completing the core holes as temporary monitoring wells and measuring the water levels in these wells not earlier than seven days after installation.

(5) Upon abandonment of the soil core holes, all soil core holes, including those developed as temporary water level monitoring wells, shall be plugged with concrete, Portland cement concrete grout, bentonite, or similar materials.

(6) If soil test pits or other excavation methods are used in conducting the soils investigation, upon closure these excavations must be filled with suitable materials and adequately compacted to ensure they will not compromise the integrity of the AT system.

65.207(5) Hydrology—groundwater table. For purposes of this rule, groundwater table is the seasonal high-water table determined by a PE, a groundwater professional certified pursuant to 567—Chapter 134, or qualified staff from the department or NRCS. If a construction permit is required, the department must approve the groundwater table determination.

a. Groundwater level measurements. Groundwater levels shall be measured using at least one of the following methods:

(1) Temporary monitoring wells. Three temporary monitoring wells shall be developed to a minimum of ten feet below the surface of the proposed AT system and constructed in accordance with requirements of paragraph 65.109(6)“c.” The top of the well screen shall be within five feet of the ground surface. These monitoring wells may be installed in the soil core holes developed as part of conducting the soils investigation required in paragraph 65.207(4)“c.”

(2) Test pits. Test pits may be used in lieu of temporary monitoring wells to determine the seasonal high-water table or prior to the construction of an AT system to ensure the required separation distance to the seasonal high-water table is being met. The bottom of each pit shall be a minimum of five feet below the proposed surface of the AT system. However, if the test pit is also being used to conduct the soils investigation required in paragraph 65.207(4)“c,” the bottom of the pit shall be a minimum of ten feet below the surface of the proposed AT system. Each pit shall be allowed to remain open and unaltered for a minimum of seven days for viewing by the department or an NRCS-qualified staff person. Adequate protection (temporary berms and covers) shall be provided to prevent surface runoff from entering the test pits. Test pits shall be located as needed to provide an accurate assessment of soil materials and seasonal high groundwater levels throughout the area of the proposed AT system. A description of the materials present in the test pit shall be documented by all of the following:

1. Digital photos;
2. Description of soils including mottling;
3. Weather conditions both prior to and during the period in which test pits are open.

b. Determination of seasonal high-water table. The seasonal high-water table shall be determined by considering all relevant data, including the groundwater levels measured in the temporary monitoring wells or test pits not earlier than seven days following installation, NRCS soil survey information, soil characteristics such as color and mottling found in soil cores and test pits, other existing water table data, and other pertinent information. If a drainage system for artificially lowering the groundwater table will be installed, the level to which the groundwater table will be lowered will be considered to represent the seasonal high-water table.

c. Seasonal high-water table. The seasonal high-water table shall be a minimum of four feet below the finished grade of a VTA.

65.207(6) Stand-alone VTA.

a. Computer modeling. Results of predictive computer modeling for the proposed alternative technology system shall be used to determine suitability of the proposed site for the system and to predict performance of the alternative technology system as compared to the use of a 25-year, 24-hour runoff containment system, over a 25-year period. A summary of the computer modeling results shall be approved and provided to the department.

b. Size. The computer model used to determine whether the proposed AT system will meet the equivalent performance standard shall also be used to establish the minimum required size of the VTA. However, in no case shall the size of the VTA be less than the following:

- (1) 100 percent of the total drainage area (feedlot and other) served if the soil permeability is from six-tenths of an inch to two inches per hour.
- (2) 200 percent of the total drainage area (feedlot and other) served if the soil permeability is from two-tenths to six-tenths of an inch per hour.

c. Slope. The constructed VTA shall be level in one dimension and have a slight slope (maximum of 5 percent) in the other dimension.

- d. Berming.* The VTA must be bermed to prevent inflow of surface water from outside areas.
- e. Spreaders.* Settled open feedlot effluent must be discharged evenly across the top width of the VTA and allowed to slowly flow downslope through the VTA. Level spreaders, at a maximum six inches tall, or other practices may be required to maintain uniform flow of settled open feedlot effluent across the width of the VTA as flow moves downslope through the VTA.
- f. Soil permeability.* Soil permeability within the VTA must be from two-tenths to two inches per hour throughout the soil profile to a depth of five feet. Soil permeability must be verified by conducting on-site or laboratory soil permeability testing.
- g. Groundwater lowering system.* The seasonal high-water table within the VTA must be capable of being lowered to a depth of four to five feet with a perimeter tile system installed outside of the VTA. Design information must be provided that demonstrates the adequacy of the proposed groundwater lowering system. The tile system must satisfy the following requirements:
- (1) If the tile system does not have a surface outlet accessible on the property where the AT system is located, a device to allow monitoring of the water in the tile system and a device to allow shutoff of the flow in the tile system must be installed.
 - (2) Tile lines in the system must be installed horizontally at least 25 feet away from the outside toe of the berm of the VTA.
- h. Tile system to enhance infiltration within the VTA.* A tile system may be installed at the perimeter of the VTA cells to enhance infiltration within the VTA. The tile system must satisfy the following requirements:
- (1) Tile lines shall be installed at the centerline of the berms of the VTA cells.
 - (2) The tile lines shall be constructed such that no settled open feedlot effluent can enter the lines except through infiltration through the soil profile.
 - (3) A shutoff valve and sampling point located downslope of the VTA cell shall be provided for each individual tile line. However, if multiple tile lines are brought together into a common tile line, a single shutoff valve and sampling point may be utilized.
 - (4) Monitoring of the tile lines must be conducted in accordance with the requirements of subparagraph 65.202(7)“d”(2).
- i. Depth to sands, gravels, or glacial outwash.* A VTA is not allowed if the depth to sands, gravels, or glacial outwash is less than six feet. A soils investigation that documents sands found are in isolated sand lenses that will not have a significant impact on subsurface water flow or groundwater quality shall not prohibit use of the site.
- j. Depth to bedrock.* A minimum of ten feet of overburden or loose material must exist between the surface of the constructed VTA and underground bedrock.
- k. Flooding.* The VTA must be constructed in areas that are not subject to flooding more frequently than once in 25 years.
- l. Distance to water bodies.* The following distances, measured along the path of water flow, shall be provided between the point of discharge from the VTA and the receiving water body.
- (1) Designated use streams referenced in 567—subrule 61.3(5). A minimum distance of 500 feet or ½ foot distance per animal unit capacity of the feedlot area which drains to the VTA, whichever is greater, shall be provided.
 - (2) All other uncrossable intermittent streams. A minimum distance of 200 feet shall be provided.

