

**Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item**

SUBJECT:

Request that the Board adopt Board Order WT-29-09, proposed rules affecting ch. NR 114 Wis. Adm. Code related to the certification of wastewater treatment plant operators.

FOR: December 2013 Board meeting

PRESENTER'S NAME AND TITLE: Susan Sylvester, Director, Bureau of Water Quality

SUMMARY:

Wisconsin Administrative Code Chapter NR 114 - Certification Requirements for Wastewater Treatment Operators is being revised to reflect changes over the past 20 years in wastewater treatment plant technologies and the many computer based course and on-line educational opportunities that now exist. Wastewater treatment has also become more advanced and complex to meet more stringent water quality limits over the past few decades. The proposed revisions will improve and modernize the certification process while providing more flexibility and a wider range of options for operators seeking to obtain advanced certification. The proposed revised certification subclasses will result in more current and pertinent operator certification study guides and exams that reflect the new and improved treatment technologies that exist today. This will be a benefit the succession of new operators currently replacing retiring operators. A grandfathering of new operators is also proposed.

The most notable changes being proposed are:

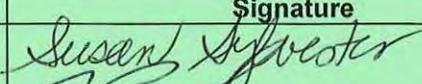
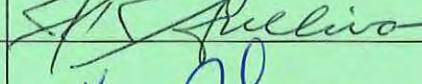
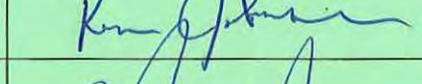
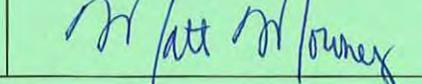
- > facility and operator level changes from grades 1, 2, 3, 4 to basic and advanced levels
- > changes in the criteria for classifying treatment plants as advanced
- > four new subclasses including a sanitary sewage collection system subclass
- > re-grouping and revising of the other subclasses
- > a new point system for operators to gain advanced certification

The Department Secretary approved the Statement of Scope to begin revisions to Ch.NR 114, Wis. Adm. Code on September 17, 2009. The rule is expected to be a Level 3 - little to no economic impact expected. From March 27 - April 25, 2013, the Department solicited comments or participation on the economic impact analysis. No comments were received.

RECOMMENDATION: The Board adopt Board Order WT-29-09.

LIST OF ATTACHED MATERIALS (check all that are applicable):

- | | |
|---|---|
| <input checked="" type="checkbox"/> background memo | <input type="checkbox"/> Attachments to background memo |
| <input type="checkbox"/> Statement of scope | <input type="checkbox"/> Governor approval of statement of scope |
| <input checked="" type="checkbox"/> Fiscal estimate and economic impact analysis (EIA) form | <input type="checkbox"/> Environmental assessment or impact statement |
| <input checked="" type="checkbox"/> Response summary | <input checked="" type="checkbox"/> Board order/rule |

Approved by	Signature	Date
Susan Sylvester, Bureau Director		10/30/13
John Sullivan, Bureau Director		10/30/13
Ken Johnson, Administrator		11/7/13
Cathy Stepp, Secretary		11/13/13

cc: Board Liaison - AD/8
Jack Saltes - WQ/3

Program attorney - LS/8
Julia Riley - WQ/3

Department rule coordinator - LS/8

DATE: October 21, 2013

TO: All Members of the Natural Resources Board

FROM: Cathy Stepp, Secretary

SUBJECT: Background memo on Board Order WT-29-09, relating to adoption of certification requirements for wastewater treatment plant operators

1. Subject of Proposed Rule:

The proposed rule revises the wastewater treatment plant operator certification process and requirements contained in Chapter NR 114.

The proposed revisions addresses new, changed and advanced wastewater treatment technologies; on-line educational training opportunities; and the need for knowledgeable, competent operators of sanitary sewer collection systems.

2. Background:

Wisconsin's wastewater operator certification program began in 1965, prior to the federal Clean Water Act of 1972. The critical importance of having trained, knowledgeable individuals operating wastewater treatment plants was recognized then, as it is now. A well-operated and maintained treatment plant directly translates in producing a high quality effluent discharge to our rivers, streams, lakes and groundwater, thus protecting water quality, recreational opportunities and public health.

Over the past four decades, there have been many significant changes in water quality initiatives and federal/state regulations. This has resulted in more restrictive water quality limits and other conditions being placed into Wisconsin Pollutant Discharge Elimination System (WPDES) permits. Wastewater treatment plants have become more sophisticated and complex to meet the need for greater treatment levels and efficiencies. More sophisticated and complex treatment plants result in the need for more knowledgeable and skilled operators to operate and manage them. Today, most wastewater treatment plants have more advanced levels of treatment, not only for conventional pollutants (Biochemical Oxygen Demand and Total Suspended Solids), but also to meet limits for nutrients such as phosphorus and nitrogen and limits for certain toxics.

Coinciding with advanced treatment, computer technologies and capabilities have grown rapidly. Computers have made distance learning more common through the use of on-line courses and degree programs. It is important that our operator certification code revisions incorporate the many educational and training modalities into the certification process. The code revisions incorporate these new training methods into the certification program. In addition, the need for more advanced courses for the growing number of advanced level plants and operators creates economic opportunities for educational institutions and private trainers to develop such courses and curriculums.

Many veteran operators are retiring. Rapid and ongoing succession of new operators is underway. It was recognized that the process needed to provide more flexibility and options in obtaining advanced education/training.

As the result of all these factors, the Department established a wastewater operator trainer's stakeholder workgroup in March 2010 to assist and advise the Department in revising the certification program for a

new generation of wastewater treatment plants and operators. This large workgroup consisted of representatives from Wisconsin Wastewater Operators Association, Wisconsin Rural Water Association, private trainers, consultants, technical colleges, UW-Stevens Point, and USEPA. Several workgroup meetings were held during 2010-2012 in drafting the revisions. Comments and ideas for revisions from the workgroup members contributed significantly to the changes and modernization of the certification program.

As the code revisions were underway in 2010, the Department of Workforce Development, Bureau of Apprenticeship Standards received a federal grant to develop a state apprenticeship program for wastewater treatment plant operators in Wisconsin. It became the primary model for the federal Department of Labor's Wastewater Treatment Plant Operator Apprenticeship Program (2012). The Department of Natural Resources worked collaboratively with the Department of Workforce Development to integrate the apprenticeship program into our operator certification code. The Wisconsin Apprenticeship Program requires passing three new certification subclasses (treatment technologies) exams as part of the graduation criteria. In addition, graduates of the apprenticeship program will receive recognition towards advanced level certification.

Lastly, two new wastewater training centers were built during 2010-2012: (1) Waste Education Center – UW Stevens Point and (2) Wisconsin Rural Water Association Training Building, Plover, WI. These two new training centers are state-of-the-art facilities that will serve and educate the new generation of operators entering the workforce in the years ahead. They will also provide many training opportunities for continuing education.

New and updated Department operator certification study guides and exams will be developed to implement the code revisions during 2014. These study guides and exams will update wastewater technology information and wastewater knowledge operators need to know.

3. Why is the rule being proposed?

Advancements in treatment technologies, changes in educational training methods and the succession of a new generation of operators prompted the Department to seek revision to Ch. NR 114, Wis. Adm. Code – Certification Requirements for Wastewater Treatment Plant Operators. These revisions will help modernize and improve the certification process while providing a wider range of opportunities with more flexibility for operators to obtain advanced certification.

