



ADMINISTRATIVE RULES – FISCAL IMPACT SUMMARIES

Section 17A.4(3) Iowa Code Supplement requires the Legislative Services Agency (LSA) to analyze the fiscal impact of all administrative rules with an impact of \$100,000 or more and provide a summary of the impact to the Administrative Rules Review Committee (ARRC). Fiscal Impact Statements filed by State agencies can be found on our website at http://staffweb.legis.state.ia.us/lfb/docs/Admin_Rules/arfiscal_notes.htm.

DEPARTMENT OF ADMINISTRATIVE SERVICES

ARC 4528B

Rule Summary The proposed rule updates rules regulating parking on the Capitol Complex by revising the definition of “employee,” and allows easier enforcement of segregated parking in employee and visitor lots. The amendments also provide rules for parking for State employees who do not regularly work on the Capitol Complex, and for Board and Commission members who work at the Capitol Complex only occasionally.

Fiscal Impact Minimal fiscal impact. Additional non-adhesive hang tags (\$1.50 each) will be purchased as parking permits for off-Complex employees to park at the Capitol Complex. Some off-Complex employees presently use adhesive decals. The cost of the hang tags will be partially offset by a reduction in the purchase of the adhesive decals (\$0.90 each). The non-adhesive hang tags can be reused. The number of hang tags that will be required is unknown. Typically, the Department has provided parking permits free of charge and the rules do not change this practice.

ARC 4510B

Rule Summary The rule implements HF 814 (FY 2006 State Purchase, Electronic Bidding Act). The Act adds enforcement conditions to provisions presently found in Section 73.2, Code of Iowa, which requires the posting of any request for bids or proposals on the official State Internet site operated by the Department of Administrative Services. State agencies are required to implement the requirements by September 1, 2005.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Ron Robinson (Ext. 16256)

DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

ARC 4481B

Rule Summary Strikes the rule that rescinded the Chronic Wasting Program in the Department of Agriculture and Land Stewardship. The Program was to terminate on August 17, 2005, due to limited funding; however, \$100,000 was appropriated from the General Fund for the continuation of the Chronic Wasting Disease Program for FY 2006.

Table of Contents:

Department of Administrative Services – p. 1	Medical Examiners Board – p. 11
Department of Agriculture and Land Stewardship – p. 1	Professional Licensure Division – p. 11
Credit Union Division – p. 2	Department of Public Safety – p. 15
Department of Corrections – p. 2	Railway Finance Authority – p. 15
Department of Cultural Affairs – p. 3	Records Commission – p. 15
Dental Examiners Board – p. 3	Department of Revenue – p. 16
Department of Education – p. 4	Secretary of State – p. 16
Environmental Protection Commission – p. 4	Soil Conservation Division – p. 16
Ethics and Campaign Disclosure Board – p. 7	State Public Defender – p. 17
Department of Human Services – p. 8	Department of Transportation – p. 17
Iowa Finance Authority – p. 10	Workers' Compensation Division – p. 17
Labor Services Division – p. 11	

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

2

The legislation allows the Department to charge a fee of up to \$200 annually for each person who raises farm deer, but the Department does not expect to charge fees at this time. Participation in the Program is voluntary for farm deer producers.

Fiscal Impact The Chronic Wasting Disease Program received a General Fund appropriation of \$100,000 for FY 2006.

ARC 4408B

Rule Summary Rescinds and replaces Chapters 90 (State Licensed Warehouse and Warehouse Operators), 91 (Licensed Grain Dealers), 92 (Participation in Grain Indemnity Fund), 93 (Grain Indemnity Fund Board – Organization and Operations), and 94 (Claims Against the Grain Depositors and Sellers Indemnity Fund).

Fiscal Impact Minimal fiscal impact to the State regarding increased expenditures. Total costs to the regulated community for compliance is unknown; however, the proposed changes may increase costs and, in a few instances, reduce costs due to eliminating restrictions on storage facilities. Estimated savings cannot be calculated, as the number of warehouse operators choosing to build and license new facilities is unknown.

STAFF CONTACT: Debra Kozel (Ext. 16767)

CREDIT UNION DIVISION – DEPARTMENT OF COMMERCE

ARC 4541B

Rule Summary The rule requires a credit union, when lending for the purpose of acquisition, to obtain a written legal opinion by an attorney or title insurance written by an insurance company licensed to do business in the State in which the real estate is located.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Ron Robinson (Ext. 16256)

DEPARTMENT OF CORRECTIONS

ARC 4531B

Rule Summary Complies with requirements of HF 619 (FY 2006 Sex Offender Act), specifically, conducting risk assessments on sex offenders to provide the Department of Public Safety with information to update the Sex Offender Registry. The proposed rules define the risk assessment tools to be used, and provide a process for offenders to follow who contest their risk assessment score. The proposed rule complies with the Supreme Court decision regarding administrative appeals (*Bryan Brummer vs. Iowa Department of Corrections*, 9661 N.W.2d 167, Iowa 2003).

Fiscal Impact Impact to the Attorney General's Office: The estimated cost to be absorbed by the Office is approximately \$35,000 annually.

Impact to the DOC and CBC District Departments: The estimated cost to be absorbed by the Corrections System is approximately \$279,000 annually. This estimate includes \$140,000 for the cost of contested cases (Administrative Law Judge, ICN line charges, and one-time programming costs) plus \$139,000 for additional staff due to increased workload from conducting the risk assessments.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

3

ARC 4516B

Rule Summary Amends the standards for county jail facility inspections to be consistent with American Correctional Association (ACA) industry standards for jail operations.

Fiscal Impact No fiscal impact. Implementing the ACA space standards reduces the required amount of square footage per inmate.

ARC 4517B

Rule Summary Amends the standards for county jail facility inspections to be consistent with American Correctional Association (ACA) industry standards for temporary holding facility operations.

Fiscal Impact No fiscal impact. Implementing the ACA space standards reduces the required amount of square footage per inmate.

STAFF CONTACT: Beth Lenstra (Ext. 16301)

DEPARTMENT OF CULTURAL AFFAIRS

ARC 4538B

Rule Summary Clarifies the definition of Cultural and Entertainment Districts. Affirms the availability of rehabilitation tax credits for projects in such Districts.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Robin Madison (Ext. 15270)

DENTAL EXAMINERS BOARD – DEPARTMENT OF PUBLIC HEALTH

ARC 4535B

Rule Summary Clarifies the sequence of services provided to new patients by a dental hygienist. Allows dental hygienists to provide services prior to the dentist examining the patient as long as the services provided are rendered under direct or public health supervision. Also, requires that dentists conduct an examination of the new patient during the initial visit.

Fiscal Impact No fiscal impact.

ARC 4534B

Rule Summary Clarifies the renewal and reinstatement procedures for a local anesthesia permit.

Fiscal Impact No fiscal impact.

ARC 4533B

Rule Summary Changes the renewal term of a resident license from an annual renewal to a license period that extends until the expected date of completion of the resident training program; changes the renewal term of a dental hygiene license from a biennial period to a one-year period for the renewal term of July 1, 2006, and ending June 30, 2007. For the renewal term beginning July 1, 2007, and ending June 30, 2009, dental hygiene licenses are to be renewed biennially and expire on June 30 of every odd-numbered year. Also, increases application and renewal fees, along with fees for issuing duplicate certificates and renewals, and written verifications of licensure or registration status.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

4

Fiscal Impact The estimated fiscal impact is an increase of \$169,000 in revenues generated from the increase in licensure fees paid by those in the practice of dentistry. Of this, the Board will retain \$153,000 for activities related to the Board, and approximately \$17,000 will be deposited into the General Fund. House File 825 (FY 2006 Health and Human Services Appropriations Act) contained codification language to allow the Board to retain and expend 90.0% of revenues generated from any fee increase after July 1, 2005.

ARC 4536B

Rule Summary Clarifies procedures for the renewal and reinstatement of deep sedation/general anesthesia and conscious sedation permits.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Lisa Burk (Ext. 17942)

DEPARTMENT OF EDUCATION

ARC 4529B

Rule Summary Clarifies that a parent or guardian must use a student's legal name when enrolling that student in school.

Fiscal Impact No fiscal impact to the State.

ARC 4530B

Rule Summary Clarifies the intent of the Department to establish standards for smaller school districts to regulate construction projects financed with Local Option Sales and Services Tax for School Infrastructure revenues. Eliminates the requirement for a Certificate of Need for larger school districts.

Fiscal Impact No fiscal impact to the State.

STAFF CONTACT: Robin Madison (Ext. 15270)

ENVIRONMENTAL PROTECTION COMMISSION – DEPARTMENT OF NATURAL RESOURCES

ARC 4502B

Rule Summary Adds 12 exemptions of equipment or processes that are required to obtain an air construction permit due to their low emissions of regulated pollutants. This rulemaking is a result of a workgroup comprised of ten Iowa industrial facilities, the Department of Economic Development, the federal Environmental Protection Agency – Region VII, and the Iowa Air Emissions Assistance Program at the University of Northern Iowa.

Fiscal Impact Since the State does not charge for construction air permits, no fees are collected, and therefore, there is no fiscal impact to the State. There is a potential savings to Iowa businesses due to a reduction in record keeping requirements.

ARC 4503B

Rule Summary Amends the fugitive dust rule to include ordinary travel on an unpaved public road, routine traffic, and certain road maintenance activities. These activities are exempt from the requirements of the fugitive dust rule.

Fiscal Impact No fiscal impact.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

5

ARC 4504B

Rule Summary

The proposed amendments relate to Iowa's Water Quality Standards:

- **Protected Flow** – Eliminates the exceptions of the design low flow requirement, commonly known as the protected flow concept. The current use of exceptions to the protected flow concept, in conjunction with the implementation of Iowa's Water Quality Standards, has not protected aquatic life uses under critical low flow conditions and is not consistent with the federal Environmental Protection Agency (EPA) guidelines. There are 63 wastewater treatment facilities that would be impacted through more stringent effluent ammonia-nitrogen limits.
- **Rebuttal Presumption** – Revises the general use classification and no longer allows streams that flow as a result of discharges from wastewater treatment facilities to be considered a general use segment. Also, eliminates language that State aquatic life will be protected from acutely toxic conditions only at elevated flows. Designates all perennial rivers and streams or intermittent streams with perennial pools in Iowa as Class A1 and all of the same streams not listed in the Surface Water Classification as Class B(WW-1) waters. There are 334 wastewater treatment facilities that will be impacted from the implementation of more stringent effluent ammonia-nitrogen and bacteria limits. The treated effluent from these continuously discharging facilities currently enter General Use (non-designated) watercourses ranging from channelized ditches to meandering waterways. All of these watercourses were found not to meet the current definitions for designated uses. Under the proposed rule change, all would become designated as Class A1 and Class B(WW-1) waters.
- **Recreational Use Designation** – Adds all streams that are not protected to the Class A1 – Primary Contact Recreational Use designation, which includes all current Class B(LR) waters. This would impact 14 additional wastewater treatment facilities.

Fiscal Impact

The Department of Natural Resources (DNR) estimates the additional costs to the Department will be \$75,000 per year and 1.5 FTE positions to perform field assessments and to prepare Use Attainability Analysis (UAA) reports. In addition, the DNR estimates the cost for additional field equipment at \$3,000 per year. These costs will increase for a period of five to seven years.

The estimated fiscal impact to the facilities is estimated between \$790.3 million to \$956.2 million. The following table summarizes the estimated costs and is part of the detailed Fiscal Impact statement submitted by the DNR. See **Attachment A** for the complete analysis.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

6

Water Quality Standards Fiscal Impact Summary			
High-Cost Scenario			
Rule Making Topic	Nitrification	Disinfection - Dechlorination	Total
Protected Flow	\$ 177,946,000	N/A	\$ 177,946,000
Rebuttal Presumption	716,583,000	\$ 50,100,000	766,683,000
Recreational Use Designation	N/A	11,550,000	11,550,000
Total High Cost	\$ 894,529,000	\$ 61,650,000	\$ 956,179,000
Low-Cost Scenario			
Protected Flow	\$ 134,011,000	N/A	\$ 134,011,000
Rebuttal Presumption	594,605,000	\$ 50,100,000	644,705,000
Recreational Use Designation	N/A	11,550,000	11,550,000
Total Low Cost	\$728,616,000	\$ 61,650,000	\$ 790,266,000
Total Cost Range: \$790.3 million to \$956.2 million			

N/A = Not applicable

Benefits derived include improved stream conditions for aquatic and semi-aquatic life, watering needs for wildlife and livestock, and improved aesthetic conditions. The monetary value of the benefits, however, cannot be quantified.

ARC 4505B

Rule Summary

Amends the State's warm water aquatic life use designations and adopts protocol to assess and designate waterbodies for warm water aquatic life uses:

- Changes the current Class B(LR) use designation from Limited Resource Warm Water to Warm Water – Type 2 (Class B(WW-2)).
- Changes the current Class B(WW) use designation from Significant Resource Warm Water to Warm Water – Type 1 (Class B(WW-1)).
- Adds a new use designation titled Warm Water – Type 3 (Class B(WW-3)).
- Adds a new use designation titled Human Health (Class HH).
- Adopts the document entitled, "Warm Water Stream Use Assessment and Attainability Analysis Protocol," that details assessment methods for the warm water uses of streams.
- Establishes criteria for Dissolved Oxygen, chemical, and ammonia-nitrogen related to the new proposed use designation of Class B(WW-3) at the same level that is associated with the existing Class B(LR) use designation.
- Transfers all existing Class B(WW) designated waters to the new Class B(WW-1) use designation.
- Transfers all existing Class B(LR) designated waters to the new Class B(WW-2) use designation.
- Incorporates the proposed use designation classifications into the text of the Water Quality Standards.
- Adds Class HH to Table 1, Criteria for Chemical Constituents.
- Transfers all Human Health – Fish Criteria for Class B(WW), B(LW), and B(CW) designated waters, and Human Health – Fish and Wildlife Criteria from Class C waters to Class HH.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

7

Other Information: Iowa's current warm water aquatic life stream use designations, Class B(WW) and B(LR), include most designated warm waterbodies. The new Class B(WW-1) use designation will be defined similarly to the current significant resource warm water use designation. The new Class B(WW-2) use designation will be defined similarly to the current limited resource warm water use designation.