567—65.208(455B,459A) Construction certification.

65.208(1) The owner of an open feedlot operation who is issued a construction permit for a settled open feedlot effluent basin or AT system as provided in rule 567—65.203(455B,459A) shall submit to the department a construction certification from a PE certifying all of the following:

- a.* The settled open feedlot effluent basin or AT system was constructed in accordance with the design plans submitted to the department as part of an application for a construction permit pursuant to rule 567—65.204(455B,459A). If the actual construction deviates from the approved design plans, the construction certification shall identify all changes and certify that the changes were consistent with all applicable standards of these rules.

b. The settled open feedlot effluent basin or AT system was inspected by the PE after completion of construction and before commencement of operation.

65.208(2) A written record of an investigation for drainage tile lines, including the findings of the investigation and actions taken to comply with subrules 65.206(1) and 65.207(3), shall be submitted as part of the construction certification.

567—65.209(455B,459A) NMP requirements.

65.209(1) The owner of an open feedlot operation that has an animal unit capacity of 1,000 animal units or more or that is required to be issued an NPDES permit shall develop and implement an NMP meeting the requirements of this rule. The owner of an open feedlot operation who seeks to obtain or is required to be issued an NPDES permit shall develop and implement an NMP meeting the requirements of this rule no later than the date on which the NPDES permit becomes effective. For the purpose of this rule, requirements pertaining to open feedlot effluent also apply to settled open feedlot effluent and settleable solids.

65.209(2) Not more than one open feedlot operation shall be covered by a single NMP. For an open feedlot operation that is required to have an NPDES permit and the AFO includes an open feedlot operation and a confinement feeding operation, the NMP must include both the open feedlot operation and the confinement feeding operation if the confinement feeding operation does not have an MMP. If the confinement feeding operation portion of the AFO does have an MMP as required in rules 567—65.110(455B,459,459B) and 567—65.111(455B,459,459B), the confinement feeding operation portion shall not be included in the NMP; however, in that event, the MMP must be amended to include the information specified in paragraph 65.209(8) “*e.*”

65.209(3) A person shall not remove manure, process wastewater or open feedlot effluent from an open feedlot operation structure that is part of an open feedlot operation for which an NMP is required under this rule, unless the department approves an NMP as required in this rule.

65.209(4) The department shall not approve an application for a permit to construct a settled open feedlot effluent basin or AT system unless the owner of the open feedlot operation applying for approval submits an NMP together with the application for the construction permit as provided in rule 567—65.203(455B,459A). The owner shall also submit proof that the owner has published a notice for public comment as provided in subrule 65.209(7).

65.209(5) If a construction permit is required as provided in rule 567—65.203(455B,459A), the department shall approve or disapprove the NMP as part of the construction permit application. If a construction permit is not required, the department shall approve or disapprove the NMP within 60 days from the date that the department receives the NMP.

65.209(6) Prior to approving or disapproving an NMP as required in this rule, the department may receive comments exclusively to determine whether the NMP is submitted according to procedures required by the department and that the NMP complies with the provisions of this rule.

65.209(7) Public notice.

a. The owner of the open feedlot operation shall publish a notice for public comment in a newspaper having a general circulation in the county where the open feedlot operation is or is proposed to be located and in the county where manure, process wastewater, or open feedlot effluent that originates from the open feedlot operation may be applied under the terms and conditions of the NMP.

b. The notice for public comment shall include all of the following:

(1) The name of the owner of the open feedlot operation submitting the NMP.

(2) The name of the township where the open feedlot operation is or is proposed to be located and the name of the township where manure, process wastewater, or open feedlot effluent originating from the open feedlot operation may be applied.

(3) The animal unit capacity of the open feedlot operation.

(4) The time when and the place where the NMP may be examined as provided in Iowa Code section 22.2.

(5) Procedures for providing public comment to the department. The notice shall also include procedures for requesting a public hearing conducted by the department. The department is not required

to conduct a public hearing if it does not receive a request for the public hearing within ten days after the first publication of the notice for public comment as provided in this subrule. If such a request is received, the public hearing must be conducted within 30 days after the first date that the notice for public comment was published.

(6) A statement that a person may acquire information relevant to making comments under this subrule by accessing the department's Internet website. The notice for public comment shall include the address of the department's Internet website as required by the department.