4. Summary of the rule.

Wisconsin Administrative Code Chapter NR 114 – Certification Requirements for Wastewater Operators proposed revisions reflect changes in treatment technologies and educational training methods. Some notable changes include:

- A new point system based on a mix of education and experience to gain advanced level certification
- The creation of four new subclasses including a collection system subclass
- The revisions and re-grouping of other subclasses
- Operator and facility classifications changing from Grades 1-4 to Basic and Advanced levels
- Changes to the advanced classification criteria for wastewater treatment plants

5. How does this proposal affect existing policy?

The proposed changes maintain the Department's certification authority of Wisconsin's wastewater treatment plant operators. With aging and deteriorating sewer system infrastructure, it also proposes to add a subclass

for the sanitary sewer collection system that conveys wastewater to the wastewater treatment plant. This will complement the Sanitary Sewer Overflow (SSO) Rules (WT-29-10) and new Capacity, Management, Operation and Maintenance (CMOM) requirements that the Board adopted in January 2013. A short mediasite presentation about CMOM can be found on the website: <http://dnr.wi.gov/topic/wastewater/cmom.html>

6. Has Board dealt with these issues before?

The last revisions to ch. NR 114 – Subchapter 1 were made in September 1995 and December 2000.

7. Who will be impacted by the proposed rule? How?

Operators of wastewater treatment systems will be affected by these code revisions based on the classification of treatment plants (basic or advanced) and the revised subclasses. New operators who need to obtain advanced certification would achieve advanced certification through a point system based on education and experience, instead of by exams alone. A grandfathering of existing operators into the new certification system is proposed. Some municipalities may need to increase salaries of some operators who obtain advanced certification through grandfathering. Owners of treatment plants with collection systems will be required to have at least one operator certified in sanitary sewers. This will help improve the knowledge and skills of collection system operators and thus help reduce the frequency and severity of sewer overflows and basement back-ups. Certified collection system operators will also have a better knowledge about sewer systems to develop and implement good CMOM programs.

The rule revisions will lead to increased competency of operators and more consistent and improved compliance with Wisconsin Pollutant Discharge Elimination System (WPDES) permit requirements. This will lead to fewer instances of noncompliance and result in a lowered potential for costs due to enforcement of permit limits by the Department. A well-operated and maintained wastewater treatment plant and collection system produces a high quality effluent, thus protecting public health and maintaining water quality in the state.

Educational institutions and trainers such as technical colleges and private trainers will benefit by adding and offering new advanced training courses for operators seeking advanced certification through education. The Department of Workforce Development's new Apprenticeship Program for Wastewater Treatment Plant Operators was developed in conjunction with these proposed certification changes. Information about the state approved apprenticeship program can be found on the following website: http://sage.wi.gov/pdf/wwtpo/wwwtpo_apprenticeship_info_packet.pdf

8. Soliciting public input on economic impact synopsis

From March 27 - April 25, 2013, the department solicited comments or participation on the economic impact analysis. No comments were received.

9. Environmental Analysis

The Department has made the determination that these rule revisions are a Type IV action under s. NR 150 .03(8)(a)(7) , Wis. Adm. Code, and an environmental analysis is not required.

10. Small Business Analysis

No small businesses, as defined in s. NR 227.114 (1), Wis. Adm. Code will be affected by changes in wastewater treatment plant operator certification requirements. Small businesses, as defined, do not generally own and operate treatment plants, or at least mechanical treatment plants with surface water discharges, that require certified operators under ch. NR 114, Wis. Adm. Code. Any fiscal impacts that would occur from these rule changes would affect municipalities and larger industries that have treatment plants or municipal sanitary sewer collection systems. Based on this analysis, the Department concluded there are few, if any, small businesses that will be affected by changes in wastewater treatment plant or sanitary sewer system operator certification requirements.

A positive effect on small business will be additional training opportunities for consultants and private trainers to provide advanced training (on-line or classroom) to operators, especially those seeking advanced certification through education. The requirement for municipal collection systems to have a certified operator will result in the development of sanitary sewer collection system classes by wastewater education based businesses and technical colleges for municipal operators who will need this certification in the next 5-10 years.

RESPONSE SUMMARY NATURAL RESOURCES BOARD ORDER WT-29-09

The Department published notice of public hearings on proposed revisions to NR 114 on July 12, 2013 in the Administrative Register. The public comment period was open through August 29, 2013. Public hearings were held at Eau Claire (August 13), Wausau (August 16), Green Bay (August 27), Milwaukee (August 28) and Fitchburg (August 29). Non-Department attendees include four (4) in Eau Claire; one (1) in Wausau and one (1) in Milwaukee. The attendees had no comments. They came for informational purposes and to ask some questions.

Nine written comments were received on the rule proposal. Those persons or organizations providing comment were:

- Wisconsin Wastewater Operators Association (in full support of the rule)
- Michael Davy, Davy Engineering, LaCrosse WI
- Gary Hanson, AECOM, Sheboygan, WI
- Brian Hein, LaCrosse WWTP
- Thomas Grisa, DPW, City of Brookfield
- Daniel Stephany, DPW, City of Monona
- Rod Maas, Electrotek Corporation, Oak Creek, WI
- Chris Groh, Wisconsin Rural Water Association , Plover, WI

Comments are summarized below:

SUMMARY OF PUBLIC COMMENTS

Comment: Three comments were made recommending changing the name of Wastewater Treatment Plant Operators to Water Resource Recovery Specialists, Water Resources Operators or Wastewater Operations Specialists.

Response: The Department does not feel a name change should be made at this time. There is a long history of this position title. It is clear and descriptive of the position. All operator certification programs in other states, the national Association Board of Certification (ABC), the state and federal wastewater operator apprenticeship program and educational institutions still refer to operators of treatment plants as Wastewater Treatment Plant operators. A position name change may also lead to confusion and impact Wisconsin operator reciprocity or job applications in other states.

Comment: Two comments were made regarding the new Subclass SS – Sanitary Sewage Collection Systems. Both were in favor of this new important subclass and that operators certified in the operation and management of sewage collection systems would be beneficial. Additionally, a comment was made that certification requirement for collection systems should also apply to satellite collection systems (communities only owning a sewer system that discharges to a large regional wastewater treatment facility).

Response: The department agrees certified sewage collection system operators are very important in the improved operation and maintenance of this vital, but aging infrastructure. The department also agrees that satellite sanitary sewage systems would benefit by having a certified operator but adding certification requirements to satellite collection systems is beyond the scope of this rule revision at this time. The department hopes however that satellite sewer systems voluntarily certify their collection system operators.

Comment: Two comments were made regarding the elimination of subclass L (metal plating/finishing) with no conversion to another subclass.

Response: The Department agrees with these comments and will revise the code accordingly. Subclass L (Metal Plating & Finishing) will be converted to subclass U (Unique Treatment Process).

Comment: One comment was made that Wisconsin's certification program be expanded to include complex industrial pretreatment facilities.

Response: Expanding the NR 114 certification program to include complex industrial facilities is beyond staffing/resources of the Department and the scope of this code revision. Pretreatment facilities will remain excluded from certification requirements of NR 114 as in the current code because wastewater treatment plants that receive wastewater from pretreatment facilities already are required to have certified operators, sewer use ordinances regulate and control such discharges in municipalities and the complex pretreatment facilities are also regulated under the Department's Pretreatment program.

Comment: One comment was provided asking the Department to clarify code language regarding grace periods (time) for replacement operators to achieve the required certification levels. 1 year and 3 year grace periods were suggested for basic and advanced plants respectively.

Response: The Department agrees that the language needs to be clearer and will revise it, however, disagrees that a person lacking any knowledge or experience in wastewater treatment should be given a grace period to operate and maintain a wastewater facility. However, for basic treatment plants, the Department will allow an operator-in-training (passed the basic general wastewater and the basic subclass exams) to be designated as the operator-in-charge. Such an operator shall be given one year to obtain the year of experience to obtain the year of experience for basic level certification. This is similar to current code.