Fiscal Impact This rule adopts the protocol to assess and designate warm waterbodies. See ARC 4504B for the fiscal impact of changes to the Water Quality Standards.

Rule Summary **ARC 4506B and ARC 4507B**
Amends 567 IAC Chapter 65 and creates two divisions, one for confinement operations and one for open feedlots. Creates a separate division for open feedlot rules as specified in HF 805 (FY 2006 Open Feedlot Act). This includes minimum design standards for settled open feedlot effluent basins, nutrient management plans, alternative technology systems, and construction permits. Included are provisions necessary to implement the National Pollutant Discharge Elimination System (NPDES) Program.

Fiscal Impact Minimal fiscal impact to the State based on existing staff enforcing compliance and evaluating the NPDES Program and construction permit applications.

STAFF CONTACT: Debra Kozel (Ext. 16767)

ETHICS AND CAMPAIGN DISCLOSURE BOARD

Rule Summary **ARC 4485B**
Clarifies that elections of Board officers take place on an annual basis at the Board's first meeting after April 30.

Fiscal Impact No fiscal impact.

Rule Summary **ARC 4484B**
Clarifies that persons requesting an advisory opinion concerning the application of the ethics and lobbying laws in Chapter 68B, Code of Iowa, are to be referred to the Senate and House Ethics Committees.

Fiscal Impact No fiscal impact.

Rule Summary **ARC 4501B**
Reflects statutory changes enacted by the 2005 General Assembly that impact Board advisory opinions (jurisdiction of the Board and opinions as defense to complaints).

Fiscal Impact No fiscal impact.

Rule Summary **ARC 4500B**
Permits campaign committees to make campaign transactions by debit card and credit card (currently may only do so by check).

Fiscal Impact No fiscal impact.

Rule Summary **ARC 4483B**
Changes the "official" committee address and telephone number from the treasurer of the committee to the candidate in the case of a candidate's committee, and the chair of a committee for all other types of committees. This relates to the person

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

8

responsible for filing campaign reports. Also, states the Board's policy for electronic submission whenever possible.

Fiscal Impact No fiscal impact.

ARC 4487B

Rule Summary Rescinds 351 IAC rule 8.10, concerning a sponsor of a function held during the Legislative Session filing a report directly with the Ethics Board. As a result of a change in the law, the Board will now receive copies of these reports from the General Assembly during the Legislative Session.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Sam Leto (Ext. 16764)

DEPARTMENT OF HUMAN SERVICES

ARC 4511B

Rule Summary Establishes rules for the voluntary child care rating system that was authorized in legislation enacted during the 2005 Legislative Session, and adds appeal rights for providers participating in the system.

Fiscal Impact There are 6,000 registered child development homes and 1,500 licensed child care centers. It is unknown how many of these providers will participate in the first year.

House File 825 (FY 2006 Health and Human Services Appropriations Act) appropriated \$900,000 for establishment of the system, including costs associated with project management and support, marketing and public awareness, quality rating system specialists, environmental rating scale training, and additional provider training and achievement bonuses. It is estimated that these costs may increase by \$450,000 in FY 2007.

ARC 4545B

Rule Summary Amendments rescind rules for the defunct U.S. Department of Agriculture's Commodity Distribution Programs and adopt rules for the federal Emergency Food Assistance Program. The State contracts with organizations to operate distribution sites under this Program. The amendments address the procedure for contract eligibility and rules for contractor operations and oversight.

Fiscal Impact It will cost \$44 to eliminate one remaining commodities form.

ARC 4486B

Rule Summary The proposed amendments change the rules regulating the *hawk-i* program to reference the electronic application and referral forms for families ineligible or cancelled from Medicaid; clarify that either a Medicaid or a *hawk-i* application can be used to determine eligibility for both programs; explain that a child voluntarily excluded from Medicaid for any financial reason may qualify for *hawk-i*; provide for premiums to be considered as paid timely if postmarked by the due date and allow a one-time, ten-day extension for premium payment; and introduce data-matching, currently used in Medicaid, to the *hawk-i* program.

Fiscal Impact There will likely be no fiscal impact from these rule changes, though there is the potential for some cost savings through the data-matching process.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

9

ARC 4512B

Rule Summary The proposed amendments bring the Department of Human Services into compliance with recently changed Iowa Supreme Court guidelines for calculating child support payments. The amendments also align DHS policies on suspension and reinstatement of child support with Code of Iowa as amended during the 2005 Legislative Session. The rules expand situations in which the Child Support Recovery Unit can assist parents with altering the child support arrangement. Additionally, the rules state that Unit staff shall follow up on incomplete requests for suspension or reinstatement instead of denying them, as is current policy.

Fiscal Impact No fiscal impact.

ARC 4532B

Rule Summary The amendments implement HF 753 (FY 2006 Foster Care Safety-Related Information Act). The Act requires that certain safety-related information concerning a child be provided to a parent, guardian, foster parent, or other custodian of a child unless otherwise ordered by a court.

The amendments also implement a provision in HF 825 (FY 2006 Health and Human Services Appropriations Act) that requires the Department of Human Services (DHS) to allow an infant's mother to continue to breastfeed an infant that is removed from the infant's home when such contact is in the best interest of the child.

Fiscal Impact It is anticipated that there would be no fiscal impact for providing safety-related information to a parent, guardian, foster parent, or other custodian of a child, since it is current practice to include this information in the case plan.

The fiscal impact for the DHS to allow a mother to continue to breastfeed an infant after removal from the home cannot be determined; however, it is likely to be minimal. Any fiscal impact would be for costs associated with transporting the child to the mother. There are currently 129 infants age six months or younger in placement.

ARC 4513B

Rule Summary Changes transportation rules for licensed child care centers to reflect the child passenger restraint systems required by State law, effective January 1, 2006, as well as the recommendation from the National Transportation Safety Board for center vehicles to be maintained and inspected regularly.

The rules also require all owners, personnel and volunteers, whether in staff ratio or not, to be free from the use of illegal drugs, and not under the influence of alcohol or prescription and non-prescription drugs that could impair the ability to function.

The rules also require that unrestricted access to children in a child care center be limited to persons with a record check and approval to be involved in child care.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Kerri Johannsen (Ext. 14611) Lisa Burk (Ext. 17942) Sue Lerdal (Ext. 17794)

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

10

IOWA FINANCE AUTHORITY

ARC 4547B

Rule Summary Extends the maximum loan term to 40 years and increases the maximum size of subordinate loans for multi-family housing.

Fiscal Impact No fiscal impact. The loan fees are not being changed by these amendments.

ARC 4422B and ARC 4549B

Rule Summary The proposed amendment (ARC 4422B) would have adopted a new 2006 allocation plan for the State Housing Trust Fund; however, due to a lack of funds the Authority will not make Trust Fund awards in FY 2006.

Fiscal Impact No fiscal impact.

ARC 4550B

Rule Summary Proposes a new chapter concerning the Transitional Housing Revolving Loan Program operated by the Authority. Through the Program, the Authority seeks to assist in the development of affordable housing for parents who are reuniting with their children while completing or participating in substance abuse treatment. The rules outline the purpose, application procedure, Program guidelines, and other necessary requirements of the Program.

Fiscal Impact The Authority has been appropriated \$1.4 million for this purpose. The funds, however, will be loaned to owners, not expended, and interest earned on the loans will remain in the Transitional Housing Loan Program Fund.

ARC 4548B

Rule Summary Proposes a new chapter concerning the Home and Community-Based Services (HCBS) Rent Subsidy Program to be operated by the Authority. Through the Program, the Authority seeks to provide rent subsidy for persons who participate in a Home and Community-Based Services (HCBS) Waiver Program and who meet the nursing facility level of care for HCBS waiver services as established on or after July 1, 2005. The rules outline the purpose, application procedure, program guidelines, and other necessary requirements of the program.

Fiscal Impact For FY 2006, the Authority was appropriated \$700,000 from the Senior Living Trust Fund for this purpose.

ARC 4551B

Rule Summary Proposes a new chapter concerning the State Revolving Fund Program operated by the Iowa Finance Authority. The proposed new chapter contains rules to guide the Authority in the financial aspects of the Program, including loan programs, project funding, loan approval, and loan terms.

Fiscal Impact No fiscal impact. The State Revolving Fund is largely comprised of federal funds. The Iowa Finance Authority provides a 20.0% match through the issuance of bonds. Interest earned on existing loans under the State Revolving Fund Program is used to pay debt service on the bonds.

STAFF CONTACT: Russell Trimble (Ext. 14613)

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

11

LABOR SERVICES DIVISION – DEPARTMENT OF WORKFORCE DEVELOPMENT

ARC 4544B

Rule Summary In the September Administrative Rules Review Committee meeting, the Division provided notice of ARC 4443B, which consolidated fee schedules and increased fees for the inspection of boilers and pressure vessels. Boilers with less than 70 pounds per square inch of pressure were inadvertently struck from ARC 4443B. The proposed ARC 4544B makes the necessary correction to the rules as originally intended by the Boiler and Pressure Vessel Board in rule ARC 4443B. The fiscal impact of ARC 4544B was accounted for in ARC 4443B, but is repeated below.

Fiscal Impact As a result of the increase in fees for inspection of boilers, the Division will generate an additional \$276,000 in fee revenue annually starting in FY 2006 for deposit to the Boiler and Pressure Vessel Safety Revolving Fund. This Program, by statute, is required to be self-sustaining.

STAFF CONTACT: Russell Trimble (Ext. 14613)

MEDICAL EXAMINERS BOARD – DEPARTMENT OF PUBLIC HEALTH

ARC 4526B

Rule Summary Raises the fees for the various types of physician licensure by the following amounts: initial licensure by \$50; special licensure by \$100; license renewal via on-line application by \$87.50; and license renewal via paper application by \$75. Also, the fee to reinstate a license to active status if less than one year after going inactive will be raised by \$75, and the penalty fee of \$125 is eliminated. Reinstatement of a license to active status after having been inactive for more than one year will be raised by \$50. The fees will be implemented in October 2005.

Fiscal Impact The estimated fiscal impact is an increase of \$343,000 in revenues generated from the increase in licensure fees paid by those in the practice of medicine. Of this, the Board will retain \$309,000 for activities related to the Board and approximately \$34,000 will be deposited into the General Fund. House File 825 (FY 2006 Health and Human Services Appropriations Act) contains codification language to allow the Board to retain and expend 90.0% of revenues generated from any fee increase after July 1, 2005.

STAFF CONTACT: Lisa Burk (Ext. 17942)

PROFESSIONAL LICENSURE DIVISION – DEPARTMENT OF PUBLIC HEALTH

ARC 4519B

Rule Summary Cosmetology Arts and Sciences Examiners – Proposed amendments make administrative rules consistent with legislative changes relating to intense pulsed light devices and provide for a mechanism for attestation when proof of high school graduation may not be possible.

Fiscal Impact No fiscal impact.

ARC 4509B

Rule Summary Cosmetology Arts and Sciences Examiners – Proposed amendment clarifies the examination required for licensure.

Fiscal Impact No fiscal impact.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

12

ARC 4527B
Rule Summary Cosmetology Arts and Sciences Examiners – Proposed amendment adopts new rules relating to temporary permits.

Fiscal Impact No fiscal impact.

ARC 4525B
Rule Summary Cosmetology Arts and Sciences Examiners – Proposed amendments correct terminology by changing the word “reactivation” to “reinstatement,” clarify continuing education requirements, and delete the word “initial” to allow the subrule to apply to all types of licenses.

Fiscal Impact No fiscal impact.

ARC 4543B
Rule Summary Mortuary Science Examiners – Proposed amendments redefine the definition of “authorized person,” delete the word “initial,” revise student practicum requirements, and update requirements regarding preparation of a body.

Fiscal Impact No fiscal impact.

ARC 4542B
Rule Summary Mortuary Science Examiners – Increases licensure fees by \$20 per licensee. There are 868 licensees that renew licenses every two years. Funeral home licenses will also be increased by \$15 for 600 funeral homes. House File 825 (FY 2006 Health and Human Services Appropriations Act) codified language that permits the Board to retain 90.0% of any new fee increase, with the remaining 10.0% deposited into the General Fund.

Fiscal Impact The fee increase for licensees will generate additional revenues of approximately \$17,000. Of this, the Board will retain approximately \$15,000 (90.0%) and \$2,000 (10.0%) will be deposited into the General Fund.

The fee increase for funeral home licenses will generate additional revenues of approximately \$9,000. Of this, the Board will retain approximately \$8,000 (90.0%) and \$1,000 (10.0%) will be deposited into the General Fund.

ARC 4524B
Rule Summary Massage Therapy Examiners – Increases licensure fees by \$10 per licensee. There are 2,030 licensees that renew licenses every two years. House File 825 (FY 2006 Health and Human Services Appropriations Act) codified language that permits the Board to retain 90.0% of any new fee increase, with the remaining 10.0% deposited into the General Fund.

Fiscal Impact The fee increase will generate additional revenues of approximately \$20,000. Of this, the Board will retain approximately \$18,000 (90.0%) and \$2,000 (10.0%) will be deposited into the General Fund.

ARC 4488B
Rule Summary Physical and Occupational Therapy Examiners/Physical Therapy – Proposed amendments define licensure status as active or inactive; define the process for license reactivation and reinstatement; change from pre- and post-continuing education audits prior to licensure, to post-continuing education audits following licensure; add grounds for disciplinary action; and establish the fee for reactivation.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

13

Fiscal Impact No fiscal impact. The reactivation fee is the same as what would have been collected under the previous definition of reinstatement and no increase in these fees is anticipated.