65.209(8) Except as provided in paragraph 65.209(8) "f," an NMP shall include all of the following:

a. An estimate of the nitrogen and phosphorus concentration of manure, process wastewater and open feedlot effluent and an estimate of the manure, process wastewater, and open feedlot volume or weight produced by the open feedlot operation, in accordance with subrule 65.111(3).

b. Application rate calculations consistent with the requirements of subrule 65.111(12). The 100 pounds of available nitrogen per acre limitation specified in paragraph 65.111(13) "c" (applicable to open feedlot operations and combined open feedlot operations and confinement operations with an NPDES permit because of requirements in subrule 65.111(4)) pertaining to liquid manure applied to land currently planted to soybeans or to land where a soybean crop is planned applies only to liquid manure, process wastewater or settled open feedlot effluent.

c. The location of manure application. If the application is on land other than land owned or rented for crop production by the owner of the open feedlot operation, the plan shall include a copy of each written agreement executed by the owner of the open feedlot operation and the landowner or the person renting the land for crop production where the manure, process wastewater or open feedlot effluent may be applied. The written agreement shall indicate the number of acres on which the manure, process wastewater or effluent may be applied and the length of the agreement.

d. A phosphorus index of each field in the nutrient management plan, as defined in paragraph 65.111(12) "a," including the factors used in the calculation. A copy of the NRCS phosphorus index detailed report shall satisfy the requirement to include the factors used in the calculation.

e. Information that shows all of the following:

(1) There is adequate storage for manure, process wastewater, stockpiled manure and open feedlot effluent, including procedures to ensure proper operation and maintenance of the storage structures.

(2) The proper management of animal mortalities to prevent discharge of pollutants to surface water and to ensure that animals are not disposed of in an open feedlot operation structure or a treatment system that is not specifically designed to treat animal mortalities.

(3) Surface drainage prior to contact with an open feedlot structure is diverted, as appropriate, from the open feedlot operation.

(4) Animals kept in the open feedlot operation do not have direct contact with any waters of the United States.

(5) Chemicals or other contaminants handled on site are not disposed of in manure, process wastewater, an open feedlot operation structure or a treatment system that is not specifically designed to treat such chemicals or contaminants.

(6) Equipment used for the land application of manure, process wastewater or open feedlot effluent must be periodically inspected for leaks.

(7) Appropriate site-specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States.

(8) Protocols for appropriate testing of manure, process wastewater, open feedlot effluent and soil.

(9) Protocols to land-apply manure, process wastewater or open feedlot effluent in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, process wastewater or open feedlot effluent.

(10) Identification of specific records that will be maintained to document the implementation and management of the requirements in this subrule.

f. Sales of scraped solids or settleable solids licensed by IDALS. Open feedlot operations that will sell scraped solids or settleable solids as a commercial fertilizer or soil conditioner regulated by IDALS under Iowa Code chapter 200 or bulk dry animal nutrient product under Iowa Code chapter 200A shall

submit a copy of their site-specific IDALS license or documentation that manure will be sold pursuant to Iowa Code chapter 200 or 200A as regulated by IDALS and may, in lieu of complying with this subrule for that portion of open feedlot effluent, submit to the department a copy of the operation's site-specific IDALS license or documentation for any scraped solids or settleable solids that will be sold pursuant to Iowa Code chapter 200 or 200A, along with the department-approved NMP form for sales of scraped solids or settleable solids.

g. An open feedlot operation must submit a complete NMP using a new phosphorus index, including soil sampling as required in subrule 65.111(11), for each field in the NMP a minimum of once every five years, submitting the plan with the NPDES permit renewal application if the open feedlot operation has an NPDES permit.

65.209(9) If an open feedlot operation uses an alternative technology system as provided in rule 567—65.207(455B,459A), the NMP is not required to provide for settled open feedlot effluent that enters the AT system.

65.209(10) Current NMP; recordkeeping; record inspections.

a. *Current NMP.* The owner of an open feedlot operation who is required to submit an NMP shall maintain a current NMP at the site of the open feedlot operation and shall make the current NMP available to the department upon request. If nutrient management practices change, a person required to submit an NMP shall make appropriate changes consistent with this rule. If values other than the standard table values are used for NMP calculations, the source of the values used shall be identified.

b. *Recordkeeping.* Records shall be maintained by the owner of an open feedlot operation who is required to submit an NMP. This recorded information shall be maintained for five years following the year of application or for the length of the crop rotation, whichever is greater. Records shall be maintained at the site of the open feedlot operation and shall be made available to the department upon request. Records to demonstrate compliance with the NMP shall include the requirements of rule 567—65.111(455B,459,459B) and the following:

- (1) Weather conditions at time of application and for 24 hours prior to and following the application.
- (2) Date(s) when application equipment was inspected.
- (3) All applicable records identified in paragraph 65.209(8) "e."

c. *Record inspection.* The department may inspect an open feedlot operation at any time during normal working hours and may inspect the NMP and any records required to be maintained.

567—65.210 to 65.299 Reserved.

DIVISION IV
ANIMAL TRUCK WASH FACILITIES

567—65.300(455B,459A) Minimum animal truck wash effluent control requirements. An animal truck wash facility shall provide for the management of manure, process wastewater, settleable solids, scraped solids, and animal truck wash effluent by using the control method as provided in subrules 65.300(1) through 65.300(4). A release shall be reported to the department as provided in subrule 65.2(1).

65.300(1) No direct discharge of animal truck wash effluent shall be allowed from an animal truck wash facility into a publicly owned lake, a known sinkhole, or an agricultural drainage well.