Advanced treatment plants, however, must plan for and find a fully certified (in all subclasses of the plant), knowledgeable and competent operator-in-charge for advanced treatment systems, critical and imperative to operate such sophisticated and complex plants. This will ensure they meet limits and remain in compliance at all times to protect public health and water quality.

LEGISLATIVE COUNCIL RULES CLEARINGHOUSE (LCRC) COMMENTS

LCRC provided comments on the draft rule on August 6, 2013. Most comments were recommendations that improve or correct the clarity, grammar and form and have been incorporated into the final rules. All comments and recommendations were incorporated into the rule except:

5.a. The LCRC suggested that it believes some of the defined terms have an obvious meaning. However, it is the Department's opinion that some of the terms identified by the LCRC may not be obvious to operators in the context of this rule. Therefore, it is important that these definitions remain in the rule, with those revised as recommended, for clarity and the operator's clear understanding of the terms and respective certification requirements as it pertains to those terms.

2.p. The LCRC stated that the effective date clause be written as follows : (2) SECTION 16 (now SECTION 18) of this rule shall take effect on the first day of the month following publication in the Wisconsin Administrative Register. Only SECTION 18 s NR 114.57 (3) is to take effect on the first day of the month following publication. The rest of the code will take effect 12 months later as stated in SECTION 19.

ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

1. Type of Estimate and Analysis

Original Updated Corrected

2. Administrative Rule Chapter, Title and Number

NR 114 - Certification Requirements for Waterworks, Wastewater Treatment Plant, Septage Servicing and Water Systems Operators

3. Subject

Revisions to Subchapter I for certification requirements of wastewater treatment plant operators

4. Fund Sources Affected

GPR FED PRO PRS SEG SEG-S

5. Chapter 20, Stats. Appropriations Affected

None

6. Fiscal Effect of Implementing the Rule

No Fiscal Effect Increase Existing Revenues Increase Costs
 Indeterminate Decrease Existing Revenues Could Absorb Within Agency's Budget
 Decrease Cost

7. The Rule Will Impact the Following (Check All That Apply)

State's Economy Specific Businesses/Sectors
 Local Government Units Public Utility Rate Payers
 Small Businesses (if checked, complete Attachment A)

8. Would Implementation and Compliance Costs Be Greater Than \$20 million?

Yes No

9. Policy Problem Addressed by the Rule

Operator certification requirements in Wisconsin originated with Chapter 614, Wisconsin laws of 1965. After passage of the Clean Water Act of 1972, the operator certification program became more solidified with the establishment of wastewater treatment plant classifications (1,2,3,4) and numerous subclasses. Study guides and exams were developed for operators of the different classes and subclasses of treatment plants. The last revisions occurred in the late 1990's. With new wastewater treatment technologies and the increase in on-line classes and distance learning programs, there is a critical need to update and modernize the certification program.

10. Summary of the businesses, business sectors, associations representing business, local governmental units, and individuals that may be affected by the proposed rule that were contacted for comments.

This rule revision will primarily impact wastewater treatment facilities (WWTF). To estimate the impact, we conducted a survey of 123 WWTF. A copy of the survey can be found in Attachment A; details of survey results will be discussed in question 12.

11. Identify the local governmental units that participated in the development of this EIA.

See above.

12. Summary of Rule's Economic and Fiscal Impact on Specific Businesses, Business Sectors, Public Utility Rate Payers, Local Governmental Units and the State's Economy as a Whole (Include Implementation and Compliance Costs Expected to be Incurred)

From March 27 - April 25, 2013, the department solicited comments or participation on the economic impact analysis. No comments were received.

We identified five changes that could have a potential economic impact: Base level costs for exam fees, grandfathering of operator certification, re-classification of facility certification, certification costs of sanitary sewer collection system

ADMINISTRATIVE RULES

Fiscal Estimate & Economic Impact Analysis

Operators-in-Charge, and increased demand for educational courses and study materials.

1. Base level costs for exam fees

Previously, there was a different advanced exam for certification in each subclass, costing \$25 per exam. Operators took an average of five exams, for a total cost of \$125. Under the new system, there is one single advanced exam that is an amalgamation of the former advanced exams. As the number of questions on the advanced exam has risen from 40 to 100, the exam fee has increased to \$50 to accommodate higher production and processing costs. There is also a \$100 application fee for advanced certification, which did not exist previously. Thus, the difference between the former and the revised rule is a \$25 increase per examinee. (See Table 2 in Appendix B for additional details.)

However, it is worth noting that while the price is increasing by \$25 for those that wish to take the exam, the exam is no longer mandatory. Those that are able to obtain advanced certification through other means will save \$25 as they will only be required to pay the \$100 application fee. Between 2008 and 2011, on average, 722 advanced exams were taken annually. Because there are now additional avenues for advanced certification, we anticipate that there will be fewer advanced exams taken each year.

Note: While exam preparation courses are not necessary to pass the exam, some operators may find them to be helpful in certification. Although department rules do not require prep courses, we expect that a small additional number of operators will choose to take the courses if the proposed rule is adopted.

2. Grandfathering of operators

Under the new rule, some basic operators may be grandfathered into advanced certification. Treatment facilities with a certification-based pay structure will face higher salary costs from these newly advanced operators. However, as the individual operators will benefit from higher salaries this impact would be considered an economic transfer rather than a cost.

To estimate the costs of grandfathering operators into advanced certification, we conducted a salary structure survey of WWTP. We sent the survey to 123 plants of various size, geographic location, and plant classification; fifty plants responded. Out of the fifty respondents, twenty-three had salary structures dependent on certification. We therefore anticipate these potential salary increases will affect less than half of the state's WWTF. For additional details on survey responses, see Appendix A.

Salary increases ranged from \$0.10 – \$1.50 per hour, or \$208 – \$3,120 per year, per operator. While we cannot predict exactly how many operators will be grandfathered into a higher salary, we do not anticipate this salary hike to be excessively expensive for plants that incorporate certification in their salary packages. Operators will also benefit from the higher wages.

3. Reclassifying Facilities/Plants

Some facilities may be reclassified from basic to advanced. Plants that implement high technology phosphorus controls will need operators with advanced certification. Because they would not otherwise pursue advanced certification, the cost to certify operators will be \$150 per facility.

There are 512 plants classified as basic statewide. (See Figure 1 in Appendix B for plant classification details.) In an informal survey of department wastewater engineers, engineers anticipated that 28 percent of basic plants would be re-

ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

classified as advanced for \$21,400 in statewide certification costs. Table 4 in Appendix B gives a range of estimates on reclassification costs depending on what percentage of facilities are reclassified as advanced.

4. Certifying Sanitary Sewer System Operators-in-Charge

New revisions introduce certification requirements for sanitary sewer collection systems. Operators will only need basic certification, and are thus only subject to the exam fee (\$25). As this is a new requirement, it will affect all 700 facilities, at a cost of \$25 per facility (\$17,500 statewide). This new level of certification will result in a better operated and managed sewer systems, which will reduce future sewer overflows and building backups. Certified collection system operators will also have a better knowledge about sewer systems to develop and implement good Capacity, Management, Operation and Maintenance (CMOM) Programs that will be required by the Sanitary Sewer Overflow (SSO) rules.

5. Educational providers

There will be some benefit to organizations or individuals who provide exam prep classes and advanced coursework that fulfills the point system. In actuality, many of the "costs" described above are actually transfers, benefitting institutions and individuals providing education and training. See Table 3 in Appendix B for additional information on educational costs.

Summary of economic impact

Ultimately, the impact on the state's economy will be moderate. Most of the changes that result from this rule are transfers rather than costs. The advanced exam will be slightly more expensive, but there will be fewer exams for operators to take and the exam is not mandatory. WWTF may need to pay higher salaries that they offset by increasing rates (or absorbing), but employees will benefit from the raises. Operators may choose to pay for preparatory classes, but those offering these courses will realize an increase in their business.