ARC 4496B

Rule Summary Physical and Occupational Therapy Examiners/Physical Therapy – Proposed amendments adopt a new discipline rule that provides the Board with the ability to discipline a licensee for breach of an agreement or contract with the Impaired Practitioner Program.

Fiscal Impact No fiscal impact.

ARC 4495B

Rule Summary Physical and Occupational Therapy Examiners/Physical Therapy – Increases licensure fees by \$10 per licensee. There are 2,556 licensees that renew licenses every two years. House File 825 (FY 2006 Health and Human Services Appropriations Act) codified language that permits the Board to retain 90.0% of any new fee increase, with the remaining 10.0% deposited into the General Fund.

Fiscal Impact The fee increase will generate additional revenues of approximately \$26,000. Of this, the Board will retain approximately \$23,000 (90.0%) and \$3,000 (10.0%) will be deposited into the General Fund.

ARC 4491B

Rule Summary Physical and Occupational Therapy Examiners/Occupational Therapy – Proposed amendments define licensure status as active or inactive; define the process for license reactivation and reinstatement; change from pre- and post-continuing education audits prior to licensure, to post-continuing education audits following licensure; add grounds for disciplinary action; and establish the fee for reactivation.

Fiscal Impact No fiscal impact. The reactivation fee is the same as what would have been collected under the previous definition of reinstatement and no increase in these fees is anticipated.

ARC 4490B

Rule Summary Physical and Occupational Therapy Examiners/Occupational Therapy – Proposed amendments adopt a new discipline rule that provides the Board with the ability to discipline a licensee for breach of an agreement or contract with the Impaired Practitioner Program.

Fiscal Impact No fiscal impact.

ARC 4489B

Rule Summary Physical and Occupational Therapy Examiners/Occupational Therapy – Increases licensure fees by \$10 per licensee. There are 1,229 licensees that renew licenses every two years. House File 825 (FY 2006 Health and Human Services Appropriations Act) codified language that permits the Board to retain 90.0% of any new fee increase, with the remaining 10.0% deposited into the General Fund.

Fiscal Impact The fee increase will generate additional revenues of approximately of \$12,000. Of this, the Board will retain approximately \$11,000 (90.0%) and \$1,000 (10.0%) will be deposited into the General Fund.

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

14

ARC 4499B
Rule Summary Respiratory Care Examiners – Deletes language relating to a graduate to conform to legislative changes.

Fiscal Impact No fiscal impact.

ARC 4498B
Rule Summary Respiratory Care Examiners – Increases licensure fees by \$10 per licensee. There are 1,340 licensees that renew licenses every two years. House File 825 (FY 2006 Health and Human Services Appropriations Act) codified language that permits the Board to retain 90.0% of any new fee increase, with the remaining 10.0% deposited into the General Fund.

Fiscal Impact The fee increase will generate additional revenues of approximately of \$13,000. Of this, the Board will retain approximately \$12,000 (90.0%) and \$1,000 (10.0%) will be deposited into the General Fund.

ARC 4492B
Rule Summary Speech Pathology and Audiology Examiners – Proposed amendments define licensure status as active or inactive; define the process for license reactivation and reinstatement; change from pre- and post-continuing education audits prior to licensure, to post-continuing education audits following licensure; add grounds for disciplinary action; and establish the fee for reactivation.

Fiscal Impact No fiscal impact. The reactivation fee is the same as what would have been collected under the previous definition of reinstatement and no increase in these fees is anticipated.

ARC 4493B
Rule Summary Speech Pathology and Audiology Examiners – Proposed amendments define licensure status as active or inactive; define the process for license reactivation and reinstatement; change from pre- and post-continuing education audits prior to licensure, to post-continuing education audits following licensure; add grounds for disciplinary action; and establish the fee for reactivation.

Fiscal Impact No fiscal impact. The reactivation fee is the same as what would have been collected under the previous definition of reinstatement and no increase in these fees is anticipated.

ARC 4497B
Rule Summary Speech Pathology and Audiology Examiners – Increases licensure fees by \$16 per licensee. There are 267 audiologists and 782 speech pathologists that renew licenses every two years. House File 825 (FY 2006 Health and Human Services Appropriations Act) codified language that permits the Board to retain 90.0% of any new fee increase, with the remaining 10.0% deposited into the General Fund.

Fiscal Impact The fee increase will generate additional revenues of approximately \$17,000. Of this, the Board will retain approximately \$15,000 (90.0%) and \$2,000 (10.0%) will be deposited into the General Fund.

ARC 4494B
Rule Summary Interpreters for the Hearing Impaired – Increases licensure fees by \$20 per licensee. There are 245 interpreters who may renew licenses every two years if they all become eligible for permanent licensure. The Board is new and 176 licensees

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

15

currently have a temporary license that cannot be renewed until the license passes a national examination. As of July 1, 2007, there will no longer be a temporary licensure status available.

House File 825 (FY 2006 Health and Human Services Appropriations Act) codified language that permits the Board to retain 90.0% of any new fee increase, with the remaining 10.0% deposited into the General Fund.

Fiscal Impact The fee increase will generate additional revenues of approximately \$4,900. Of this, the Board will retain approximately \$4,400 (90.0%) and \$500 (10.0%) will be deposited into the General Fund.

STAFF CONTACT: Lisa Burk (Ext. 17942)

DEPARTMENT OF PUBLIC SAFETY

Rule Summary Adopts a new State building code based upon the International Building Code and other related nationally-recognized codes. **ARC 4514B**

Fiscal Impact Staff training costs are estimated to be under \$100,000 annually and will be absorbed by the Department.

Rule Summary Adopts the State Historical Building Code as mandated in Section 103A.41, Code of Iowa. **ARC 4515B**

Fiscal Impact No fiscal impact.

STAFF CONTACT: Jennifer Acton (Ext. 17846)

RAILWAY FINANCE AUTHORITY – DEPARTMENT OF TRANSPORTATION

Rule Summary Section 327H.20A, Code of Iowa, as amended by House File 875 (FY 2006 Infrastructure Appropriations Act), establishes a Railroad Revolving Loan and Grant Fund under the control of the Iowa Railway Finance Authority. The proposed rules contain requirements and procedures for administration of loans and grants from the Fund. **ARC 4523B**

Fiscal Impact This is a funding program to expend moneys credited to the Railroad Revolving Loan and Grant Fund. The Fund is used for the purpose of providing loans and grants for railroad-related improvement projects. It is estimated that \$3.5 million will be available in FY 2005 through FY 2006, and \$500,000 will be available in subsequent fiscal years.

STAFF CONTACT: Dave Reynolds (Ext. 16934)

RECORDS COMMISSION

Rule Summary Provides guidelines and clarifies the responsibilities of agencies related to the retention of e-mail messages. **ARC 4537B**

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

16

Fiscal Impact Minimal fiscal impact. No new duties or requirements are established, but improved recordkeeping practices may result in additional costs for some agencies.

STAFF CONTACT: Robin Madison (Ext. 15270)

DEPARTMENT OF REVENUE

ARC 4518B

Rule Summary The rules implement tax credit provisions of the following three Acts:

HF 857 (FY 2006 Housing Development Tax Credit Act) – Allows for the transfer of eligible housing business tax credits for projects located in a Brownfield site or a blighted area.

HF 868 (FY 2006 Iowa Values Fund Act) – Provides for additional historic, cultural, and entertainment district tax credits, and additional Endow Iowa tax credits.

HF 882 (FY 2005 Standing Appropriations Act) – Allows a tax credit to an eligible housing business under the Enterprise Zone Program, and for property rehabilitation to be allocated to a limited partner designated by the limited partnership when Section 42 Low-Income Housing Credits are used to finance these projects.

Fiscal Impact The fiscal impact of the provisions of these Acts is provided below. Additional detail is provided in each fiscal note.

- House File 857 – The tax credit provision implemented in this rule will reduce General Fund revenues between \$810,000 and \$840,000 for FY 2006 and between \$3.5 million and \$3.6 million for FY 2007.
- House File 868 – The tax credit provisions implemented in this rule will reduce General fund revenues by \$1.0 million for FY 2006 and \$6.0 million for FY 2007.
- House File 882 – No fiscal impact. Under current law, tax credits for projects using Section 42 Low-Income Housing Credits are already transferable.

STAFF CONTACT: Russell Trimble (Ext. 14613)

SECRETARY OF STATE

ARC 4546B

Rule Summary The proposed amendments make editorial changes to 721 IAC Chapter 22, provide additional security guidance to county commissioners to improve the safety of voting equipment, make changes to incorporate requirements of the Help America Vote Act (HAVA), and provide programming and vote-counting procedures for the newly certified Election Systems and Software voting system.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Douglas Wulf (Ext. 13250)

SOIL CONSERVATION DIVISION – DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

ARC 4521B and ARC 4520B

Rule Summary Establishes Administrative Rules for the Watershed Improvement Review Board that was established in SF 200 (FY 2006 Watershed Improvement Review Board Act), and provides procedures related to the operations of the Board. To obtain a

Administrative Rules – Fiscal Impact Summaries

October 11, 2005

17

watershed grant, the grantee must be established as a non-profit entity, which includes Soil and Water Conservation Districts.

Fiscal Impact The Watershed Improvement Fund was appropriated \$5.0 million for FY 2006. The Department of Agriculture and Land Stewardship received \$50,000 to provide administrative and technical assistance to the Watershed Improvement Board.

STAFF CONTACT: Debra Kozel (Ext. 16767)

STATE PUBLIC DEFENDER – DEPARTMENT OF INSPECTIONS AND APPEALS

ARC 4540B and ARC 4539B

Rule Summary Amends the rules to increase the mileage reimbursement for court-appointed counsel from 24 to 30 cents per mile.

Fiscal Impact No significant fiscal impact.

STAFF CONTACT: Beth Lenstra (Ext. 16301)

DEPARTMENT OF TRANSPORTATION

ARC 4482B

Rule Summary The rules are amended to reflect the amendments made in SF 2070 (FY 2005 Motor Vehicle Registration and Titling Act), and accommodate the new computer system for registering and titling vehicles, which was activated in January 2005. Senate File 2070 makes procedural changes to the registration and title application process, permits electronic transactions, and repeals the requirement to submit a copy of the registration receipt when exchanging regular plates for special plates or when applying for a registration credit or refund.

The rules are amended to streamline processes where warranted; remove form numbers and titles and use more generic descriptions for forms; correct or delete outdated language; strike language that unnecessarily repeats the Code of Iowa; consolidate and simplify wording; add the Department's Internet address for vehicle-related forms and information; update citations to federal and State laws in the text of rules and in implementation clauses; and otherwise clean up the rules.

Fiscal Impact The fiscal impact cannot be determined. Most of the amendments are intended to streamline the rules and bring them up to date. Procedural changes made should reduce unnecessary paperwork and time spent by the DOT, county treasurers, vehicle dealers, and vehicle owners.

STAFF CONTACT: Mary Beth Mellick (Ext. 18223)

WORKERS' COMPENSATION DIVISION

ARC 4522B

Rule Summary Amends the time period for first report of injury under Workers' Compensation; amends the procedure for compliance proceedings and for filing an appearance in a contested case proceeding; specifies the method for scheduling contested case hearings; amends the appeals process for a rehearing in the case where an appeal is filed by one party and a rehearing is filed by a different party; amends various issues considered on appeal of a contested case; provides more current tables for life expectancy and life expectancy remarriage probability for commutation of workers'

Administrative Rules – Fiscal Impact Summaries
October 11, 2005

compensation weekly benefits; and amends the mileage reimbursement rate for transportation expenses incurred in workers' compensation matters.

Fiscal Impact No fiscal impact.

STAFF CONTACT: Russell Trimble (Ext. 14613)

Fiscal Impact Statement

Associated with the

Notice of Intended Action

Group #1 - Water Quality Standards
(Chapter 61)

Prepared by the

Department of Natural Resources

August 16, 2005

Table of Contents

Introduction:	Page 3
Topic 1 – General Use Definition:	Page 3
Topic 2 – Class B Use Designations:	Page 4
Topic 3 – Eliminate Protected Flow:	Page 4
Topic 4 – Rebuttable Presumption:	Page 8
Topic 5 – Recreational Use for All non-Designated Waters:	Page 17
Assumptions and Basic Approach for Cost Estimates:	Page 18
Commonly Used Terms:	Page 21
Addendum-Implementation Alternatives Available to Affected Facilities:	Page 22
Appendix A	Page 25

Fiscal Impact Statement

Introduction: This Fiscal Impact Statement (FIS) provides the projected costs and potential benefits associated with the proposed rule changes being addressed in the Notice of Intended Action, Group #1 – Water Quality Standards (Chapter 61). This rule-making effort is the most recent effort of the triennial review of Iowa’s Water Quality Standards and is a part of the IDNR’s Time Lines for Water Quality Standards Modifications that includes the following topics:

1. Amend the definition for general use stream segments to eliminate the language that allows streams that flow as a result of discharges from wastewater treatment facilities to be considered as general use segments and the language that states aquatic life will be protected from acutely toxic conditions only at elevated flows
2. Amend the current warm water aquatic life use designations to the following designations: Class B(WW-1), Class B(WW-2), and Class B(WW-3). The existing Class B(WW) and Class B(LR) waterbodies will be reassigned to Class B(WW-1) and Class B(WW-2), respectively
3. Eliminate the protected flow provision in 567 – 61.2(5) and rule–referenced document “Protected Flows for Selected Stream Segments”
4. Designate all perennial rivers and streams or intermittent streams with perennial pools in Iowa not specifically listed in the Surface Water Classification as Class B(WW-1) waters.
5. Designate as Class A1 – Primary Contact Recreational Use all of Iowa’s perennial rivers and streams and intermittent streams with perennial pools.