65.300(2) Land application.

a. *General requirements.* Animal truck wash effluent shall be land-applied in a manner which will not cause pollution of surface water or groundwater. Land application of animal truck wash effluent shall not exceed one inch per hour, and land application shall cease immediately if runoff occurs. Land application of animal truck wash effluent shall be conducted on days when weather and soil conditions are suitable. Weather and soil conditions are normally considered suitable for animal truck wash effluent application if (1) land application areas are not frozen or snow-covered, (2) temperatures during application are greater than 32 degrees Fahrenheit, and (3) precipitation has not exceeded the water holding capacity of the soil to accept the effluent application without the possibility of runoff.

Application in accordance with the provisions of state law and the rules in this chapter shall be deemed as compliance with this requirement.

b. Separation distances. A person shall not apply animal truck wash effluent on land located within 750 feet from a residence not owned by the titleholder of the land, unless one of the following applies:

(1) The animal truck wash effluent is land-applied by injection or incorporation on the same date as the animal truck wash effluent was land-applied.

(2) The titleholder of the land benefiting from the separation distance requirement executes a written waiver with the titleholder of the land where the animal truck wash effluent is land-applied.

(3) The animal truck wash effluent is from a small animal truck wash facility or an animal truck wash facility that is part of a SAFO.

65.300(3) The owner of an animal truck wash facility who discontinues the use of the facility shall remove and land-apply in accordance with state law all manure, process wastewater and animal truck wash effluent from the animal truck wash effluent structures as soon as practical but not later than six months following the date the animal truck wash facility is discontinued.

65.300(4) Stockpiling of scraped solids and settleable solids. Stockpiles of solids scraped from animal truck wash facilities and stockpiles of settleable solids shall comply with the following requirements:

a. Stockpiles must be land-applied in accordance with subrule 65.300(2) as soon as possible but not later than six months after they are established.

b. Stockpiles shall not be located within 400 feet from a designated area or, in the case of a high-quality water, within 800 feet.

c. Stockpiles shall not be located in grassed waterways or areas where water ponds or has concentrated flow.

d. Stockpiles shall not be located within 200 feet of a terrace tile inlet or surface tile inlet or known sinkhole unless the stockpile is located so that any runoff from the stockpile will not reach the inlet or sinkhole.

e. Stockpiles shall not be located on land having a slope of more than 3 percent unless methods, structures or practices are implemented to contain the stockpiled solids, including but not limited to hay bales, silt fences, temporary earthen berms, or other effective measures, and to prevent or diminish precipitation-induced runoff from the stockpiled solids.

567—65.301(455B,459,459A) Construction permits.

65.301(1) *Animal truck wash facilities required to obtain a construction permit.* An animal truck wash facility must obtain a construction permit as follows:

a. Prior to construction or expansion of an animal truck wash effluent structure.

b. When the department has previously issued the animal truck wash facility a construction permit and the volume of the animal truck wash effluent would be more than the volume approved by the department in the previous construction permit.

c. When the animal truck wash facility is part of a confinement feeding operation and all of the following apply:

(1) The department has issued a construction permit or an NPDES permit for the confinement feeding operation or a letter approving a construction design statement for the confinement feeding operation in lieu of a construction permit.

(2) The animal truck wash effluent will be added to an existing manure storage structure resulting in a total stored volume greater than that approved in the construction permit or the construction design statement approval letter.

d. When the animal truck wash facility is part of an open feedlot operation and all of the following apply:

(1) The department has issued a construction permit or an NPDES permit for an open feedlot operation.

(2) The animal truck wash effluent will be added to an existing settled open feedlot effluent basin resulting in a total stored volume greater than that approved in the construction permit or NPDES permit.

e. When an animal truck wash facility is constructed or expanded as part of a SAFO that includes a manure storage structure and the animal truck wash effluent will be added to the manure storage structure.

65.301(2) *Construction permit not required.* A construction permit is not required in the following situations:

a. When a small animal truck wash facility is constructed or expanded and remains a small animal truck wash facility.

b. When a small animal truck wash facility is part of a SAFO and the animal truck wash effluent is added to the manure storage structure.

65.301(3) *Construction permit applications that cannot be approved.* The department shall not approve an application for a construction permit unless the applicant submits all of the following:

a. An NMP as provided in rule 567—65.306(455B,459A).

b. An engineering report, construction plans, and specifications prepared by a PE or an NRCS-qualified staff person certifying that the design of the animal truck wash effluent structure complies with the construction design standards required in Division III of this chapter.

65.301(4) *Plan review criteria; time for approval or disapproval.*

a. Plan review criteria. Review of plans and specifications shall be conducted by the department to determine the potential of the animal truck wash effluent structure to achieve the level of control being required of the animal truck wash facility. Applicable criteria contained in federal law, state law, these rules, NRCS design standards and specifications unless inconsistent with federal or state law or these rules will be used in this review. If the proposed facility plans are not adequately covered by these criteria, applicable criteria contained in current technical literature shall be used.

b. Time for approval or disapproval. The department shall approve or disapprove an application for a construction permit within 60 days after receiving the permit application. However, the applicant may deliver a notice requesting a continuance. Upon receipt of a notice, the time required for the department to act upon the application shall be suspended for the period provided in the notice but for not more than 30 days after the department's receipt of the notice. The applicant may submit more than one notice. If review of the application is delayed because the application is incomplete, and the applicant fails to supply requested information within a reasonable time prior to the deadline for action on the application, the permit may be denied and a new application will be required if the applicant wishes to proceed. The department may also provide for a continuance when it considers the application. The department shall provide notice to the applicant of the continuance. The time required for the department to act upon the application shall be suspended for the period provided in the notice but for not more than 30 days. However, the department shall not provide for more than one continuance.