While there is some variability, we predict the total costs and transfers to be between \$100,000 and \$200,000 for the first year of implementation as facilities pursue operator certification necessitated by facility reclassification and the new sanitary system requirements. After the first year, economic impacts will be reduced to transfers resulting from salary increases and changes in exam costs.

We anticipate that the department will absorb implementation costs into the existing program. Table 1 in Appendix 2 provides a summary of the costs associated with different aspects of the point system.

13. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule

Question 9 outlined five primary objectives to this rule revision. The benefits from these objectives are as follows:

1. Plant classifications and operator certifications are streamlined and simplified by reducing certification levels from four to two;
 2. Updated plant subclasses to better address new and changed technologies;
 3. Replacing certification examinations with a point system allows more educational flexibility and online options for advancement;
 4. Certification now includes sanitary sewer collection systems, which will protect public health and water quality from basement back-ups and sanitary sewer overflows;
 5. Revising the code to separate wastewater and waterworks certification improves readability and understanding.
-

ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

These new requirements aim to encourage the advancement of operator knowledge and competency in operating and rehabilitating aging infrastructure. In addition, sanitary sewer systems certification will provide the necessary knowledge for operators to develop and implement capacity management operation and maintenance (CMOM) programs. These revisions will help streamline and improve the certification process while providing a wider range of opportunities for operators to receive advanced certification.

Additionally, there are unquantifiable benefits associated with clean water that were not incorporated into this analysis. We did not have the resources, time, or information to accurately analyze the precise changes in water quality that would result from better-qualified operators. However, this rule revision will result in fewer sanitary sewer failures and better water quality, which in turn returns economic benefits through tourism, recreation, reduced clean-up costs, and increased property values.

Alternatives:

Rule revisions were written to maximize flexibility for operator certification. They integrate the current exam certification system with options of gaining points through experience and educational training. The point system provides operators many different options to pursue advanced certification in a way that best suits them.

14. Long Range Implications of Implementing the Rule

In the long run, streamlining will provide greater flexibility for those pursuing advanced certification. The majority of the costs are up-front implementation and salary adjustment costs which benefit employees and educational providers. We predict that, going forward, operators will benefit from the increased education and flexibility provided by the point system.

15. Compare With Approaches Being Used by Federal Government

The federal government (USEPA) has no nationwide operator certification program. The certification of wastewater treatment plant operators is carried out by each state and their programs. All fifty states have wastewater treatment plant operator certification programs.

16. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota)

All neighboring states have wastewater treatment plant operator certification programs. These certification programs are based on examination and experience.

Only Minnesota requires a collection system certificate for wastewater collection, pumping, and conveyance facilities that are managed separately from the wastewater treatment facility. Illinois offers a voluntary wastewater collection system certificate. Indiana and Michigan do not offer state certification for collection systems.

ILLINOIS: In Illinois a voluntary Collection System Operator Certification is available for wastewater operators. The certification is administered by the Illinois State Environmental Protection Agency's Bureau of Water. Prerequisites for certification include a high school diploma (or equivalent), 6 months collection system operating experience and the equivalent of 6 months substitution experience. There is only one level of voluntary certification offered.

INDIANA: The Indiana Department of Environmental Management, who oversees certification of wastewater operators, does not offer collection system certification. The professional member association, Indiana Water Environment Association has a Collection System Committee (30+ members) administers a four-level voluntary collection system operation certification for wastewater operators.

ADMINISTRATIVE RULES

Fiscal Estimate & Economic Impact Analysis

MICHIGAN: The State of Michigan's Department of Environmental Quality, who certifies wastewater operators, does not offer certification for collection systems.

MINNESOTA: The Minnesota Pollution Control Agency (MPCA), who certifies wastewater operators, requires at least one certified collection system operator for a system of collection, pumping, and conveyance facilities that is operated separately from the facility that treats, stabilizes and disposes of wastewater. The MPCA classifies these facilities as type-S facilities with four subclasses (A, B, C, & D) based upon the size of the population served. If the collection facility is not operated separately from the treatment facility, the designated operator of the treatment facility is responsible and does not need a type S certificate.

OHIO: The Ohio Environmental Protection Agency's Division of Drinking and Groundwater certifies the person responsible and in charge of a collection system. Sewerage systems, a.k.a. collection systems, are classified. Sewerage systems may be classified at one of two levels (I and II) based upon design flow (< or > 0.15 MGD respectively).

17. Contact Name Jack Saltes, Wastewater Operations Engineer	18. Contact Phone Number 608 264 4045
---	--

This document can be made available in alternate formats to individuals with disabilities upon request.

ADMINISTRATIVE RULES
Fiscal Estimate & Economic Impact Analysis

ATTACHMENT A

1. Summary of Rule's Economic and Fiscal Impact on Small Businesses (Separately for each Small Business Sector, Include Implementation and Compliance Costs Expected to be Incurred)

2. Summary of the data sources used to measure the Rule's impact on Small Businesses

3. Did the agency consider the following methods to reduce the impact of the Rule on Small Businesses?

- Less Stringent Compliance or Reporting Requirements
- Less Stringent Schedules or Deadlines for Compliance or Reporting
- Consolidation or Simplification of Reporting Requirements
- Establishment of performance standards in lieu of Design or Operational Standards
- Exemption of Small Businesses from some or all requirements
- Other, describe:

4. Describe the methods incorporated into the Rule that will reduce its impact on Small Businesses

5. Describe the Rule's Enforcement Provisions

6. Did the Agency prepare a Cost Benefit Analysis (if Yes, attach to form)

- Yes No
-

Appendix A - WWTF Survey details

Salary adjustments accompanying changes in operator certification could have an economic impact on WWTF. To accurately assess how operator certification affects salary structures, we surveyed 123 WWTFs of geographical locations and sizes throughout the state (text below). We received fifty responses.

Survey responses:

Out of the fifty respondents, twenty-three had salary structures dependent on certification. The remainder had salary structures based on experience and other factors.

For the WWTFs where certification affected operator salaries, operators were compensated for certification in one of four ways:

1. An increase in salary following the passing of the advanced exam
2. An increase in salary following the passing of the advanced exam and some predetermined number of subclass exams
3. An increase in salary for each subclass certification
4. An increase in salary when advance certification is achieved in all advanced subclasses.

Salary increases ranged from \$0.10 – \$1.50 per hour, or \$208 – \$3,120 per year, per operator. While we cannot predict exactly how many operators will be grandfathered into a higher salary, we do not anticipate this salary hike to be excessively expensive for plants that incorporate certification in their salary packages. Operators will also benefit from the higher wages.

Text of survey:

Hello,

The WDNR is revising the certification requirements for wastewater treatment plant operators found in NR 114. I am working with Jack Saltes on an economic impact analysis of the proposed changes. To make sure we're accurately assessing the salary impact on WWTF, we're soliciting feedback from affected parties. If you could please answer six brief questions, we would appreciate it - it will make sure we're accurately assessing how the revised rule will impact your facilities. Please send your response by Friday, December 21, 2012, and thank you for your time.

Compensation Survey:

1. Is your treatment plant Class 1 or 2 (Intro) or Class 3 or 4 (Advanced)?
2. How many Wastewater Treatment Plant operators does your treatment plant have?

3. How many operators have intro certification?
How many have advanced certification?
4. Is treatment plant operator certification required of operators other than the Operator-In-Charge?

At your WWTP, please describe the relationship between operator certification level and salary level:

5. Is salary based on each individual Intro subclass certification? If yes, monetarily, how much is each subclass certification worth to the operator?
6. Does salary increase with advanced certification? If yes, monetarily, how much is each advanced subclass certification worth to the operator?