This evaluation will discuss the fiscal impacts from each of the five topics separately and provide a summary of the fiscal impacts for the entire rule-making effort. It is important to note that department staff did not evaluate the specific individual impacts or treatment needs for each wastewater treatment facility noted in the FIS. Basic assumptions and evaluations were made on the general impacts on all facilities predicted to be affected. The specific individual impacts and needs will be best evaluated by the facility’s staff or retained consultant. Innovative or unique treatment methods may be available to some facilities thereby reducing specific costs.

The number of facilities expected to be impacted is an approximation based on the NPDES permitted facilities list that is periodically updated as NPDES permits are issued for new treatment systems or revoked for others. The impacted facilities list is based off the February 2004 List of NPDES permitted facilities that can be found on the department’s website at <http://www.iowadnr.com/water/npdes/index.html>.

Topic 1 – General Use Definition: This topic is proposing to revise the current definition for general use stream segments in 567 – 61.3(1)a. The language that states general use stream segments that flow as a result of discharges from wastewater treatment facilities to be considered as general use segments is proposed to be eliminated as the presence of flow or pools supporting a designated use must stand alone regardless of the source of that flow or pooling. In addition, Topic 4, below, proposes to add the Class A-1 and Class B(WW-1) to all non-designated perennial or perennial-pooled waters, which would include the stream segments resulting from the wastewater dischargers. It is anticipated that these general use streams where wastewater treatment facilities discharge will be designated as Class B(WW-1) streams.

Thus, the potentially affected facilities and associated implementation cost will be included in Topic 4, below.

Anticipated Benefits. The anticipated benefits from revising the general use definition are associated with the potential improvements to: instream conditions for aquatic and semiaquatic life, wildlife and livestock watering needs, and aesthetic conditions. None of these potential benefits has a readily identifiable monetary value and will not be estimated in this impact statement. With the interconnection between the proposed elimination of the wastewater exclusion of Topic 1 and the proposed application of the rebuttable presumption of Topic 4, common anticipated benefits would not only be to the streams currently receiving wastewater treatment plant discharges, but also waters receiving any future discharge of wastewater. The benefits in the nature of projected improvements to instream water quality below wastewater treatment discharges would be derived from the construction of the treatment improvements to comply with the acute and chronic numerical criteria in the Water Quality Standards.

Topic 2 – Class B Use Designations and Warm Water Protocol: This topic is proposing to amend the current warm water aquatic life use designations to the following designations: Class B(WW-1), Class B(WW-2), and Class B(WW-3). The existing Class B(WW) and Class B(LR) waterbodies will be reassigned to Class B(WW-1) and Class B(WW-2), respectively. This rule proposal is accompanied by the Warm Water Use Assessment and Attainability Analysis Protocol that proposes an approach to be followed in assessing the warm water aquatic life uses of streams.

These proposed revisions will have no direct economic impact. However, if a currently general use classified stream segment is assessed in the future using the protocol and determined to more appropriately be one of the Class B use designations, then any wastewater treatment facility located on that stream (or activity impacting the attainment of the use) may be impacted. This impact will be through the added level of protection for aquatic life provided through the applicable Class B designation. Wastewater treatment facilities discharging treated effluent to these streams would be required to meet more stringent limits, particularly for ammonia nitrogen. Other sources (e.g. nonpoint sources, other point sources) that may be affecting the designated use may be required to modify the impacting activity. The impact will not be known until the specific stream reach is appropriately field assessed in the future. However, it is anticipated that all suspected general use streams potentially supporting aquatic life will become Class B designated due to the proposed rule modification of Topic 4 – Rebuttable Presumption, below.

Topic 3 – Eliminate Protected Flow: This topic is proposing to eliminate the rule-referenced document “Protected Flows for Selected Stream Segments” and the protected flow provisions provided in Chapter 567 - 61.2(5). The elimination of the protected flow provision would reduce the low stream flow value at which the numerical criteria would apply. The low stream flow value affects the allowed amount or concentration of key materials that could be assimilated in the designated stream reach. Thus, for wastewater treatment facilities, this would reduce the amount of treated pollutants, such as ammonia nitrogen, that would be allowed in their discharge and result in the need to provide additional treatment of key parameters, particularly ammonia nitrogen.

A. Impacted Facilities: It is projected that three groups of wastewater treatment facilities could be impacted by the proposed rule change to eliminate the protected flow concept:

1. municipal wastewater treatment facilities discharging directly to streams segments with an assigned protected flow,
2. industrial wastewater treatment facilities discharging directly to streams segments with an assigned protected flow, and
3. semi-public wastewater treatment facilities discharging directly to streams segments with an assigned protected flow.

For this topic 63 wastewater treatment facilities (54 municipal, 6 semi-public, 3 industrial) statewide are anticipated to be impacted through the implementation of more stringent effluent ammonia-nitrogen limits. (It is important to note that these 63 facilities are not included in the affected facilities noted in Topic 1 – General Use Definition or Topic 4 – Rebuttable Presumption). However, the 63 facilities will also have more stringent bacteria limits due to the proposed provisions adding Class A-1 to all Class B(LR) streams (Topic 5). The disinfection/dechlorination costs are included in Topic 5 summary impacts below.

Facilities that do not possess significant ammonia-nitrogen concentrations in their wastewater will not likely be affected by this topic.

B. Projected Costs: With the protected flow provision being proposed for elimination, it is anticipated that these designated streams will possess critical stream low flows (1Q₁₀ & 30Q₁₀) of 0.0 cfs. Little assimilative capacity will be available in the stream for mixing that would provide for more relaxed ammonia-nitrogen effluent limitations. Achieving compliance for these 60 facilities would require an advanced ammonia-nitrogen removal treatment process similar to an extended aeration activated sludge wastewater treatment facility because conventional secondary wastewater treatment units do not typically remove ammonia-nitrogen in amounts that will meet end-of-pipe ammonia-nitrogen water quality-based effluent limits.

The types of facilities that achieve compliance with these more stringent ammonia nitrogen limits include oxidation ditch-type and other various designs of extended aeration activated sludge wastewater treatment processes. These processes are costly to build and operate. Aerated lagoon and trickling filter facilities will most likely have to upgrade to these types of facilities to meet to the more stringent effluent ammonia limits. It was assumed that any facility currently using an activated sludge process to treat wastewater may need to upgrade as well or possibly change its current operation to provide for extended aeration to remove ammonia-nitrogen. This could result in higher operation and maintenance costs and a reduction in design capacity of the existing facility since it will take longer to treat the current wasteload to the treatment facility.

The fiscal impact assessment has attempted to establish a range of costs that considers both higher cost and lower cost scenarios. The established range incorporates conservative approaches to estimating the potential fiscal impact. It is understood that a multitude of factors or variables may result in fiscal impacts that are either below the lower cost estimates or exceed the higher cost estimates. One of these variables is the implementation of alternative treatment technologies.

The Department has assembled an addendum to this document that discusses implementation alternatives that may offer lesser-cost options than the traditional nitrification processes.

Projected unit cost or relative cost reductions and potential user groups are noted in the addendum discussions. It is recognized that the alternatives are not applicable to all facilities and have not been included in the cost estimates.

It must be noted that in addition to implementation alternatives, other factors and variables (e.g., the potential for a site-specific removal of a use designation) exist but were not incorporated into the calculation of these cost estimates due to the difficulty of predicting the number of facilities at which the other factors and variables could apply.

Higher Cost Scenario: The higher cost approach considers the need for construction of ammonia-nitrogen removal treatment units (nitrification) at all impacted facilities noted in the above three groups. This assumes that all continuously discharging wastewater treatment facilities treating domestic wastewater or industrial wastewater treatment facilities with elevated ammonia nitrogen levels would be required to replace or modify their existing treatment units to achieve near-complete removal of ammonia nitrogen.

For wastewater treatment facilities with existing aerated lagoon units, it is assumed that the existing treatment units would be replaced and a new mechanical nitrification treatment facility constructed. As noted above, several implementation alternatives discussed in the attached addendum may provide a lesser-cost option for some wastewater treatment facilities. However, the appropriateness of any of these alternative options is best left to the facility's managing authority.

The cost projections also considered increased operation and maintenance (O&M) costs for existing aerated lagoon and trickling filter treatment units. It is assumed that the facility's managing authority would experience an increase in O&M costs with the new nitrification units compared to the existing treatment units which typically cost less to operate.

It is also assumed that an existing facility with a complex mechanical systems facilities would expect to have similar O&M costs as an extended air activated sludge wastewater treatment plant. Therefore, no O&M costs were calculated for these facilities.

See Table 1 for the listing of impacted facilities associated with the higher cost scenario for this topic and the total estimated capital construction cost, total present worth O&M cost, and total annual cost. It is important to note that the estimated cost did not consider the current costs that would be associated with the wastewater treatment facility's existing units. While these existing costs could be an item considered in a comprehensive economic impact assessment, they have not been included in this assessment. Insufficient data, resources, and time occur with the rulemaking effort to accurately consider existing unit costs. It is anticipated that the existing costs are relatively small and best considered by each facility's managing authority.

Lower Cost Scenario: The lower cost scenario assumes that existing complex mechanical systems (non-aerated lagoon and non-trickling filter units) can achieve compliance with more stringent ammonia-nitrogen limits (or achieve nitrification) with their existing treatment units through optimum operation of their biological and physical treatment units. Through optimum operation, it is assumed that no capital cost of upgrading their treatment plants would occur. However, it is recognized that a minor increase in operational cost (varying between facilities) would be expected, but cannot be quantified by this assessment effort.

Thus, Table 1 also notes the lower cost estimated costs for the impacted facilities associated with Topic 3 and only differs from the higher cost projections by excluding the capital construction costs for the 27 existing complex mechanical system (non-aerated lagoon and non-trickling filter units).

Table 1 – Topic 3 Fiscal Impact

Facility Name	Facility Type	Type of Treatment
AG PROCESSING INC a COOPERATIVE	INDUSTRIAL	ACTIVATED SLUDGE
CARGILL INC. EDDYVILLE INDUSTRIAL	INDUSTRIAL	AERATED LAGOON
IOWA ARMY AMMUNITION PLANT	INDUSTRIAL	TRICKLING FILTER
WEST LIBERTY CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
DIKE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
ELK RUN HEIGHTS CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
SHELLSBURG CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
VINTON CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
BOONE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
GRIMES CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
ANKENY CITY OF STP (EAST)	MUNICIPAL	ACTIVATED SLUDGE
CASEY CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
INDIANOLA CITY OF STP (NORTH)	MUNICIPAL	ACTIVATED SLUDGE
RUNNELLS CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
CORNING CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
VICTOR CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
WILLIAMSBURG CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
WORTHINGTON CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
CARROLL CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
WHEATLAND CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
CORWITH CITY OF STP	MUNICIPAL	AERATED LAGOON
DENVER CITY OF STP	MUNICIPAL	AERATED LAGOON
BLAIRSTOWN CITY OF STP	MUNICIPAL	AERATED LAGOON
BRANDON CITY OF STP	MUNICIPAL	AERATED LAGOON
NORWAY CITY OF STP	MUNICIPAL	AERATED LAGOON
GRANGER CITY OF STP	MUNICIPAL	AERATED LAGOON
BEACON CITY OF STP	MUNICIPAL	AERATED LAGOON
ARMSTRONG CITY OF STP	MUNICIPAL	AERATED LAGOON
BROOKLYN CITY OF STP	MUNICIPAL	AERATED LAGOON
ELY CITY OF STP	MUNICIPAL	AERATED LAGOON
LADORA CITY OF STP	MUNICIPAL	AERATED LAGOON
TOLEDO CITY OF STP	MUNICIPAL	AERATED LAGOON
HILLS CITY OF STP	MUNICIPAL	AERATED LAGOON
PAULLINA CITY OF STP	MUNICIPAL	AERATED LAGOON
CAMBRIDGE CITY OF STP	MUNICIPAL	AERATED LAGOON
MOUNT PLEASANT CITY OF STP (EAST)	MUNICIPAL	AERATED LAGOON
LIME SPRINGS CITY OF STP	MUNICIPAL	AERATED LAGOON
KINGSLEY CITY OF STP	MUNICIPAL	AERATED LAGOON
MOVILLE CITY OF STP	MUNICIPAL	AERATED LAGOON
RINARD CITY OF STP	MUNICIPAL	OTHER
FAIRFIELD CITY OF STP	MUNICIPAL	OXIDATION DITCH
SUMNER CITY OF STP	MUNICIPAL	OXIDATION DITCH
CONRAD CITY OF STP	MUNICIPAL	SBR
GRUNDY CENTER CITY OF STP	MUNICIPAL	SBR
STORY CITY CITY OF STP	MUNICIPAL	SBR
DURANT CITY OF STP	MUNICIPAL	TRICKLING FILTER

WILTON CITY OF STP	MUNICIPAL	TRICKLING FILTER				
WINTERSET CITY OF STP	MUNICIPAL	TRICKLING FILTER				
BEDFORD CITY OF STP	MUNICIPAL	TRICKLING FILTER				
VILLISCA CITY OF STP	MUNICIPAL	TRICKLING FILTER				
Ames Water Pollution Control Facility	MUNICIPAL	TRICKLING FILTER				
COLFAX CITY OF STP	MUNICIPAL	TRICKLING FILTER				
NEVADA CITY OF STP	MUNICIPAL	TRICKLING FILTER				
WASHINGTON CITY OF STP	MUNICIPAL	TRICKLING FILTER				
LOWDEN CITY OF STP	MUNICIPAL	TRICKLING FILTER				
HAMPTON CITY OF STP	MUNICIPAL	TRICKLING FILTER				
MANNING CITY OF STP	MUNICIPAL	TRICKLING FILTER				
NORTH POLK SCHOOL COMMUNITY SCHOOL	SEMI-PUBLIC	ACTIVATED SLUDGE				
PLANTATION VILLAGE MHP STP	SEMI-PUBLIC	ACTIVATED SLUDGE				
MT. JOY MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE				
SOUTH SQUAW VALLEY ASSOCIATION	SEMI-PUBLIC	ACTIVATED SLUDGE				
GREEN VALLEY MOBILE HOME COURT	SEMI-PUBLIC	OTHER				
LOST CANYON MOBILE HOME PARK	SEMI-PUBLIC	TRICKLING FILTER				
	Lower Cost Scenario	Higher Cost Scenario				
	Capital Cost of Construction	O & M Cost Present Worth	20-year Annual Cost	Capital Cost of Construction	O & M Cost Present Worth	20-year Annual Cost
	\$53,478,000	\$80,533,000	\$9,009,000	\$97,413,000	\$80,533,000	\$11,960,000
Overall Cost			\$134,011,000			\$177,946,000

C. Anticipated Benefits:

The anticipated benefits from eliminating protected flow are associated with the potential improvements to: instream conditions for aquatic and semiaquatic life, wildlife and livestock watering needs, and aesthetic conditions. None of these potential benefits has a readily identifiable monetary value and thus will not be estimated in this impact statement.