65.301(5) *Expiration of construction permits.* The construction permit shall expire if construction, as defined in rule 567—65.6(455B,459,459A,459B), is not begun within one year and completed within three years of the date of issuance. The director may grant an extension of time to begin or complete construction if it is necessary or justified, upon showing of such necessity or justification to the director.

65.301(6) *Revocation of construction permits.* The department may suspend or revoke a construction permit, modify the terms or conditions of a construction permit, or refuse to renew a construction permit expiring according to subrule 65.301(5) if it determines that the operation of the animal truck wash facility constitutes a clear, present and impending danger to public health or the environment.

65.301(7) *Permit prior to construction.* An applicant for a construction permit shall notify the department prior to the start of construction for any animal truck wash facility. The applicant shall not begin construction of an animal truck wash facility until the person has been granted a permit for the construction by the department.

65.301(8) *Materials used in animal truck wash.* A facility that performs acid washing, aluminum brightening, or other such processes that significantly increase the metals concentration of the effluent is not considered an animal truck wash facility for purposes of this provision. Use of disinfectant materials to control and prevent animal diseases is allowed.

567—65.302(455B,459,459A) Separation distances.

65.302(1) *Separation distances for the construction or expansion of an animal truck wash effluent structure.*

a. An animal truck wash effluent structure shall not be constructed or expanded within 1,250 feet from a residence not owned by the titleholder of the animal truck wash facility, a commercial enterprise, a bona fide religious institution, an educational institution, or a public use area.

b. An animal truck wash effluent structure shall not be constructed or expanded within 100 feet from a public thoroughfare.

c. Any separation distance required for a confinement feeding operation structure and a location or object specified in Table 6 for “Water Wells” and “Other Distances” located at iowadnr.gov/afo/rules shall also apply to the animal truck wash effluent structure and that same location or object.

d. An animal truck wash effluent structure shall not be constructed or expanded on land that is part of a one hundred year floodplain.

65.302(2) *Exemptions to separation distances for the construction or expansion of an animal truck wash effluent structure.*

a. Paragraph 65.302(1) “*a*” does not apply if a residence, educational institution, bona fide religious institution, or commercial enterprise was constructed or expanded, or if the boundaries of a public use area were expanded, after the date that the animal truck wash facility was established. The date the animal truck wash facility was established is the date on which the animal truck wash facility commenced operating. A change in ownership or expansion of an animal truck wash facility shall not change the date of operation.

b. Paragraphs 65.302(1) “*a*” and “*b*” do not apply if the titleholder of the land benefiting from the separation distance requirement, including a person authorized by the titleholder, executes a written waiver with the owner of the animal truck wash effluent structure. The structure shall be constructed or expanded under such terms and conditions that the parties negotiate. The state or a political subdivision constructing or maintaining the public thoroughfare benefiting from the separation distance requirement may execute a written waiver with the titleholder of the land where the structure is located. The structure shall be constructed or expanded under such terms and conditions that the parties negotiate. The waiver shall be specific to the construction or expansion project for which it is submitted. The waiver may include specific language to include future projects or expansions.

c. Paragraphs 65.302(1) “*a*” and “*b*” shall not apply to small animal truck wash facilities.

d. Exemptions to separation distance requirements from water sources, major water sources, known sinkholes, agricultural drainage wells and designated wetlands and secondary containment. As specified in Iowa Code section 459.310(3), the separation distance required from surface intakes, wellheads or cisterns of agricultural drainage wells, known sinkholes, water sources, major water sources and designated wetlands, specified in Iowa Code section 459.310 and summarized in Tables 6 to 6d located at iowadnr.gov/afo/rules, shall not apply to a farm pond or privately owned lake as defined in Iowa Code section 462A.2 or to an animal truck wash effluent structure constructed with a secondary containment barrier according to subrule 65.108(11). To qualify for this separation distance exemption, the design of the secondary containment barrier shall be filed in accordance with subrule 65.104(5) prior to beginning construction of the animal truck wash facility.

e. Paragraphs 65.302(1) “*c*” and “*d*” shall not apply to the replacement of an unformed animal truck wash effluent structure constructed prior to April 28, 2003, with a formed animal truck wash effluent structure. The capacity of a replacement animal truck wash effluent structure shall not exceed the amount required to store animal truck wash effluent for any 18-month period.

65.302(3) *Unformed animal truck wash effluent structures.* Unformed animal truck wash effluent structures shall be separated from water wells as follows:

a. Public wells. 1,000 feet from shallow wells and 400 feet from deep wells;

b. Private wells. 400 feet from both shallow wells and deep wells.

65.302(4) *Formed animal truck wash effluent structures.* Formed animal truck wash effluent structures shall be separated from water wells as follows: for both public wells and private wells, 200 feet from shallow wells and 100 feet from deep wells.

567—65.303(455B,459A) Construction permit application.

65.303(1) An animal truck wash facility required to obtain a construction permit in accordance with the provisions of subrule 65.301(1) shall apply for the construction permit at least 90 days before the date that construction, installation, or modification is scheduled to start.