Again, thanks very much for taking the time to help us estimate these figures. In case you're curious, here's a brief summary of the primary changes being implemented:

- Six new subclasses will be created
- Classification for operators and facilities will change from Grades 1-4 to "Basic" and "Advanced" levels.
- A new point system will be used for Advanced Certification.

Appendix B – Tables and Figures

Please note: Tables and figures are placed in an appendix rather than the body of the report because formatting on DOA – 2049 (Fiscal Estimate and Economic Impact Analysis) does not allow for any tables or figures.

Table 1 – Statewide impact of NR 144 rule revision

	Monetary value	Number affected	Impact
Exam fee difference	+/- \$25 per advanced exam	All operators seeking advanced certification	Cost increases for those taking the exam, cost decreases for those not taking the exam.
Grandfathering of operators	\$0.10 – \$1.50/hour (\$208 - \$3,120/year per facility)	~ 350 (half of WWTF statewide)	Salary increase for operators grandfathered into advanced certification.
Facility reclassification	\$150 per facility	~140 facilities (see Table 4)	Plant/operator must pursue advanced certification. (Currently, ½ of facilities contacted don't require operators* to be certified.)
Certification of sanitary systems	\$25/facility (\$17,500 statewide)	700 facilities statewide	Operator must obtain certification.
Educational providers	See Table 3	Undetermined – (See Table 3)	Education providers could see an increase in students.

*Other than the Operator-in-Charge, who must be certified.

Table 2 – Differences in cost between former and new advanced exam

	No. Exams	Exam cost	Application fee	Total
Old System	Average of 5	\$25	NA	\$125
New System	1	\$50	\$100	\$150
Difference				+/--\$25*

Note: Old advanced exams comprised 40 questions each. The new advanced exam has 100 questions.

*While there may be an increase in price for those choosing to take the exam, there will be a decrease for those who no longer need to take the exam.

Table 3 – Summary of various costs associated with point systems

Classes	Points*	Hours	Cost
Distance Learning or Correspondence Class UC- Sacramento, Tetra Tech, etc.	2	80	\$99 - \$3310
College Semester Wastewater Course	1.5	60	\$467 - \$1296
	1	40	\$350 - \$1042
Certificate Program Class Classroom or online	1	40	NA ³
1-3 Subject Wastewater Class Classroom or online	0.5	20	\$99 - \$1295

* 10 points needed for advanced certification.

³ This certification program does not currently exist. Thus there is no cost associated with it.

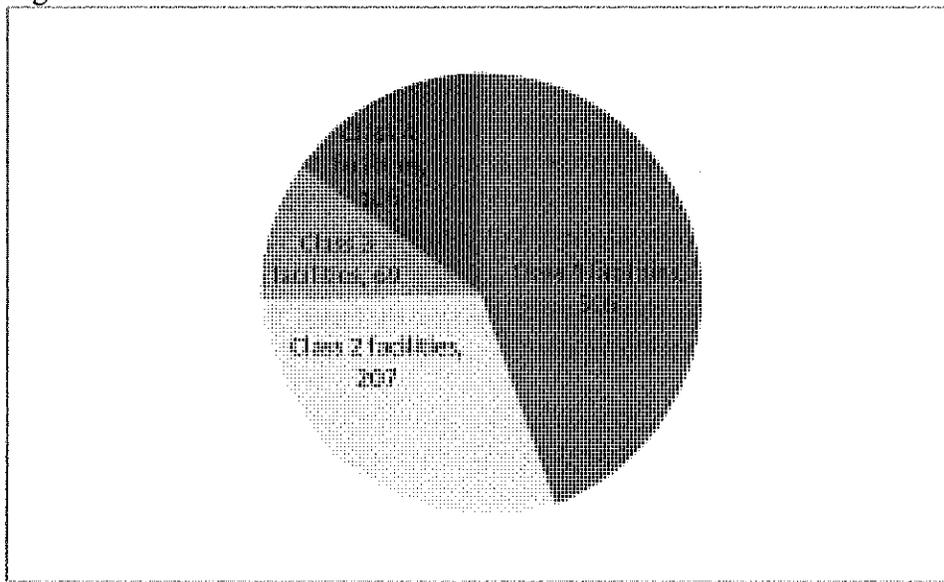
Note: These educational costs are not required under the new system. Advanced certification may be obtained with experience and the advanced exam.

Table 4 – Range of reclassification costs

Percentage of plants reclassified as advanced	Statewide Impact
10%	\$7,680
20%	\$15,360
30%	\$23,040
40%	\$30,720
50%	\$38,400

Note: The application and exam fee is \$150; reclassification will cost \$150 per facility. There are currently 512 plants classified as Basic in Wisconsin. We currently estimate that approximately 30% of plants will be reclassified as Advanced.

Figure 1. Current WWTF Classification of facilities



**PROPOSED ORDER OF THE STATE OF WISCONSIN
DEPARTMENT OF NATURAL REOSURCES
AMENDING, REPEALING AND RECREATING AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to repeal NR 114.03 (8) and (9), NR 114.03 (14) and (16), NR 114.05 (8), NR 114.08, NR 114.09, NR 114.12 (1), NR 114.14 (1) (c) and (d); to amend subch. 1 NR 114 (title), NR 114.01, NR 114.02, NR 114.03 (2), (3), and (5), NR 114.03 (10), (11), (12), and (13), NR 114.04, NR 114.05 (1), NR 114.06 (1) (b), NR 114.07 (5) (c), NR 114.10 (intro), NR 114.12 (title), NR 114.14 (1) (h); to repeal and recreate NR114.03 (6), NR114.07 (5) (b); to create subch. IV of ch. NR 114 relating to certification of waterworks and wastewater treatment plant operators by the Department of Natural Resources.

WT-29-09

Analysis Prepared by Department of Natural Resources

- 1. Statutory authority:** Sections 227.11 and 281.17 (3), Stats.
- 2. Statutes interpreted:** Section 281.17 (3), Stats.
- 3. Explanation of agency authority:**

Chapter 281, Stats. – Water and Sewage, grants authority to the Department to serve, to protect, maintain and improve the quality and management of the waters of the state, ground and surface, public and private. To the end that these vital purposes may be accomplished, all rules and orders promulgated under chapter 281, Stats., are to be liberally construed in favor of the policy objectives set forth in the chapter. Section 281.17 (3), Stats. specifically directs the department to promulgate rules establishing an examining program for certifying wastewater treatment plant operators.

4. Related statute or rule:

Chapter NR 114, Wis. Adm. Code, relates to regulation of wastewater discharges in the chapter NR 200, Wis. Adm. Code, series of rules. The quality of the discharge from wastewater treatment plants directly relates to the design and construction of the facility, as well the knowledge and competency of the operators, who run and manage the state's wastewater treatment plants. A well-operated and managed wastewater treatment plant produces a high quality effluent thus protecting and maintaining water quality in the state.

5. Plain language analysis:

Operator certification requirements in Wisconsin originated with Chapter 614, Wisconsin laws of 1965. After passage of the Clean Water Act of 1972, the operator certification program became more solidified with the establishment of wastewater treatment plant classifications (1, 2, 3, and 4) and numerous subclasses. Study guides and exams were developed for operators of the different classes and subclasses of treatment plants. The Bureau of Science Services administers

the certification program, while the Bureau of Water Quality provides the technical base and support. Examinations are given in each of the regions twice a year in May and November.

The program underwent code revisions in the 1990's and currently has a critical need of revisions with the advent of changes and innovation in computer and wastewater technologies over the past two decades. Wisconsin permits over 1000 industrial and municipal wastewater treatment plants and has 2400 certified operators operating these wastewater plants. In the past 25 years, most treatment plants have received more stringent effluent limitations, and have become more complex and technologically advanced through upgrading and new construction. Well-operated and maintained wastewater treatment plants and associated collection systems by knowledgeable and skilled operators directly translates into protections of public health and the environment. Increased competency of operators also results in more consistent and improved compliance with Wisconsin Pollutant Discharge Elimination System (WPDES) permit requirements. This then leads to fewer instances of noncompliance and a lowered potential for costs due to enforcement of permit violations by the Department.