Topic 4 – Rebuttable Presumption: This topic is proposing to designate all perennial rivers and streams or intermittent streams with perennial pools in Iowa as Class A1 and all of the same streams not specifically listed in the Surface Water Classification as Class B(WW-1) waters, and will protect these waters for recreational and aquatic life uses. The adoption of this provision would add approximately 10,000 to 14,000 miles of streams as designated streams, including stream segments downstream of all continuously discharging wastewater treatment facilities. By this designation, the numerical criteria associated with both of these designations would apply at all specified stream flow regimes, including the critical stream low flows (1Q₁₀, 7Q₁₀, and 30Q₁₀). Since most of these stream segments will have critical low flows of zero cfs, this implies that the allowed amount or concentration of key materials that could be assimilated in the designated stream reach would be very near or equal to the numerical criteria. Thus, for wastewater treatment facilities, this would reduce the amount of treated pollutants, such as ammonia nitrogen, that would be allowed in their discharge and result in the need to provide additional treatment of key parameters, particularly ammonia nitrogen and bacteria.

It should be noted that the fiscal impact estimates are not solely based on designating all perennial rivers and streams or intermittent streams with perennial pools in Iowa as Class A1 and all of the same streams not specifically listed in the Surface Water Classification as Class B(WW-1) waters. The estimates also consider the results of the Use Assessments/Use Attainability Analyses (UA/UAA) that will be conducted on these waters to determine the most

appropriate use designation. However, the FIS is anticipating that some form of Class B aquatic life use designation and Class A recreational use will remain for most of these streams after these UA/UAs are complete. The impact of this proposed rule is realized through establishing the appropriate aquatic life and recreational use designations for Iowa's perennial rivers and streams or intermittent streams with perennial pools based on guidance from EPA, not necessarily the establishment of a rebuttable presumption of uses for Iowa's waters.

A. Impacted Facilities: Statewide, 334 wastewater treatment facilities (210 municipal, 114 semi-public, 10 industrial) are anticipated to be impacted through the implementation of more stringent effluent ammonia-nitrogen and bacteria limits. The treated effluent from these continuously discharging facilities currently enter General Use (non-designated) watercourses ranging from channelized ditches to meandering waterways. All of these watercourses were found not to meet the current definitions for designated uses. Under the proposed rule change, all would become designated as Class A1 and Class B(WW-1) waters.

It should be noted that some facilities do not possess significant ammonia-nitrogen concentrations in their wastewater and may not be affected by this new rule. However, there could be other parameters that may be water quality-limited. These non-traditional water quality-limited parameters could include toxics, toxic metals, or dissolved solids for which facility specific treatment techniques may be required. No economic projections are made of the non-traditional water quality-limited parameters.

B. Projected Costs: With the proposed designation of stream segments under the rebuttable presumption provision, it is anticipated that these designated streams will possess critical stream low flows (1Q₁₀, 7Q₁₀, and 30Q₁₀) of 0.0 cfs. Therefore, little assimilative capacity will be available in the stream for mixing that would provide for more relaxed ammonia-nitrogen effluent limitations or for meeting bacteria limits.

Nitrification Costs: Achieving compliance for these 334 facilities would require a nitrification treatment process similar to an extended aeration activated sludge wastewater treatment facility because, as discussed in Topic 3, conventional secondary wastewater treatment units will not be able to meet end-of-pipe ammonia-nitrogen water quality-based effluent limits. The nitrification units may include oxidation ditch-type and other various designs of extended aeration activated sludge wastewater treatment processes that are costly to build and operate. It is assumed that aerated lagoon and trickling filter facilities will upgrade to these types of nitrification facilities to comply with anticipated ammonia limits. In addition, it is assumed that any activated sludge facility may need to upgrade or possibly change its current operation to provide for extended aeration to remove ammonia-nitrogen, resulting in higher operation and maintenance costs and possibly reduced design capacity.

For Topic 4, the fiscal impact assessment has attempted to establish a range of costs that considers both higher cost and lower cost scenarios. The established range incorporates conservative approaches to estimating the potential fiscal impact. As noted in the discussion under Topic 3, it is understood that a multitude of factors or variables may result in estimates that are either below the lower cost estimates or exceed the higher cost estimates and were not considered due to the difficulty of predicting which variables could apply to any facility. Some of these factors will not be known until fieldwork is completed through the Warm Water Use Assessment and Attainability Analysis Protocol.

1) Higher Cost Scenario – Nitrification: The higher cost approach assumes the need for construction of nitrification units at all 334 impacted facilities. This assumes that all continuously discharging wastewater treatment facilities treating domestic wastewater or industrial wastewater treatment facilities with elevated ammonia nitrogen levels would be required to replace or modify their existing treatment units with nitrification unit processes. For wastewater treatment facilities with existing aerated lagoon units, it is assumed that the existing treatment units would be replaced and a new mechanical nitrification treatment facility would be constructed.

Similar to Topic 3, the cost projections also consider increased O&M costs for existing aerated lagoon and trickling filter treatment units. It is assumed that the facility would experience an increase in O&M costs with the new nitrification units compared to the existing treatment units which typically cost less to operate. It is also assumed that existing complex mechanical systems facilities would have similar O&M costs as an extended air activated sludge wastewater treatment plant. Therefore, no O&M costs were included for these facilities.

See Table 3 for the listing of impacted facilities associated with the higher cost scenario and the total estimated capital construction cost, total present worth O&M cost, and total annual cost. It is important to note that the estimated costs do not consider the current costs that would be associated with the wastewater treatment facility’s existing units.

2) Lower Cost Scenario - Nitrification: Similar to Topic 3, the lower cost scenario assumes that existing complex mechanical systems (non-aerated lagoon and non-trickling filter units) would be able to achieve nitrification with their existing treatment units through optimum operation. Thus, it was assumed that no capital cost for treatment unit upgrade would occur. However, it is recognized that a minor increase in operational cost would be expected, but is not quantified in this assessment.

Table 2 notes the lower cost estimated costs for the impacted facilities associated with Topic 4 and only differs from the higher cost projections by excluding the capital construction costs for the 88 existing complex mechanical systems for municipal, semi-public and select industrial facilities.

Table 2 – Topic 4 Nitrification Fiscal Impact

Facility Name	Facility Type	Type of Treatment
MICHAEL FOODS, INC.	INDUSTRIAL	ACTIVATED SLUDGE
TYSON FRESH MEATS, INC. - STORM LAKE	INDUSTRIAL	ACTIVATED SLUDGE
CONAGRA DAIRY FOODS COMPANY	INDUSTRIAL	ACTIVATED SLUDGE
AGRIPROCESSORS, INC.	INDUSTRIAL	ACTIVATED SLUDGE
HWH CORPORATION	INDUSTRIAL	AERATED LAGOON
ASSOCIATED MILK PRODUCERS, INC.	INDUSTRIAL	AERATED LAGOON
ROSE ACRE FARMS, INC. GUTHRIE CENTER EGG FARM	INDUSTRIAL	AERATED LAGOON
GOLDEN OVAL EGGS COOPERATIVE	INDUSTRIAL	AERATED LAGOON
SIOUX PREME PACKING COMPANY*	INDUSTRIAL	LAND APPLICATION
CARGILL INC. EDDYVILLE LEACHATE TREATMENT PLANT	INDUSTRIAL	OTHER
OSAGE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE

ATALISSA CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
LISBON CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
MOUNT VERNON CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
JESUP, CITY OF STP (SOUTHEAST)	MUNICIPAL	ACTIVATED SLUDGE
VAN HORNE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
POCAHONTAS CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
OSKALOOSA CITY OF STP (SOUTHWEST)	MUNICIPAL	ACTIVATED SLUDGE
PELLA CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
WEST BURLINGTON CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
SANBORN CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
MOUNT AYR CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
BELLE PLAINE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
SWISHER CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
IOWA CITY CITY OF STP (SOUTH)	MUNICIPAL	ACTIVATED SLUDGE
TIFFIN CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
WELLMAN CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
DYERSVILLE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
SPRAGUEVILLE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
GLIDDEN CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
MILES CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
STORM LAKE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
WAUKEE CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
SULLY CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
NEWTON CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
MONONA CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
CRESCO CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
ELMA CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
OELWEIN CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
READLYN CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
INWOOD CITY OF STP	MUNICIPAL	AERATED LAGOON
CLARION CITY OF STP	MUNICIPAL	AERATED LAGOON
STANWOOD CITY OF STP	MUNICIPAL	AERATED LAGOON
TIPTON CITY OF STP (EAST)	MUNICIPAL	AERATED LAGOON
WALCOTT CITY OF STP (NORTH)	MUNICIPAL	AERATED LAGOON
WALCOTT CITY OF STP (SOUTH)	MUNICIPAL	AERATED LAGOON
WEST BRANCH CITY OF STP	MUNICIPAL	AERATED LAGOON
ATKINS CITY OF STP	MUNICIPAL	AERATED LAGOON
CENTER POINT CITY OF STP (NORTH)	MUNICIPAL	AERATED LAGOON
CENTER POINT, CITY OF STP (SOUTH)	MUNICIPAL	AERATED LAGOON
JESUP, CITY OF STP (SOUTH)	MUNICIPAL	AERATED LAGOON
KEYSTONE CITY OF STP	MUNICIPAL	AERATED LAGOON
NEWHALL CITY OF STP	MUNICIPAL	AERATED LAGOON
TRAER MUNICIPAL UTILITIES	MUNICIPAL	AERATED LAGOON
URBANA CITY OF STP	MUNICIPAL	AERATED LAGOON
WELLSBURG CITY OF STP	MUNICIPAL	AERATED LAGOON
ACKLEY CITY OF STP	MUNICIPAL	AERATED LAGOON
CINCINNATI CITY OF STP	MUNICIPAL	AERATED LAGOON
CORYDON CITY OF STP	MUNICIPAL	AERATED LAGOON
HUMESTON CITY OF STP	MUNICIPAL	AERATED LAGOON
RUSSELL CITY OF STP	MUNICIPAL	AERATED LAGOON
DESOTO CITY OF STP	MUNICIPAL	AERATED LAGOON
POLK CITY, CITY OF STP	MUNICIPAL	AERATED LAGOON
SAVAGE SANITARY DISTRICT STP	MUNICIPAL	AERATED LAGOON
SLATER CITY OF STP	MUNICIPAL	AERATED LAGOON
WOODWARD CITY OF STP	MUNICIPAL	AERATED LAGOON
BONDURANT CITY OF STP	MUNICIPAL	AERATED LAGOON
HARTFORD CITY OF STP	MUNICIPAL	AERATED LAGOON