65.303(2) Application for a construction permit for an animal truck wash facility shall be made on a form provided by the department. The application shall include all of the information necessary to enable the department to determine the potential of the proposed animal truck wash effluent structure to achieve the level of control required of the animal truck wash facility. A construction permit application shall include the following:

a. The name of the animal truck wash facility and the name of the owner of the animal truck wash facility, including the owner's mailing address and telephone number.

b. The name of the contact person for the animal truck wash facility, including the person's mailing address and telephone number.

c. The location of the animal truck wash facility.

d. A statement providing that the application is for any of the following:

(1) The construction or expansion of an animal truck wash effluent structure for an existing animal truck wash facility that is not expanding;

(2) The construction or expansion of an animal truck wash effluent structure for an existing animal truck wash facility that is expanding;

(3) The construction of an animal truck wash effluent structure for a proposed new animal truck wash facility.

e. An engineering report, construction plans, and specifications prepared by a PE or by an NRCS-qualified staff person. The engineering report must demonstrate that the storage capacity of the animal truck wash effluent structure is equal to or greater than the amount of effluent to be stored for any six-month period, in addition to two feet of freeboard for an unformed animal truck wash effluent structure or one foot of freeboard for a formed animal truck wash effluent structure.

f. A report on the soil and hydrogeologic information for the site, as described in subrule 65.304(2).

g. Information including but not limited to maps, drawings and aerial photos that clearly show the location of all the following:

(1) The animal truck wash facility and all existing and proposed animal truck wash effluent structures.

(2) Any animal truck wash facility under common ownership or common management and located within 1,250 feet of the animal truck wash facility.

(3) Any public water supply system as defined in Iowa Code section 455B.171 or drinking water well that is located less than the distance from the animal truck wash facility required by subrules 65.302(3) and 65.302(4). Information shall also be provided as to whether the proposed animal truck wash effluent structure will meet all applicable separation distances.

567—65.304(455B,459A) Unformed animal truck wash effluent structure—investigation; design; construction requirements. An unformed animal truck wash effluent structure required to be constructed pursuant to a construction permit issued pursuant to Iowa Code section 459A.205 shall meet the design and construction requirements set forth in this rule.

65.304(1) Drainage tile investigation and removal. Prior to constructing an unformed truck wash effluent basin, the site for the basin shall be investigated for drainage tile lines as provided in this subrule. All applicable records of known drainage tiles shall be examined for the existence of drainage tile lines.

a. Prior to excavation for an unformed manure storage structure, an inspection trench of at least ten inches wide shall be dug around the structure to a depth of at least 6 feet below the original grade and within 25 feet of the proposed outside of the toe of the berm.

b. Drainage tile lines discovered during the tile inspection of an unformed manure storage structure shall be removed and rerouted in the inspection trench or in an area outside of the inspection trench. All tiles within the inspection trench perimeter shall be removed or completely plugged with concrete, grout

or similar materials. Drainage tile lines installed at the time of construction to lower the groundwater may remain in place as long as they are outside of the proposed toe of berm.

65.304(2) Soils and hydrogeologic report. An unformed animal truck wash effluent structure required to be constructed pursuant to a construction permit issued pursuant to rule 567—65.301(455B,459,459A) shall meet design standards as required by a soils and hydrogeologic report. The report shall be submitted with the construction permit application as provided in rule 567—65.303(455B,459A). The report shall include all of the following:

a. A description of the steps taken to determine the soils and hydrogeologic conditions at the proposed construction site, a description of the geologic units encountered, and a description of the effects of the soil and groundwater elevation and direction of flow on the construction and operation of the unformed animal truck wash effluent structure.

b. The subsurface soil classification of the site. A subsurface soil classification shall be based on ASTM international designation D 2487-06 or D 2488-06.

c. The results of a soils investigation conducted at a minimum of three locations within the area of the unformed animal truck wash effluent structure reflecting the continuous soil profile existing within the area of the unformed animal truck wash effluent structure. The soils investigation results shall be used in determining subsurface soil characteristics and groundwater elevation and direction of flow at the proposed site. The soils investigation shall be conducted and utilized as follows:

(1) By a qualified person ordinarily engaged in the practice of performing soils investigations.

(2) At locations that reflect the continuous soil profile conditions existing within the area of the proposed unformed animal truck wash effluent structure, including conditions found near the corners and the deepest point of the proposed unformed animal truck wash effluent structure. The soils investigation shall be conducted to a minimum depth of ten feet below the proposed bottom elevation of the unformed animal truck wash effluent structure.

(3) By methods that identify the continuous soil profile and do not result in mixing of soil layers. Soil corings using hollow-stem augers and other suitable methods may be used.

(4) Soil corings may be used to determine current groundwater levels by completing the corings as temporary monitoring wells as provided in subparagraph 65.304(3)“a”(1) and measuring the water levels in these wells no earlier than seven days after installation as provided in subparagraph 65.304(3)“a”(1).

(5) Upon abandonment of soil core holes, all soil core holes, including those developed as temporary water level monitoring wells, shall be plugged with concrete, Portland cement concrete grout, bentonite, or similar materials.

(6) If excavation methods are used in conducting the soils investigation, upon closure these excavations must be filled with suitable materials and adequately compacted to ensure they will not compromise the integrity of the unformed animal truck wash effluent structure liner.

65.304(3) Hydrology.

a. Determination of groundwater table. For purposes of this rule, the groundwater table is the seasonal high-water table determined by a PE, a groundwater professional certified pursuant to 567—Chapter 134, or qualified staff from the department or NRCS. If a construction permit is required, the department must approve the groundwater table determination.