Chapter NR 114, Subchapter I – Certification of Waterworks and Wastewater Treatment Plant Operators, Wis. Adm. Code, is being amended to remove references to wastewater treatment plant operators and subch. IV is being created of the same chapter to address certification of wastewater treatment plant operators separately from certification of waterworks. Five objectives are achieved: (1) update and revise treatment plant classifications and subclasses to reflect new and changed technologies; (2) eliminate advanced certification examinations and replace them with an advanced certification point system to allow operators more flexibility and educational options towards advancement; (3) expand certification to include sanitary sewer collection systems; (4) provide more options for a new generation of operators to gain knowledge and competency through on-line classes and apprenticeship opportunities; and (5) separate the certification requirements for waterworks and wastewater plant operators for improved readability and understanding.

Chapter NR 114, Wis. Adm. Code, establishes revised plant classification levels (basic or advanced) and subclasses, an advanced certification point system, future certification requirements for sanitary sewer collection systems and a fair conversion (grandfathering) process of transferring existing operators into the new certification system.

6. Summary and comparison with existing and proposed federal regulations:

While 33 USC 1251, federal Clean Water Act, does not mandate operator certification for wastewater treatment plants, the need for operating and maintaining wastewater treatment plants properly by knowledgeable and highly skilled operators is recognized by all states. All fifty states have wastewater treatment plant operator certification programs.

7. Comparison of similar rules in adjacent states:

All U.S. Environmental Protection Agency (EPA) Region 5 states (Illinois, Indiana, Michigan, Minnesota, and Ohio) have wastewater treatment plant operator certification programs. These certification programs are based on examination and experience.

Of the EPA Region 5 states, Ohio is the only state that requires a certified operator in charge for wastewater collection systems. Minnesota requires a collection system certificate for operation of wastewater collection, pumping, and conveyance facilities that are managed separately from the wastewater treatment facility. Illinois offers a voluntary wastewater collection system operator certificate while, Indiana and Michigan do not offer state certification.

ILLINOIS: In Illinois, a voluntary collection system operator certification is available for wastewater operators. The certification is administered by the Illinois State Environmental Protection Agency's Bureau of Water. Prerequisites for certification include a high school diploma (or equivalent), 6 months collection system operating experience and the equivalent of 6 months substitution experience. There is only one level of voluntary certification offered.

INDIANA: The Indiana Department of Environmental Management, who oversees certification of Wastewater Operators, does not offer collection system certification. The professional member association, Indiana Water Environment Association has a Collection System Committee (30+ members) who administer a voluntary collection system operation certification at 4 levels for wastewater operators.

MICHIGAN: The State of Michigan's Department of Environmental Quality, who certifies Wastewater Operators, does not offer certification for collection systems.

MINNESOTA: The Minnesota Pollution Control Agency (MPCA), who certifies wastewater operators, requires at least one certified collection system operator for a system of collection, pumping, and conveyance facilities that is operated separately from the facility that treats, stabilizes and disposes of wastewater. The MPCA classifies these facilities as type-S facilities with four subclasses (A, B, C, & D), based upon the size of the population served. If the collection facility is not operated separately from the treatment facility, the designated operator of the treatment facility is responsible and does not need a type S certificate.

OHIO: The Ohio Environmental Protection Agency's Division of Drinking and Groundwater certifies the person responsible and in charge of a collection system. Sewerage systems, a.k.a. collection systems, are classified. Sewerage systems may be classified at one of two levels (I and II) based upon design flow (< or > 0.15 MGD respectively).

8. Summary of factual data and analytical methodologies used in the rules and how any related findings support the regulatory approach chosen:

Given the increase in on-line training courses and programs for wastewater treatment plant operators, especially in the last ten years, it became apparent and imperative that the Department revise and modernize its certification program to allow operators more flexibility and choices in achieving advanced certification beyond only examinations. During the revisions of ch. NR 114, Wis. Adm. Code, the Department of Workforce Development, Bureau of Apprenticeship Standards received federal grant monies to develop an Apprenticeship Program for Wastewater Treatment plant operators. The Apprenticeship Program has since been developed and is now

available for wastewater treatment plant operators. Operators earn 6 of 10 points towards advanced certification by completing this program.

The concept of an advanced certification point system came from the Kansas wastewater operator certification program. Kansas uses a point system to determine what level exam an operator is eligible to take. The Department adapted the point system concept by developing one for advanced certification. Advanced certification allows operators to gain an increased knowledge about a particular aspect of wastewater treatment. A stronger knowledge through advanced certification is critical in operating more complex wastewater treatment plants and requires greater operational skills because of various factors.

Concurrent to these ch. NR 114, Wis. Adm. Code revisions, the Department has also drafted revisions to various rules for collection systems, more commonly referred to as the “Sanitary Sewer Overflow (SSO) Rules” (WT-23-11). These rule revisions are primarily intended to prevent, to the extent possible, the overflow of untreated sewage to state waters and land surfaces and/or the backup of sewage into basements and buildings where such discharges present a risk to public health and may cause environmental harm. The SSO rules require that all sewage collection system owners implement defined programs to assure the long-term viability of those systems. Effective programs for the proper operation and maintenance of the systems will be less costly in the long-term by reducing and preventing infiltration and inflow that lead to SSOs and building backups, assuring treatment facility capacity is not exceeded, and proactively dealing with potential failures of the system components. The SSO rules will require that all collection system owners develop and implement a Capacity, Management, Operation and Maintenance (CMOM) program within three years to assure proper long-term operation of sewage collection systems. The SSO Rules will also specify what components must be included in a CMOM and the documentation and reporting requirements associated with such a program.

With CMOM requirements and implementation of the SSO Rules, certification requirements for collection system operators will complement those rule revisions. It will provide the needed knowledge and skills for operators to develop and implement successful CMOM Programs and better operate and maintain their collection systems. Improved operational knowledge of sanitary sewer systems directly translates into protecting public health and water quality from basement back-ups and sanitary sewer overflows. Knowledgeable collection system operators also help protect and maintain the large investment of government funding of infrastructure. The Department evaluated collection system certification programs for every state in the nation. Approximately 46% of the states require some level of collection system certification.

In March 2010, the Department established a wastewater operators trainers stakeholders workgroup to assist and advise the Department in revising the certification program for wastewater treatment plant operators. The workgroup consisted of representatives from the Wisconsin Wastewater Operators Association (WWOA), Wisconsin Rural Water Association (WRWA), private trainers, consultants, technical colleges, UW-Stevens Point, and EPA. Several workgroup meetings were held during 2010-2012 in crafting the revisions. Comments and ideas for revisions from the workgroup members contributed significantly to the changes and modernization of the certification program.

9. Analysis and supporting documentation used to support the small business analysis:

No small businesses, as defined in s. NR 227.114 (1), Wis. Adm. Code will be affected by changes in wastewater treatment plant operator certification requirements. Small businesses, as defined, do not generally own and operate treatment plants, or at least mechanical treatment plants with surface water discharges, that require certified operators under ch. NR 114, Wis. Adm. Code. Any fiscal impacts that would occur from these rule changes would affect municipalities and larger industries that have treatment plants or municipal sanitary sewer collection systems.

For example, in the small businesses analysis prepared for the phosphorus water quality criteria, Board Order WT-25-08, that could also potentially apply to treatment plant operator certification, 11 dairy operations were identified that met the small business definition. Small cheese factories may be the best example of a small business. Of those 11, 6 apply wastes to the land through a variety of methods and are exempt from certification requirements. The other 5 discharge their wastes to municipal wastewater treatment plants, also exempt from certification requirements.