MILO CITY OF STP	MUNICIPAL	AERATED LAGOON
MITCHELLVILLE CITY OF STP	MUNICIPAL	AERATED LAGOON
NEW VIRGINIA SANITARY DISTRICT-STP	MUNICIPAL	AERATED LAGOON
NORWALK CITY OF STP	MUNICIPAL	AERATED LAGOON
PLEASANTVILLE CITY OF STP	MUNICIPAL	AERATED LAGOON
PRAIRIE CITY, CITY OF STP	MUNICIPAL	AERATED LAGOON
ST. CHARLES CITY OF STP	MUNICIPAL	AERATED LAGOON
TRURO CITY OF STP	MUNICIPAL	AERATED LAGOON
DONNELSON CITY OF STP	MUNICIPAL	AERATED LAGOON
EDDYVILLE CITY OF STP	MUNICIPAL	AERATED LAGOON
LOVILIA CITY OF STP	MUNICIPAL	AERATED LAGOON
MELCHER-DALLAS CITY OF STP	MUNICIPAL	AERATED LAGOON
ALBIA CITY OF STP (NORTH)	MUNICIPAL	AERATED LAGOON
ALBIA CITY OF STP (WEST)	MUNICIPAL	AERATED LAGOON
ANITA CITY OF STP	MUNICIPAL	AERATED LAGOON
KIMBALLTON CITY OF STP	MUNICIPAL	AERATED LAGOON
MIDDLETOWN CITY OF STP	MUNICIPAL	AERATED LAGOON
HOSPERS CITY OF STP	MUNICIPAL	AERATED LAGOON
REMSEN CITY OF STP	MUNICIPAL	AERATED LAGOON
ORANGE CITY CITY OF STP	MUNICIPAL	AERATED LAGOON
BLOOMFIELD CITY OF STP (MAIN)	MUNICIPAL	AERATED LAGOON
LENOX CITY OF STP	MUNICIPAL	AERATED LAGOON
GARNER CITY OF STP	MUNICIPAL	AERATED LAGOON
KLEMME CITY OF STP	MUNICIPAL	AERATED LAGOON
WILLIAMS CITY OF STP	MUNICIPAL	AERATED LAGOON
CHELSEA CITY OF STP	MUNICIPAL	AERATED LAGOON
DYSART CITY OF STP	MUNICIPAL	AERATED LAGOON
GILMAN CITY OF STP	MUNICIPAL	AERATED LAGOON
HOMESTEAD SANITARY DISTRICT	MUNICIPAL	AERATED LAGOON
LAUREL CITY OF STP	MUNICIPAL	AERATED LAGOON
MACBRIDE SANITARY SEWER DISTRICT	MUNICIPAL	AERATED LAGOON
MONTOUR CITY OF STP	MUNICIPAL	AERATED LAGOON
STATE CENTER CITY OF STP	MUNICIPAL	AERATED LAGOON
WALFORD CITY OF STP	MUNICIPAL	AERATED LAGOON
ALBION CITY OF STP	MUNICIPAL	AERATED LAGOON
WEST/HIGH AMANA SANITARY DISTRICT	MUNICIPAL	AERATED LAGOON
LONE TREE CITY OF STP (SOUTH)	MUNICIPAL	AERATED LAGOON
MORNING SUN CITY OF STP	MUNICIPAL	AERATED LAGOON
ASBURY CITY OF STP	MUNICIPAL	AERATED LAGOON
ODEBOLT CITY OF STP	MUNICIPAL	AERATED LAGOON
EDGEWOOD CITY OF STP	MUNICIPAL	AERATED LAGOON
EPWORTH CITY OF STP	MUNICIPAL	AERATED LAGOON
PRESTON CITY OF STP	MUNICIPAL	AERATED LAGOON
ALLERTON CITY OF STP (SOUTH)	MUNICIPAL	AERATED LAGOON
BLUE GRASS CITY OF STP	MUNICIPAL	AERATED LAGOON
MONTPELIER SANITARY DISTRICT, VILLAGE OF	MUNICIPAL	AERATED LAGOON
FORT MADISON CITY OF STP (WESTERLY)	MUNICIPAL	AERATED LAGOON
WEST POINT CITY OF STP	MUNICIPAL	AERATED LAGOON
FONTANELLE CITY OF STP	MUNICIPAL	AERATED LAGOON
MASSENA CITY OF STP	MUNICIPAL	AERATED LAGOON
DALLAS CENTER CITY OF STP	MUNICIPAL	AERATED LAGOON
FARNHAMVILLE CITY OF STP	MUNICIPAL	AERATED LAGOON
DELTA CITY OF STP	MUNICIPAL	AERATED LAGOON
MONTEZUMA CITY OF STP	MUNICIPAL	AERATED LAGOON
NEW SHARON CITY OF STP	MUNICIPAL	AERATED LAGOON
SIGOURNEY CITY OF STP (EAST)	MUNICIPAL	AERATED LAGOON
WHAT CHEER CITY OF STP	MUNICIPAL	AERATED LAGOON

EARLING CITY OF STP	MUNICIPAL	AERATED LAGOON
SIBLEY CITY OF STP	MUNICIPAL	AERATED LAGOON
HULL CITY OF STP	MUNICIPAL	AERATED LAGOON
BAXTER CITY OF STP	MUNICIPAL	AERATED LAGOON
ELKHART CITY OF STP	MUNICIPAL	AERATED LAGOON
HEDRICK CITY OF STP	MUNICIPAL	AERATED LAGOON
MAXWELL CITY OF STP	MUNICIPAL	AERATED LAGOON
MONROE CITY OF STP (EAST)	MUNICIPAL	AERATED LAGOON
ROLAND CITY OF STP	MUNICIPAL	AERATED LAGOON
BIRMINGHAM CITY OF STP	MUNICIPAL	AERATED LAGOON
BRIGHTON CITY OF STP	MUNICIPAL	AERATED LAGOON
KEOTA CITY OF STP	MUNICIPAL	AERATED LAGOON
NEW LONDON CITY OF STP	MUNICIPAL	AERATED LAGOON
WAYLAND CITY OF STP	MUNICIPAL	AERATED LAGOON
WINFIELD CITY OF STP	MUNICIPAL	AERATED LAGOON
AGENCY CITY OF STP	MUNICIPAL	AERATED LAGOON
MONDAMIN CITY OF STP*	MUNICIPAL	AERATED LAGOON
SCHLESWIG CITY OF STP	MUNICIPAL	AERATED LAGOON
DAVIS CITY CITY OF STP	MUNICIPAL	AERATED LAGOON
LEON CITY OF STP	MUNICIPAL	AERATED LAGOON
CALMAR CITY OF STP	MUNICIPAL	AERATED LAGOON
GARNAVILLO CITY OF STP	MUNICIPAL	AERATED LAGOON
OSSIAN CITY OF STP	MUNICIPAL	AERATED LAGOON
FAIRBANK CITY OF STP	MUNICIPAL	AERATED LAGOON
WINTHROP CITY OF STP	MUNICIPAL	AERATED LAGOON
ELDRIDGE CITY OF STP(BUTTRMLK)	MUNICIPAL	AERATED LAGOON
MECHANICSVILLE CITY OF STP	MUNICIPAL	AERATED LAGOON
PARK VIEW SANITARY DIST. STP	MUNICIPAL	AERATED LAGOON
TREYNOR CITY OF STP (NORTHWEST)	MUNICIPAL	AERATED LAGOON
WALNUT CITY OF STP	MUNICIPAL	AERATED LAGOON
LAKE MILLS CITY OF STP	MUNICIPAL	AERATED LAGOON
MOUNT STERLING, CITY OF-STP	MUNICIPAL	OTHER
LEGRAND CITY OF STP	MUNICIPAL	OTHER
LAKE PARK CITY OF STP*	MUNICIPAL	OTHER
FESTINA-(WINNESHIEK COUNTY-STP	MUNICIPAL	OTHER
RANDALIA CITY OF STP	MUNICIPAL	OTHER
TORONTO, CITY OF-STP	MUNICIPAL	OTHER
CHARITON CITY OF STP	MUNICIPAL	OXIDATION DITCH
AUDUBON CITY OF STP	MUNICIPAL	OXIDATION DITCH
SOLON CITY OF STP	MUNICIPAL	OXIDATION DITCH
FARLEY CITY OF STP	MUNICIPAL	OXIDATION DITCH
HARTLEY CITY OF STP	MUNICIPAL	OXIDATION DITCH
DEWITT CITY OF STP	MUNICIPAL	OXIDATION DITCH
CUMMING CITY OF STP	MUNICIPAL	PRIMARY TREATMENT
BALLTOWN, CITY OF-NORTH WWTF	MUNICIPAL	PRIMARY TREATMENT
BALLTOWN, CITY OF-SOUTH WWTF	MUNICIPAL	PRIMARY TREATMENT
BANKSTON CITY OF STP	MUNICIPAL	PRIMARY TREATMENT
BAGLEY CITY OF STP	MUNICIPAL	PRIMARY TREATMENT
RICKETTS CITY OF STP	MUNICIPAL	PRIMARY TREATMENT
WELTON CITY OF STP	MUNICIPAL	PRIMARY TREATMENT
EAGLE GROVE CITY OF STP	MUNICIPAL	RBC
WEBSTER CITY, CITY OF STP	MUNICIPAL	RBC
CENTERVILLE CITY OF STP (EAST)	MUNICIPAL	RBC
CENTERVILLE CITY OF STP (WEST)	MUNICIPAL	RBC
EMMETSBURG CITY OF STP	MUNICIPAL	RBC
SHELDON CITY OF STP	MUNICIPAL	RBC
IOWA GREAT LAKES SANITARY DISTRICT STP	MUNICIPAL	RBC

LAMONI CITY OF STP	MUNICIPAL	SBR
NORTH LIBERTY CITY OF STP	MUNICIPAL	SBR
OXFORD CITY OF STP	MUNICIPAL	SBR
HOPKINTON CITY OF STP	MUNICIPAL	SBR
ELDRIDGE CITY OF STP(SOUTH SLOPE)	MUNICIPAL	SBR
CLEAR LAKE SANITARY DISTRICT	MUNICIPAL	SBR
IRETON CITY OF STP	MUNICIPAL	TRICKLING FILTER
BRITT CITY OF STP	MUNICIPAL	TRICKLING FILTER
KIRON CITY OF STP	MUNICIPAL	TRICKLING FILTER
TIPTON CITY OF STP (WEST)	MUNICIPAL	TRICKLING FILTER
MADRID CITY OF STP	MUNICIPAL	TRICKLING FILTER
OGDEN CITY OF STP	MUNICIPAL	TRICKLING FILTER
ALTOONA CITY OF STP	MUNICIPAL	TRICKLING FILTER
KNOXVILLE CITY OF STP	MUNICIPAL	TRICKLING FILTER
OSCEOLA CITY OF STP	MUNICIPAL	TRICKLING FILTER
ADAIR CITY OF STP	MUNICIPAL	TRICKLING FILTER
SHENANDOAH CITY OF STP	MUNICIPAL	TRICKLING FILTER
SIOUX CENTER CITY OF STP	MUNICIPAL	TRICKLING FILTER
NORTH ENGLISH CITY OF STP	MUNICIPAL	TRICKLING FILTER
ALTA CITY OF STP	MUNICIPAL	TRICKLING FILTER
CASCADE CITY OF STP	MUNICIPAL	TRICKLING FILTER
STUART CITY OF STP	MUNICIPAL	TRICKLING FILTER
SLOAN CITY OF STP*	MUNICIPAL	TRICKLING FILTER
GOWRIE MUNICIPAL UTILITIES	MUNICIPAL	TRICKLING FILTER
LOHRVILLE CITY OF STP	MUNICIPAL	TRICKLING FILTER
NEWELL CITY OF STP	MUNICIPAL	TRICKLING FILTER
SCRANTON CITY OF STP	MUNICIPAL	TRICKLING FILTER
ALBERT CITY,CITY OF STP	MUNICIPAL	TRICKLING FILTER
GRINNELL CITY OF STP	MUNICIPAL	TRICKLING FILTER
NEOLA CITY OF STP	MUNICIPAL	TRICKLING FILTER
CRESTON CITY OF STP	MUNICIPAL	TRICKLING FILTER
HUXLEY CITY OF STP	MUNICIPAL	TRICKLING FILTER
OSKALOOSA CITY OF STP (NORTHEAST)	MUNICIPAL	TRICKLING FILTER
GREENFIELD CITY OF STP	MUNICIPAL	TRICKLING FILTER
HAWKEYE CITY OF STP	MUNICIPAL	TRICKLING FILTER
NEW HAMPTON CITY OF STP	MUNICIPAL	TRICKLING FILTER
POSTVILLE CITY OF STP	MUNICIPAL	TRICKLING FILTER
WAUKON CITY OF STP	MUNICIPAL	TRICKLING FILTER
FOUR OAKS GROUP HOME - BERTRAM CAMPUS	SEMI-PUBLIC	ACTIVATED SLUDGE
BENTON COMMERCE VILLAGE-STP	SEMI-PUBLIC	ACTIVATED SLUDGE
KNOXVILLE VA HOSPITAL	SEMI-PUBLIC	ACTIVATED SLUDGE
SOUTHDALE ADDITION	SEMI-PUBLIC	ACTIVATED SLUDGE
OAK HILLS SUBDIVISION-STP	SEMI-PUBLIC	ACTIVATED SLUDGE
SPRING GROVE MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE
SOUTHPARK MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE
BRECKENRIDGE ESTATES MOBILE HOMES	SEMI-PUBLIC	ACTIVATED SLUDGE
COMFORT INN AMANA COLONIES	SEMI-PUBLIC	ACTIVATED SLUDGE
IOWA CITY REGENCY MOBILE HOME PARK STP	SEMI-PUBLIC	ACTIVATED SLUDGE
LAKE RIDGE, INC.- STP	SEMI-PUBLIC	ACTIVATED SLUDGE
LAKEVIEW KNOLLS	SEMI-PUBLIC	ACTIVATED SLUDGE
MODERN MANOR MOBILE HOME COURT	SEMI-PUBLIC	ACTIVATED SLUDGE
WOODLAND MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE
ANDREW JACKSON CARE FACILITY	SEMI-PUBLIC	ACTIVATED SLUDGE
CAMP COURAGEOUS OF IOWA	SEMI-PUBLIC	ACTIVATED SLUDGE
DES MOINES GOLF & COUNTRY CLUB	SEMI-PUBLIC	ACTIVATED SLUDGE
HICKORY ACRES SUBDIVISION	SEMI-PUBLIC	ACTIVATED SLUDGE
SUPER 20 MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE

TABLE MOUND #1 MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE
CAMP ABE LINCOLN	SEMI-PUBLIC	ACTIVATED SLUDGE
PAVELKA MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE
WEST KIMBERLY MOBILE HOME PARK	SEMI-PUBLIC	ACTIVATED SLUDGE
WEST LAKE PARK	SEMI-PUBLIC	ACTIVATED SLUDGE
LEE COUNTY CORRECTIONAL FACILITY	SEMI-PUBLIC	ACTIVATED SLUDGE
RISEN SON CHRISTIAN VILLAGE	SEMI-PUBLIC	ACTIVATED SLUDGE
TEEN CHALLENGE OF THE MIDLANDS-STP	SEMI-PUBLIC	ACTIVATED SLUDGE
IOWA DOT REST AREA #04-180 TIPTON	SEMI-PUBLIC	AERATED LAGOON
TIMBER RIDGE MOBILE HOME PARK-STP	SEMI-PUBLIC	AERATED LAGOON
CAMP DODGE	SEMI-PUBLIC	AERATED LAGOON
DNR LEDGES STATE PARK	SEMI-PUBLIC	AERATED LAGOON
SUNNYBROOK MOBILE HOME PARK STP	SEMI-PUBLIC	AERATED LAGOON
DNR LAKE WAPELLO STATE PARK	SEMI-PUBLIC	AERATED LAGOON
ECHO VALLEY MOBILE HOME PARK NO. 2	SEMI-PUBLIC	AERATED LAGOON
ECHO VALLEY MOBILE HOME PARK NO.1	SEMI-PUBLIC	AERATED LAGOON
DNR LAKE OF THREE FIRES STATE PARK	SEMI-PUBLIC	AERATED LAGOON
AMANA COLONIES GOLF COURSE, INC.	SEMI-PUBLIC	AERATED LAGOON
AMANA NORDSTROM INC.	SEMI-PUBLIC	AERATED LAGOON
Bulk Petroleum	SEMI-PUBLIC	AERATED LAGOON
COLONY VILLAGE RESTAURANT	SEMI-PUBLIC	AERATED LAGOON
DAYS INN	SEMI-PUBLIC	AERATED LAGOON
FUEL MART 794	SEMI-PUBLIC	AERATED LAGOON
KWIK STAR #303	SEMI-PUBLIC	AERATED LAGOON
GATEWAY LTD-STP	SEMI-PUBLIC	AERATED LAGOON
SHILOH	SEMI-PUBLIC	AERATED LAGOON
SUNRISE MOBILE HOME VILLAGE	SEMI-PUBLIC	AERATED LAGOON
TIMBER TRAILS ESTATES HOMEOWNER'S ASSOCIATION	SEMI-PUBLIC	AERATED LAGOON
GRANADA GARDENS MOBILE HOME PARK	SEMI-PUBLIC	AERATED LAGOON
DNR BACKBONE STATE PARK (LOWER AREA)	SEMI-PUBLIC	AERATED LAGOON
DALLAS COUNTY CARE FACILITY-STP	SEMI-PUBLIC	AERATED LAGOON
DNR SPRINGBROOK STATE PARK-EDUCATION CENTER	SEMI-PUBLIC	AERATED LAGOON
LAKEVIEW HEIGHTS	SEMI-PUBLIC	AERATED LAGOON
DUBUQUE REGIONAL AIRPORT	SEMI-PUBLIC	AERATED LAGOON
HIDDEN VALLEY ADDITION	SEMI-PUBLIC	AERATED LAGOON
HOMETOWN LAKESIDE MOBILE HOME PARK	SEMI-PUBLIC	AERATED LAGOON
LAKESIDE ESTATES MOBILE HOME PARK	SEMI-PUBLIC	AERATED LAGOON
M AND W MOBILE HOME PARK	SEMI-PUBLIC	AERATED LAGOON
CENTRAL LEE COMMUNITY SCHOOLS	SEMI-PUBLIC	AERATED LAGOON
WESTSIDE PARK FOR MOBILE HOMES	SEMI-PUBLIC	AERATED LAGOON
DNR VIKING LAKE STATE PARK	SEMI-PUBLIC	AERATED LAGOON
CUTTY'S DES MOINES CAMPING CLUB	SEMI-PUBLIC	AERATED LAGOON
CRESTVIEW MOBILE HOME PARK	SEMI-PUBLIC	AERATED LAGOON
HARVESTER GOLF CLUB DEVELOPMENT	SEMI-PUBLIC	AERATED LAGOON
SUNRISE MOBILE HOME PARK	SEMI-PUBLIC	AERATED LAGOON
CARDINAL SCHOOL STP	SEMI-PUBLIC	AERATED LAGOON
TURKEY VALLEY COMMUNITY SCHOOL	SEMI-PUBLIC	AERATED LAGOON
DNR PIKES PEAK STATE PARK-STP	SEMI-PUBLIC	AERATED LAGOON
COUNTRY CONDOS-STP	SEMI-PUBLIC	OTHER
CAMP HANTESA STP (CAMP FIRE)	SEMI-PUBLIC	OTHER
JESTER PARK #2	SEMI-PUBLIC	OTHER
JESTER PARK #3-(NEW LODGE)	SEMI-PUBLIC	OTHER
YMCA CAMP OF BOONE	SEMI-PUBLIC	OTHER
IOWA ASSOCIATION OF MUNICIPAL UTILITIES	SEMI-PUBLIC	OTHER
NEAL SMITH NATIONAL WILDLIFE REFUGE	SEMI-PUBLIC	OTHER
CENTER VILLAGE CARE FACILITY-STP	SEMI-PUBLIC	OTHER
HARMONY COMMUNITY SCHOOL	SEMI-PUBLIC	OTHER

WOODLANDS TREATMENT CENTER	SEMI-PUBLIC	OTHER
GOLD KEY DINING ROOM & LOUNGE	SEMI-PUBLIC	OTHER
GOLD KEY MOTEL	SEMI-PUBLIC	OTHER
JOLLY ROGER CAMPGROUND & MARINA	SEMI-PUBLIC	OTHER
PILGRIM HEIGHTS RETREAT CENTER-STP	SEMI-PUBLIC	OTHER
AINSWORTH CORNERS,INC.-STP-TRUCK STOP	SEMI-PUBLIC	OTHER
THE MEADOWS OF DUBUQUE,INC. GOLF COURSE STP	SEMI-PUBLIC	OTHER
ALBRECHT ACRES CAMPGROUND-STP	SEMI-PUBLIC	OTHER
DNR BACKBONE STATE PARK (CABINS & SPILLWAY)	SEMI-PUBLIC	OTHER
DNR BACKBONE STATE PARK (RANGER'S RESIDENCE)	SEMI-PUBLIC	OTHER
DNR SPRINGBROOK STATE PARK-CAMPGROUND AREA	SEMI-PUBLIC	OTHER
DIAMOND EAGLE VILLAGE-STP	SEMI-PUBLIC	OTHER
CLEARVIEW MOBILE HOME PARK-RIPLEY'S INC.	SEMI-PUBLIC	OTHER
HIDDEN OAKS ESTATES SUBDIVISION-STP	SEMI-PUBLIC	OTHER
BELVA DEER PARK	SEMI-PUBLIC	OTHER
TRI-COUNTY COMMUNITY SCHOOL	SEMI-PUBLIC	OTHER
HICKORY GROVE MOBILE HOME PARK	SEMI-PUBLIC	OTHER
LYNNNDANA ACRES SANITARY SEWER DISTRICT	SEMI-PUBLIC	OTHER
BOOKS ARE FUN, LTD.	SEMI-PUBLIC	OTHER
YARMOUTH COMMUNITY BUILDING	SEMI-PUBLIC	OTHER
WATER'S EDGE SUBDIVISION-WWTF	SEMI-PUBLIC	OTHER
JESTER PARK #1	SEMI-PUBLIC	PRIMARY TREATMENT
COCKLIN'S RV CAMPSITE	SEMI-PUBLIC	PRIMARY TREATMENT
EAST IOWA BIBLE CAMP-STP	SEMI-PUBLIC	PRIMARY TREATMENT
ROCK VALLEY RESIDENTIAL/HOPE HAVEN, INC.	SEMI-PUBLIC	PRIMARY TREATMENT
COUNTRY AIRE TRAILER COURT-STP	SEMI-PUBLIC	Septic Tank Sand Filter
SLEEP INN	SEMI-PUBLIC	Septic Tank Sand Filter
BROOKLYN SHORTSTOP TRAVEL CENTER	SEMI-PUBLIC	Septic Tank Sand Filter
MAHARISHI RESORT COMMUNITY	SEMI-PUBLIC	SBR
CONO CHRISTIAN SCHOOL	SEMI-PUBLIC	SBR
WOODWARD RESOURCE CENTER	SEMI-PUBLIC	TRICKLING FILTER
ADAIR-CASEY COMMUNITY SCHOOL DISTRICT	SEMI-PUBLIC	TRICKLING FILTER
COTTAGE RESERVE CORPORATION	SEMI-PUBLIC	TRICKLING FILTER
HIGHLAND COMMUNITY SCHOOL	SEMI-PUBLIC	TRICKLING FILTER
NORTHEND MOBILE HOME PARK	SEMI-PUBLIC	TRICKLING FILTER
KNAPP MOBILE HOME PARK-STP	SEMI-PUBLIC	TRICKLING FILTER
SPRING VALLEY MOBILE PARK	SEMI-PUBLIC	TRICKLING FILTER
VALLEY HILL TRAILER PARK (TY CO., INC.)	SEMI-PUBLIC	TRICKLING FILTER

	Lower Cost Scenario			Higher Cost Scenario		
	Capital Cost of Construction	O & M Cost Present Worth	20-year Annual Cost	Capital Cost of Construction	O & M Cost Present Worth	20-year Annual Cost
	\$252,433,000	\$342,172,000	\$39,962,000	\$374,411,000	\$342,172,000	\$51,189,000
Overall Cost			\$594,605,000			\$716,583,000

Disinfection Costs: For each of the 334 facilities, the proposed rule change would require each facility to meet effluent bacteria levels equal to the Water Quality Standard's numerical bacteria criteria. As specified in existing rule, all bacteria criteria are end-of pipe limits with no provision for mixing with critical low stream flows. It is assumed that the existing wastewater treatment or even after operation of nitrification unit processes would not comply with the stringent bacteria criteria without additional treatment. Thus, each facility would need to install effluent disinfection equipment. Since the most widely used treatment technique for disinfection is chlorination, the

economic estimates are based on the construction and O&M costs for chlorination equipment. While chlorine is a very effective disinfection agent, it is also a very toxic residual to the receiving stream's aquatic life. Therefore, dechlorination equipment costs were included in the cost estimates. The overall disinfection costs has been generalized to uniformly cost \$150,000 per facility. Table 3 notes the projected disinfection related costs for all 334 facilities.

Other alternative disinfection treatment options are available to wastewater treatment facilities. However, their costs are traditionally greater than chlorination and dechlorination. Each facility's managing authority will need to select the type of unit process, with cost being one of the factors. There are no higher cost or lower cost options for disinfection equipment. However, as noted in the attached addendum, disinfection costs may not be applicable for some types of implementation alternatives (such as land application) that do not discharge to a receiving stream. The appropriateness and applicability of these alternative options are best left to the facility's managing authority and are not integrated into any of the economic estimates.

Table 3 – Topic 4 Disinfection Fiscal Impacts

334 facilities * \$150,000 for disinfection costs per facility = \$50,100,000	
<i>Overall Cost =</i>	\$50,100,000

C. Anticipated Benefits:

The anticipated benefits from the adoption of the Topic 4 provisions are also associated with the potential improvements to: instream conditions for aquatic and semiaquatic life, wildlife, and livestock watering needs, and aesthetic conditions. These potential benefits do not have readily identifiable monetary value and are not estimated in this impact statement.

Topic 5 – Recreational Use for All non-Class A1 Designated Waters: This topic is proposing to add the Class A1 – Primary Contact Recreational Use designation to all streams not protected for Class A1 recreational uses including all current Class B(LR) waters having no recreational use designation and stream reaches currently designated as a Class A2 under the April 2004 rule change. Statewide, 14 additional wastewater treatment facilities (10 municipal, 4 semi-public) discharging to Class B(LR) waters are anticipated to be impacted through the implementation of more stringent effluent bacteria limits requiring disinfection. Several industrial facilities may be impacted by this topic, but were not included at this time. The same cost estimates and equipment needs discussed for Topic 4 were used for Topic 5 facilities. Table 4 notes the projected construction and O& M costs for the 14 impacted facilities.

1. municipal wastewater treatment facilities discharging directly to streams segments with an assigned protected flow,
2. industrial wastewater treatment facilities discharging directly to streams segments with an assigned protected flow, and
3. semi-public wastewater treatment facilities discharging directly to streams segments with an assigned protected flow.

In addition, the 63 wastewater treatment facilities (54 municipal, 6 semi-public, 3 industrial) from Topic 3 that are anticipated to be impacted through the implementation of more stringent effluent ammonia-nitrogen limits may also be impacted by the implementation of more bacteria limits due to the proposed provisions adding Class A1 to all Class B(LR) streams (Topic 5) as

streams segments that possess an applicable protected flow are Class B(LR) streams. The disinfection/dechlorination costs are included in Topic 5 summary impacts below.

Approximately 69 facilities were identified in the April 2004 rulemaking effort as being potentially impacted by the Class A2 designation. The same economic impact established in 2004 will apply to the proposed Class A1 designation of these stream reaches because the same wastewater treatment requirements would be required. Therefore, no additional economic impact is projected from this proposed rule on the 69 facilities.

Table 4 – Topic 5 Disinfection Fiscal Impacts

APLINGTON CITY OF STP	MUNICIPAL	AERATED LAGOON
BOYDEN CITY OF STP	MUNICIPAL	AERATED LAGOON
DNR BEEDS LAKE STATE PARK	SEMI-PUBLIC	AERATED LAGOON
GLADBROOK CITY OF STP	MUNICIPAL	AERATED LAGOON
LAKE VIEW CITY OF STP	MUNICIPAL	TRICKLING FILTER
LEMARS CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
MARATHON CITY OF STP	MUNICIPAL	PRIMARY TREATMENT
PANAMA CITY OF STP	MUNICIPAL	OTHER
REINBECK CITY OF STP	MUNICIPAL	ACTIVATED SLUDGE
ROCKWELL CITY, CITY OF STP	MUNICIPAL	TRICKLING FILTER
TIMBER VALLEY ESTATES-MHC-STP	SEMI-PUBLIC	AERATED LAGOON
UNDERWOOD CITY OF STP	MUNICIPAL	AERATED LAGOON
VERNON HEIGHTS MOBILE HOME PARK	SEMI-PUBLIC	OTHER
WILLOW POINTE ASSISTED LIVING FACILITY	SEMI-PUBLIC	ACTIVATED SLUDGE
14 facilities + 63 facilities = 77 facilities * \$150,000 for disinfection costs per facility = \$11,550,000		
Overall Cost =		\$11,550,000

Assumptions and Basic Approach for Cost Estimates: The wastewater treatment costs were estimated using several methods. The capital cost of construction was estimated using a cost curve based on recent information available for wastewater treatment plant upgrades in Iowa from the Department’s wastewater construction section. The cost curve includes facilities that have recently performed a major upgrade through the State Revolving Fund (SRF) loan program. These facilities were typically lagoon-type systems that constructed extended aeration activated sludge facilities in order to meet stringent ammonia-nitrogen effluent limitations. Once the cost curve was developed, an estimated treatment cost was calculated using the average wet weather (AWW) flows of each potentially impacted facility and the cost curve. It should be noted that some of these estimates for individual dischargers may project higher or lower costs because of the lack of data to derive the cost curve for extremely large and extremely small design flows. However, it is anticipated that the overall costs are adequately representative.