(1) Current groundwater levels shall be measured as provided in this subparagraph for an unformed animal truck wash effluent structure. Three temporary monitoring wells shall be installed. The top of the well screen shall be within five feet of the ground surface. Each well shall be extended to at least two feet below the proposed top of the liner of an unformed animal truck wash effluent structure or to at least two feet below the proposed bottom of the footings of a formed animal truck wash effluent structure. In addition, the wells must be installed as follows:

1. Unformed animal truck wash effluent structure. For an unformed animal truck wash effluent structure, the monitoring wells may be installed in the soil core holes developed as part of conducting the soils investigation required in paragraph 65.304(2)“c.”

2. Formed animal truck wash effluent structure. For a formed animal truck wash effluent structure, at least three temporary monitoring wells shall be installed as close as possible to three corners of the

structure, with one of the wells close to the corner of deepest excavation. If the formed animal truck wash effluent structure is circular, the three monitoring wells shall be equally spaced and one well shall be placed at the point of deepest excavation.

(2) The seasonal high-water table shall be determined by considering all relevant data, including the groundwater levels measured in the temporary monitoring wells not earlier than seven days following installation, NRCS soil survey information, soil characteristics such as color and mottling, other existing water table data, and other pertinent information. If a drainage system for artificially lowering the groundwater table will be installed in accordance with the requirements of paragraph 65.304(3)“c,” the level to which the groundwater table will be lowered will be considered to represent the seasonal high-water table.

b. The unformed animal truck wash effluent structure shall be constructed with a minimum separation of two feet between the top of the liner of the unformed animal truck wash effluent structure and the seasonal high-water table.

c. If a drainage tile line around the perimeter of the basin is installed a minimum of two feet below the top of the unformed animal truck wash effluent structure liner to artificially lower the seasonal high-water table, the top of the unformed animal truck wash effluent structure’s liner may be a maximum of four feet below the seasonal high-water table which existed prior to installation of the perimeter tile system. The seasonal high-water table may be artificially lowered by gravity flow tile lines or other similar system. However, the following shall apply:

(1) Except as provided in subparagraph 65.304(3)“c”(2), an animal truck wash facility shall not use a nongravity mechanical system that uses pumping equipment.

(2) If the animal truck wash facility was constructed before July 1, 2005, the operation may continue to use its existing nongravity mechanical system that uses pumping equipment or it may construct a new nongravity mechanical system that uses pumping equipment. However, an animal truck wash facility that expands the area of its animal truck wash facility on or after April 1, 2011, shall not use a nongravity mechanical system that uses pumping equipment.

(3) Drainage tile lines may be installed to artificially lower the seasonal high-water table at an unformed animal truck wash effluent structure, if all of the following conditions are satisfied:

1. A device to allow monitoring of the water in the drainage tile lines and a device to allow shutoff of the flow in the drainage tile lines are installed, if the drainage tile lines do not have a surface outlet accessible on the property where the unformed animal truck wash effluent structure is located.

2. Drainage tile lines are installed horizontally no greater than 25 feet away from the outside toe of the berm of the unformed animal truck wash effluent structure. Drainage tile lines shall be placed in a vertical trench and encased in granular material which extends upward to the level of the seasonal high-water table which existed prior to installation of the perimeter tile system.

65.304(4) *Liner design and construction.* The liner of an unformed animal truck wash effluent structure shall comply with all of the following:

a. The liner shall comply with any of the following permeability standards:

(1) The liner shall be constructed to have a percolation rate that shall not exceed one-sixteenth inch per day at the design depth of the unformed animal truck wash effluent structure as determined by percolation tests conducted by the PE. If a clay soil liner is used, the liner shall be constructed with a minimum thickness of 12 inches or the minimum thickness necessary to comply with the percolation rate in this subparagraph, whichever is greater.

(2) The liner shall be constructed to have a percolation rate that shall not exceed one-sixteenth inch per day at the design depth of the unformed animal truck wash effluent structure. The design of the liner will specify a moisture content, compaction requirement, and liner thickness that will comply with the maximum allowable percolation requirement and will be based on moisture content and percentage of maximum density as determined by a standard 5-point proctor test performed in accordance with ASTM D698 (Method A), effective date November 11, 1991. The liner thickness will be based on laboratory tests of the compacted material, with a minimum liner thickness of 12 inches. Appropriate field or laboratory testing during construction shall be provided to verify the design requirements are met.

b. If a synthetic liner is used, the liner shall be installed to comply with the percolation rate required in subparagraph 65.304(4)“a”(1).

65.304(5) *Berm erosion inspection and repair.* The owner of an animal truck wash facility using an unformed animal truck wash effluent structure shall inspect the berms of the unformed animal truck wash effluent structure at least semiannually for evidence of erosion. If the inspection reveals erosion that may impact the unformed animal truck wash effluent structure’s structural stability or the integrity of the unformed animal truck wash effluent structure’s liner, the owner shall repair the berms.

65.304(6) *Basins containing confinement manure and animal truck wash effluent.* Basins containing confinement manure and animal truck wash effluent shall meet the confinement construction standards and separation distance requirements provided in Division II of this chapter. The basin design shall ensure adequate storage including two feet of freeboard for an unformed animal truck wash effluent structure or one foot of freeboard for a formed animal truck wash effluent structure. The basin shall contain the annual manure generated from all confinement animals.