Based on this analysis, the Department concluded there are few, if any, small businesses that will be affected by changes in wastewater treatment plant or sanitary sewer system operator certification requirements.

10. Effect on small business, including how this rule will be enforced:

Based on the above analysis, the Department determined that few, if any, small businesses would be affected by the proposed changes in wastewater treatment plant operator certification requirements. Small cheese factories may be the best example of a small business that would have wastewater treatment and management needs. Many of these small dairies land apply their wastewater and thus are excluded from operator certification requirements.

A positive effect on small business will be additional training opportunities for consultants and private trainers to provide advanced training (on-line or classroom) to operators, especially those seeking advanced certification through education. The requirement for municipal collection systems to have a certified operator will result in the development of sanitary sewer collection system classes by wastewater education based businesses and technical colleges for municipal operators who will need this certification in the next 5-10 years.

11. Agency Contact:

Jack Saltes
Bureau of Water Quality
P.O. Box 7921
101 South Webster Street
Madison, WI 53707
jack.saltes@wisconsin.gov

12. Place where comments are to be submitted and deadline for submittal:

Jack Saltes
Bureau of Water Quality
P.O. Box 7921
101 South Webster Street
Madison, WI 53707
jack.saltes@wisconsin.gov

SECTION 1. subch. I of NR 114 (title) is amended to read:

SUBCHAPTER I — CERTIFICATION OF WATERWORKS AND WASTEWATER
TREATMENT PLANT OPERATORS

SECTION 2. NR 114.01, NR 114.02, NR 114.03 (2), (3), and (5) are amended to read:

NR 114.01 Purpose. The purpose of this subchapter is to establish rules for the certification of waterworks and wastewater treatment plant operators pursuant to s. 281.17 (3), Stats.

NR 114.02 Applicability. The provisions of this subchapter are applicable to all owners and operators of waterworks and wastewater treatment plants as defined in this subchapter.

NR 114.03 (2) "Certified operator" means a person who has met the requirements of this subchapter and has been issued a certificate by the department to work at one or more of the classifications of waterworks or wastewater treatment plants.

NR 114.03 (3) "Classification" or "class" means a number assigned to a waterworks or wastewater treatment plant based on a rating system.

NR 114.03 (5) "Direct responsible charge" means to provide detailed on-site technical direction of the operation of a waterworks or wastewater treatment plant.

SECTION 3 NR114.03 (6) is repealed and recreated to read:

NR114.03 (6) "Experience in the operation of a waterworks" means to have performed the basic duties involved with the operation of a specific treatment subclass for 12 months, or to have provided daily on-site technical supervision of the operator or operators performing those duties.

SECTION 4. NR 114.03 (8) and (9) are repealed.

SECTION 5. NR 114.03 (10), (11), (12), and (13) are amended to read:

NR 114.03 (10) "Operate" means to be in direct responsible charge of a subclass or subclasses of operations at a ~~waterworks or a wastewater treatment plant~~.

NR 114.03 (11) "Operator-in-charge" means the person designated by the owner of a ~~waterworks or wastewater treatment plant~~ to be in direct responsible charge of a subclass of operations of the ~~waterworks or wastewater treatment plant~~. Not included in this definition are utility managers, city engineers, directors of public works or the equivalent, who are not actually involved in day-to-day operations.

NR 114.03 (12) "Owner" means the state, county, town, town sanitary district, city, village, ~~metropolitan sewerage district~~, corporation, firm, company, institution, association, utility district, school district, ~~joint sewerage commission~~ or individual owning or operating any ~~or wastewater treatment plant~~ waterworks.

NR 114.03 (13) "Subclass" means a letter assigned a ~~plant or system~~ to a waterworks based upon a particular type of process at the plant-waterworks and the letter assigned to a person based on passing an examination for a specific operational process.

SECTION 6. NR 114.03 (14) and (16) are repealed.

SECTION 7. NR 114.04 and NR 114.05 (1) are amended to read:

NR 114.04 General requirements. No person may be an operator-in-charge of a subclass of a ~~waterworks or wastewater treatment plant~~ unless that person holds a valid certificate issued pursuant to this subchapter. Every subclass at a ~~waterworks or wastewater plant~~ shall have a designated operator-in-charge.

NR 114.05 (1) Examinations and on-the-job experience shall be used to determine knowledge, skill and ability of the applicant to perform duties at a ~~waterworks or wastewater treatment plant~~. A score of 75% or higher shall be a passing score on each written examination. An applicant desiring to be certified to perform duties at a ~~waterworks or wastewater treatment plant~~ shall submit a completed application to the department at least 28 days prior to the established date of a written examination on an application form provided by the department. Fees as outlined in s. NR 114.06 shall accompany the application. Applicants shall be notified of their eligibility for examination.

SECTION 8. NR 114.05 (8) is repealed.

SECTION 9. NR 114.06 (1) (b) is amended to read:

NR 114.06 (1) (b) Three year renewal-~~waterworks or wastewater~~.....\$45.00

SECTION 10. NR 114.07 (5) (b) is repealed and recreated to read:

NR114.07 (5) (b) Applicants shall meet the following continuing education requirements: Waterworks certified operators at Grade T and 1 require 18 hours per 3 year renewal period, except the operator-in-charge of a surface water treatment plant shall be required to submit 24 hours per 3 year renewal period.

SECTION 11. NR 114.07 (5) (c) is amended to read:

NR 114.07 (5) (c) For ~~both waterworks and wastewater treatment~~ certified operators, not more than 6 hours of health and safety training may be used per 3 year renewal period.

SECTION 12. NR 114.08 and NR 114.09 are repealed.

SECTION 13. NR 114.10 (intro.) is amended to read:

NR 114.10 (intro.) Classification of waterworks. The classification of each waterworks shall be class 1 and assigned one or more of the applicable subclasses based on the operations performed at ~~the plant that~~ waterworks.

SECTION 14. NR 114.12 (title) is amended to read:

NR 114.12 (title) Required grades for the operation of waterworks and wastewater treatment plants.

SECTION 15. NR 114.12 (1) is repealed.

SECTION 16. NR 114.14 (1) (c) and (d) are repealed.

SECTION 17. NR 114.14 (1) (h) is amended to read:

NR 114.14 (1) (h) By intentional or negligent action, caused or significantly contributed to a violation of any provision of ch. 281-~~or~~283, Stats., or any administrative codes, permits or orders adopted or issued under those chapters.

SECTION 18. Subchapter IV of NR 114 is created to read:

SUBCHAPTER IV - CERTIFICATION OF WASTEWATER TREATMENT PLANT OPERATORS

NR 114.50 Purpose. The purpose of this subchapter is to establish rules for the certification of wastewater treatment plant operators pursuant to s. 281.17 (3), Stats.

NR 114.51 Applicability. The provisions of this subchapter are applicable to all owners and operators of wastewater treatment plants as defined in this subchapter and under the coverage of a WPDES permit.

NR 114.52 Definitions. In this subchapter:

(1) "Advanced coursework" means education that is beyond the basic knowledge of a particular aspect of wastewater treatment. It concentrates advanced wastewater studies in only a few subjects in blocks of a minimum of 20, 40, 60 or 80 hours. Technical talks or presentations at meetings, single or part day classes or training sessions, seminars or conferences are not included in this definition.

(2) "Associates degree" means a wastewater treatment related degree earned at a 2-year technical college.

(3) "Certificate" means a printed document issued by the department, pursuant to this subchapter, stating that the operator named therein has met the competency requirements for one or more operator levels and subclasses.