The operation & maintenance (O&M) costs were estimated using the EPA’s Innovative and Alternative Technology Assessment Manual (published in 1980 using cost information from 1976). The O&M cost used facilities that were upgrading from an aerated lagoon to an extended air activated sludge plant. A Consumer Price Index of 3.32 from the U.S. Department of Labor was used to bring the 1976 EPA cost estimates to today’s cost. The current cost of operating an aerated lagoon was subtracted from the cost of operating an extended air activated sludge plant to determine a representative O&M cost increase. The resulting net difference of O&M cost was calculated to a present worth value by using a 3% interest rate to account for inflation and a 20-year wastewater treatment plant design life. The present worth for O&M was then plotted with AWW design flows to create a cost regression where the resulting formula was used to estimate O&M present worth for the impacted facilities. The capital cost and O&M cost were then calculated to an annual cost to estimate impact on a year-by-year basis using a capital recovery equation.

Summary: The projected fiscal impact to municipal, industrial and semipublic wastewater treatment facilities from this rule-making effort ranges from \$790 million to \$956 million. The following table summarizes the total impact from each topic of the proposed rule.

Table 6
Fiscal Impact Summary

Rule-making Topic	Number of Affected Facilities	Projected Fiscal Impact		
		Nitrification	Disinfection/Dechlorination	Total
Higher Cost Scenario				
1) General Use Definition Changes*	*	*	*	*
2) Class B(WW-1, 2, & 3) Modification	N/A	N/A	N/A	N/A
3) Protected Flow	63**	\$177,946,000	N/A	\$177,946,000
4) Rebuttable Presumption*	334	\$716,583,000	\$50,100,000	\$766,683,000
5) Add Class A-1 to all Class B(LR)	14 + 63**	N/A	\$11,550,000	\$11,550,000
Totals	411	\$894,529,000	\$61,650,000	\$956,179,000
Lower Cost Scenario				
1) General Use Definition Changes*	*	*	*	*
2) Class B(WW-1, 2, & 3) Modification	N/A	N/A	N/A	N/A
3) Protected Flow	36***	\$134,011,000	N/A	\$134,011,000
4) Rebuttable Presumption*	246	\$594,605,000	\$50,100,000	\$644,705,000
5) Add Class A-1 to all Class B(LR)	14 + 63***	N/A	\$11,550,000	\$11,550,000
Totals	323	\$728,616,000	\$61,650,000	\$790,266,000
	Range	\$790,266,000 to \$956,179,000		

* Impacts of Topic 1 are included in Topic 4.

** Same facilities, but having separate costs due to different topics.

***36 facilities are part of the 63. Less facilities are affected by nitrification in the lower cost scenario. However, all 63 are still impacted by disinfection in the lower cost scenario.

Anticipated Implementation Approach: The Department clearly recognizes that the implementation of these proposed rules and rule changes will have far-reaching economic impacts. Historically, compliance with the provisions of the federal Clean Water Act has carried a significant price tag and will continue to be costly as requirements and guidelines are reaffirmed. It is the goal of the Department to implement these proposed rules in a reasonable, practicable, and responsible manner. Thus, the implementation will be linked to the reissuance of each facility's NPDES permit. All available NPDES provisions and consideration will be made to allow adequate time for each facility to comply with the adopted rules according to their time constraints, economic abilities, and source of financial aid. The State Revolving Fund (state administered low-interest loan program) will be available to assist in the eligible construction of the required facilities. If needed, additional fund monies will be sought to assure adequate loan funding.

The Department will be performing field assessments and, if applicable, preparing Use Attainability Analysis (UAA) reports on any waterbody suspected of not being capable of attaining any of the presumptive designations (Topics 4 & 5, above). These assessments will

be linked to the reissuance of NPDES Permits to impacted facilities and may require the Department to assign over 1.5 FTE annually for the next 5 - 7 years to perform field assessment and prepare UAA documents (\$75,000, annually). Field equipment associated with assessment and UAA report should be less than \$3,000, annually. Additional discussion of the implementation and UAA report efforts is in the rule-referenced document – Warm Water Stream Use Assessment and Attainability Analysis Protocol, which is part of this rule change. No other state agencies are anticipated to be affected by this rule-making effort.

Commonly Used Terms

1Q₁₀ – A projected low stream flow regime or condition used in several provisions of the Water Quality Standards. It is the calculated lowest one-day stream flow that would occur once every ten-years at a given location on a stream.

7Q₁₀ – A projected low stream flow regime used in several provisions of the Water Quality Standards. It is the calculated lowest seven-day average stream flow that would occur once every ten-years at a given location on a stream.

30Q₁₀ – A projected low stream flow regime or condition used in several provisions of the Water Quality Standards. It is the calculated lowest thirty-day average stream flow that would occur once every ten-years at a given location on a stream.

State Revolving Fund – **A state administered low-interest loan program that makes funds available to assist in the construction of various water quality improvements, particularly for publicly-owned wastewater treatment facilities.**

Nitrification – **The technical term applied to the biological treatment of wastewater in which ammonia nitrogen (and associated compounds) are transformed into less toxic forms, such as nitrate.**

Rebuttable Presumption – **A term used to describe the interpretation of the “fishable and swimmable” goals of the Clean Water Act where all waters are assumed capable of supporting these goals unless otherwise proven not to be capable of supporting these uses.**

NPDES permit – **The federal National Pollutant Discharge Elimination System permit issued by the state traditionally to point sources of treated wastewater.**

Addendum

Implementation Alternatives Potentially Available to Affected Facilities

This addendum briefly discusses several implementation alternatives that may be considered by wastewater treatment facilities impacted by this rule making effort. The objective is to note several of the potentially lesser-cost nitrification approaches (or approaches to comply with stringent effluent ammonia limits) that may be available to facilities, but specific economic consideration of these alternatives could not be included in the Fiscal Impact Statement. None of these alternatives has universal application to all impacted facilities and each alternative should be assessed by the managing authority on an individual basis.

With past Water Quality Standards (WQS) rule making efforts and the adopted rules, several alternatives have developed to allow affected entities additional time, reduced construction costs, and operational flexibility when the rules are implemented. Some of these alternatives have been integrated into the rules, such as the stepped mixing zones percentages for ammonia, site-specific data collection, and the use of an instream effluent diffuser. While these alternatives are still within rule, some may not be as applicable because most of the facilities potentially affected by this rule making effort will be discharging to stream segments with very low or no flow. Thus, the water quality-based effluent limits will be equal to or nearly equal to the numerical WQS criteria. To potentially reduce some of the economic burden of meeting end-of-pipe limits equal to the WQS criteria (particularly for ammonia nitrogen), the following may be considered.

Potentially Lower Cost Treatment Techniques:

1. Land Application. One of the treatment alternatives to a mechanical nitrification facility is land application of the wastewater after pretreatment. The pretreated wastewater is typically applied by gravity flow to vegetated soils that are slow to moderate in permeability and is treated as it travels through the soil matrix by filtration adsorption, ion exchange, microbial action and by plant uptake.

The land application treatment technique generally requires a sizeable land area for both the wastewater application site and the required storage during non-application periods. Thus, it probably can only be pragmatically used by very small communities or wastewater sources. It is anticipated that only facilities with relatively low design flow (<0.1 mgd) would find sufficient land (25 –35 acres) in close proximity. In addition to land constraints, there are a number of other factors that need to be evaluated as a community considers using the land application option. Some of the major factors are listed below:

- Hydraulic Application Rate.
- BOD5 loading rate.
- Soil permeability.
- Nitrogen loading.
- Phosphorus loading.
- Trace Elements loading.
- Salinity Restrictions.
- Groundwater table.
- Crop and vegetation selection.

For the development of these discussions on the cost comparison between land application and an extended aeration activated sludge facility, the following assumptions were made:

- Treatment facility design flow of 0.1 mgd.
- BOD₅ loading rate of 2 lbs/acre/day was used for calculations.
- Pretreatment lagoon cells and pretreated wastewater storage cells are required to hold the wastewater for 180 days (which includes retention time in the pretreatment cells)
- Operational cost for land treatment equals the operational cost of an aerated lagoon.
- The difference of 20 years of annual operational cost between a mechanical facility and an aerated lagoon was converted back to present worth at a rate of 3%.
- Construction cost curves from EPA “Innovative and Alternative Technology Assessment Manual” were updated to bring published costs to current dollars.
- No salvage value has been included for either the land application technique or the mechanical nitrification option.

Working with the above-mentioned assumptions and constraints, it was estimated that a facility with an average flow of 0.1 mgd could expect an annual saving of between 18% – 25% in selecting the Land Application option as compared to constructing and operating an extended aeration mechanical nitrification facility. Clearly, many factors specific to the facility influence the actual cost comparison between the two treatment techniques for a given facility. Thus, the economic evaluation of treatment techniques for a facility is best prepared by the retained consulting engineer.

2. Aerated Lagoon Covers. A newer innovative modification to the traditional aerated lagoon wastewater treatment technique is the incorporation of a membrane cover over several of the aerated lagoon cells followed by polishing reactors for nitrification. The membrane cover allows the lagoon water to retain more of the latent heat associated with domestic wastewater that provides for accelerated decomposition of the organic and ammonia components of domestic wastewater and the polishing reactors nitrify in a low BOD environment. While the Department does not endorse any particular type of wastewater technique, this approach to improve wastewater treatability has been permitted for several facilities in Iowa. From a well-operated and maintained system, the effluent quality does appear to achieve ammonia reduction capable of meeting the projected end of pipe ammonia nitrogen limits discussed above.
3. Combined Aerated Lagoon/Activated Sludge Unit Processes. A newer innovative modification to the traditional aerated lagoon wastewater treatment technique is the incorporation of an activated sludge unit process into the basic physical features of the lagoon system. The proprietary process (commonly called a Bio-Lac system) converts part of the aerated lagoon cells into cells capable of supporting a high biomass of activated sludge which provides for accelerated decomposition of the organic and ammonia components of domestic wastewater. While the Department does not endorse any particular type of wastewater technique, this approach to improve wastewater treatability has been permitted for several facilities in Iowa. From a well-operated system, the effluent quality does appear to achieve ammonia reduction capable of meeting the projected end of pipe ammonia nitrogen limits noted above. Noted below are some of the observations for the facilities permitted in Iowa:
 - All of the lagoons that have been modified are above 1 mgd.

- The facilities are relatively new and are producing effluent that is low in ammonia under current loadings. Their long term performance and reliability is yet to be established as they approach their design conditions.
 - Three out of four of these facilities are located in the central Iowa.
 - Preliminary estimates suggest that communities that can take advantage of such technology may save between 20% - 40% compared to building a new extended air facility.
4. Other Innovative Treatment Techniques. The science of wastewater treatment continues to develop newer approaches and design concepts, such as artificial wetlands and various applications of bioremediation. Some of these concepts may have economic benefits or may be used in concert with established treatment techniques to achieve ammonia reduction capable of meeting the projected end of pipe ammonia nitrogen limits discussed above.

Potentially Lower Cost Operation/Treatment Technique:

- 1) Flow variable effluent limits. The basic principle of this concept would allow a discharger to release only the amount of a pollutant that the receiving stream can assimilate and not violate the WQS. As the assimilative capacity of the receiving stream increased due to increased natural flow, additional amounts could be discharged, normally from stored pre-treated wastewater. Careful operation of the discharge flow rate, monitoring of effluent ammonia concentrations, and measurement of the receiving stream's upstream flow are critical. The facility's discharge permit would be modified to reflect the additional operational requirements to assure that the instream criteria are not violated. This concept is typically considered by wastewater treatment facilities where ammonia nitrogen is present in their treated effluent. Several facilities treating industrial and domestic wastewater operate under this technique.

One significant benefit for a discharger, particularly one with ammonia present, is that there is no need to construct and operate an advanced wastewater treatment facility designed to remove essentially all ammonia-nitrogen (called nitrification). Secondary treated wastewater (for POTWs) could be partially stored in holding cells and/or land applied when inadequate assimilative capacity in the receiving stream is available. The need for additional storage cells and/or land application equipment and the means to measure stream flows are additional expenses associated with this concept.

It is anticipated that this treatment technique may have greater economic appeal for dischargers with relatively small to mid size (less than 100,000 gallon/day) design flows. Land requirements for treated effluent storage during lower stream flow periods may be excessively large for larger facilities. The large land requirements are due in part to the type of receiving streams associated with this rulemaking effort, low to zero flow headwater reaches. Thus, the treatment design associated with the flow variable concept may require greater than 180 days of storage before adequate stream flows occur to assimilate all of the stored wastewater. Specific costs for individual facilities or unit costs for this technique could not be prepared for this impact statement since each facilities costs would be specific to numerous local factors.

Clearly, this treatment technique is not applicable to all facilities and would require careful evaluation before pursued. Contact is encouraged with the Department's NPDES permit Section or Water Resources Section staff when considering this option.

Appendix A

1. See Affected Facilities Spreadsheets Attachment
2. US EPA. February 1980. Innovative and Alternative Technology Assessment Manual. Office of Water, Program Operations, Washington, DC.
3. DNR State Revolving Loan Wastewater Files