65.304(7) *Formed animal truck wash effluent structures.* An animal truck wash facility electing to use a formed animal truck wash effluent structure may submit, in lieu of an engineering report, a construction design statement that meets the requirements in subrule 65.104(3).

567—65.305(455B,459A) Construction certification.

65.305(1) The owner of an animal truck wash facility who is issued a construction permit for an animal truck wash effluent structure as provided in rule 567—65.301(455B,459,459A) shall submit to the department a construction certification on a form provided by the department from a PE certifying all of the following:

a. The animal truck wash effluent structure was constructed in accordance with the design plans submitted to the department as part of an application for a construction permit pursuant to rule 567—65.303(455B,459A). If the actual construction deviates from the approved design plans, the construction certification shall identify all changes and certify that the changes were consistent with all applicable standards of these rules.

b. The animal truck wash effluent structure was inspected by the PE after completion of construction and before commencement of operation.

65.305(2) A written record of an investigation for drainage tile lines, including the findings of the investigation and actions taken to comply with subrule 65.304(1), shall be submitted as part of the construction certification.

567—65.306(455B,459A) NMP requirements.

65.306(1) The owner of an animal truck wash facility, other than a small animal truck wash facility, that has an animal truck wash effluent structure shall develop and implement an NMP meeting the requirements of this rule. However, an animal truck wash facility that is part of a confinement feeding operation, in lieu of submitting an NMP, may submit an original MMP and an updated MMP to the department.

65.306(2) A person shall not remove animal truck wash effluent from an animal truck wash facility for which an NMP is required under this rule, unless the department approves an NMP as required in this rule.

65.306(3) The department shall not approve an application for a permit to construct an animal truck wash effluent structure unless the owner of the animal truck wash facility applying for approval submits an NMP together with the application for the construction permit as provided in rule 567—65.301(455B,459,459A).

65.306(4) If a construction permit is required as provided in rule 567—65.301(455B,459,459A), the department shall approve or disapprove the NMP as part of the construction permit application. If a construction permit is not required, the department shall approve or disapprove the NMP within 60 days from the date that the department receives the NMP.

65.306(5) An NMP shall include all of the following:

a. Restrictions on the application of animal truck wash effluent based on all of the following:

(1) A phosphorus index of each field in the NMP, as required in subrule 65.111(12), including the factors used in the calculation. A copy of the NRCS phosphorus index detailed report shall satisfy the requirement to include the factors used in the calculation. In addition, total phosphorus (as P₂O₅) available to be applied from the animal truck wash facility shall be included.

(2) Calculations necessary to determine the land area required for the application of animal truck wash effluent from an animal truck wash facility based on nitrogen or phosphorus use levels (as determined by the phosphorus index) in order to obtain optimum crop yields according to a crop schedule specified in the NMP and according to requirements specified in subrule 67.111(4).

b. Information relating to the application of the animal truck wash effluent, including application methods, the timing of the application, and the location of the land where the application occurs.

c. If the application is on land other than land owned or rented for crop production by the owner of the animal truck wash facility, the plan shall include a copy of each written agreement executed by the owner and the landowner or the person renting the land for crop production where the animal truck wash effluent may be applied. The written agreement shall indicate the number of acres on which the animal truck wash effluent may be applied and the length of the agreement.

d. An estimate of the animal truck wash effluent volume or weight produced by the animal truck wash facility.

e. Information that shows all of the following:

(1) There is adequate storage for animal truck wash effluent, including procedures to ensure proper operation and maintenance of the storage structures.

(2) Surface drainage is diverted from the animal truck wash facility.

(3) Chemicals or other contaminants handled on site are not disposed of in an animal truck wash facility that is not specifically designed to store such chemicals or contaminants.

(4) Equipment used for the land application of animal truck wash effluent must be periodically inspected for leaks.

(5) Appropriate site-specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States.

(6) Protocols for appropriate testing of animal truck wash effluent and soil.

(7) Protocols to land-apply animal truck wash effluent in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the animal truck wash effluent.

(8) Identification of specific records that will be maintained to document the implementation and management of the requirements in this subrule.

65.306(6) Current NMP; recordkeeping; record inspections.

a. Current NMP. The owner of an animal truck wash facility who is required to submit an NMP shall maintain a current NMP at the site of the animal truck wash facility and shall make the current NMP available to the department upon request. If nutrient management practices change, a person required to submit an NMP shall make appropriate changes consistent with this rule. If values other than the standard table values are used for NMP calculations, the source of the values used shall be identified.

b. Recordkeeping. Records shall be maintained by the owner of an animal truck wash facility who is required to submit an NMP. This recorded information shall be maintained for five years following the year of application or for the length of the crop rotation, whichever is greater. Records shall be maintained at the site of the animal truck wash facility, either as a hard copy or electronically, and shall be made available to the department upon request. Records to demonstrate compliance with the NMP shall include requirements of rule 567—65.111(455B,459,459B) and the following:

(1) Weather conditions at time of application and for 24 hours prior to and following the application.

(2) For animal truck wash facilities, the soil test analysis must include phosphorus.

(3) Dates when application equipment was inspected.

(4) All applicable records identified in paragraph 65.306(5) “*e.*”

c. Record inspection. The department may inspect an animal truck wash facility at any time during normal working hours and may inspect the NMP and any records required to be maintained.

These rules are intended to implement Iowa Code sections 455B.103, 455B.134, and 455B.171 and chapters 459, 459A, and 459B.

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