(4) "Certified operator" means a person who has meet the requirements of this subchapter and has been issued a certificate by the department to work at a given level and subclasses of wastewater treatment plants.

(5) "Department" means the department of natural resources.

(6) "Direct responsible charge" means having responsibility for providing on-site technical direction in the operations of a wastewater treatment plant.

(7) "Experience" means the daily hands-on operation and maintenance of a wastewater treatment plant. Treatment plant managers providing daily on-site technical supervision of the operator or operators performing those tasks may be eligible for claiming experience.

(a) The first twelve months of claimed experience shall be subclass specific.

(b) Subsequent months of claimed experience may be any general wastewater operational experience.

(c) One year of experience is based on full-time employment at a treatment plant or 1,000 hours of cumulative experience, over a minimum of 12 months, for part-time operators.

(8) "Graduate degree" means an advanced degree, M.S. or Ph.D., from an accredited college or university with graduate studies and emphasis in wastewater treatment or water pollution control engineering.

(9) "Health and safety training" means classes relating to wastewater treatment plant operations and maintenance and includes but not limited to confined space, excavation, hearing conservation, water safety, blood-borne pathogens, CPR- First Aid, mechanical and electrical safety, fall protection, hazardous plant chemicals as well as others.

(10) "Industrial wastewater treatment plant" means a privately owned wastewater treatment plant for treating liquid wastes resulting from any process of industry, manufacture, trade or business or the development of any natural resources.

(11) "Level" means the basic or advanced classification assigned to a wastewater treatment plant operator pursuant to this subchapter.

(12) "Major contributing industry" means an industrial or commercial facility that is a user of a municipally owned wastewater treatment plant, and has a waste which the department determines has, or may have, a significant impact, either singly or in combination with other wastes, on a wastewater treatment plant or on the quality of effluent from a wastewater treatment plant.

(13) "Mechanical plant" means a plant that is designed and constructed with a series of steel or concrete basins using pumps, pipes and other equipment to actively convey and treat wastewater. Pond, lagoon or natural systems are not part of this definition.

(14) "Operate" means to be in direct responsible charge of a subclass or subclasses of operations at a wastewater treatment plant and a sanitary sewage collection system.

(15) "Operator-in-charge" means the person designated by the owner of the wastewater treatment plant to be in direct responsible charge of a subclass of operations of a treatment plant or of a sanitary sewage collection system and involved in hands-on day-to-day operations.

(16) "Owner" means the state, county, town, sanitary district, city, village, metropolitan sewerage district, corporation, firm, company, institution, association, utility district, school district, sewerage commission or individual owning or operating a WPDES permitted wastewater treatment plant.

(17) "Satellite sewage collection system" means a municipally owned or private sewage collection system that conveys wastewater to another sewerage system which provides the wastewater treatment.

(18) "Sanitary sewage collection system" means the common sanitary sewers, interceptor sewers, pump stations and supporting equipment in a community that receive wastewater from buildings and conveys it to a wastewater treatment plant.

(19) "Subclass" means a letter assigned a treatment plant based upon a particular type of treatment process at the plant and to the letter assigned to a person based on passing a subclass examination for a specific operational process.

(20) "Tertiary phosphorus removal" means the advanced physical and chemical removal of phosphorus to achieve very low phosphorus concentrations not achievable by conventional methods.

(21) "Undergraduate degree" means a Bachelor's degree earned at a 4-year accredited college or university in which at least 240 hours were wastewater treatment related.

(22) "Wastewater treatment plant" means a facility that provides for the treatment of sanitary or industrial wastewater or both. The following types of facilities are excluded from operator certification:

- (a) Facilities defined as private sewage systems in s. 145.01 (12), Stats.
- (b) Pretreatment facilities which discharge to a public sewer system for treatment.
- (c) Industrial wastewater treatment which consists solely of a land disposal system.
- (d) Digesters at agricultural operations that reuse, recycle or landspread the treated wastes.
- (e) Concentrated aquatic production facilities (fish hatcheries) in which no biological treatment process is utilized.

(23) "WPDES permit" means a permit issued to a publicly owned treatment plant under s. 283.31, Stats., for the purposes of controlling pollutant discharge.

NR 114.53 General requirements. (1) Every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate pursuant to this subchapter. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days.

(2) Owners of treatment plants, which includes both the treatment plant and sanitary sewage collection system to it, shall have a designated collection system operator-in-charge for sanitary sewage collection systems. The designated operator-in-charge shall have passed and be certified in the sanitary sewage collection system subclass. For owners of satellite sanitary sewage collections systems, collection system operator certification is voluntary.

(3) All wastewater treatment plants holding a WPDES permit that have a registered or certified laboratory shall have at least one operator that works in the laboratory certified at the basic level in the laboratory subclass.

(4) Upon a change in a wastewater treatment plant's classifications caused by the addition of a new subclass listed in s. NR 114.56 (4), the operator-in-charge shall have 12 months to pass the necessary subclass examinations and to gain the one year of subclass specific experience.

(5) Upon a change in a wastewater treatment plant's level of operations from basic to advanced, the operator-in-charge shall have 36 months to obtain advanced certification, provided the person is making earnest efforts towards advanced certification and that the treatment plant is in compliance with all terms and conditions of its WPDES permit.

(6) Owners of basic wastewater treatment plants, in the event of the unexpected loss of the operator-in-charge, may designate an operator-in-training certified in all subclasses of the plant as the operator-in-charge for a period up to twelve months.

(7) Owners of advanced wastewater treatment plants, in the event of the unexpected loss of the designated operator-in-charge, shall ensure the continued proper operation and maintenance of the treatment plant by another advanced certified operator in all subclasses of the plant.

NR 114.54 Examinations and applications. (1) Examinations, education and on-the-job experience shall be used to determine knowledge, skill and the ability of the applicant to perform duties at a wastewater treatment plant. A score of 75% or higher shall be a passing score on each examination. An applicant desiring to be certified to perform duties at a wastewater treatment plant shall submit a completed exam application to the department at least 28 days prior to the established date of the written examination. The applicant shall submit the completed application on an application form provided by the department. Fees as listed in s. NR 114.55 shall accompany the application.

Note: The application form is available on the following website: <http://dnr.wi.gov> or by writing to the Department of Natural Resources, Operator Certification Program, PO Box 7921, Madison, WI 53707-7921.

(2) Written examinations shall be conducted on week days at least 2 times annually in locations specified by the department.

(3) Basic examinations shall consist of 25 to 50 questions specific to the subclass. The wastewater treatment plant advanced examination shall consist of 100 questions with content from all subclasses.

(4) Examinations shall not be issued to applicants who have not properly registered 28 days prior to the examination date, or fail to identify themselves on request.

(5) Examinations shall not be returned to an examinee. Examination results shall be mailed to the examinee within 60 days of the examination date.

(6) Applicants who fail to pass a written examination may apply to the department for reexamination at a subsequent scheduled examination.

(7) The department shall provide study guides pertaining to each subclass.

(8) A wastewater treatment plant operator shall take and successfully complete the general wastewater examination and subclass examinations to become an operator-in-training in each subclass.

(9) A wastewater treatment plant operator shall take and successfully complete the requirements of sub. (8) and meet one-year subclass-specific experience to become a basic level operator in a subclass.

(10) A wastewater treatment plant operator may take the wastewater treatment advanced certification examination to earn four points towards advanced certification according to the table in s. NR 114.57 (1) (c).

NR 114.55 Fees. (1) Fees for certification shall be as follows:

- (a) Each basic examination..... \$25.00
- (b) Advanced examination..... \$50.00
- (c) Advanced certification application..... \$100.00
- (d) Certification renewal..... \$45.00
- (e) Late renewal penalty..... \$25.00
- (f) Reciprocity application..... \$100.00

(2) Fees shall accompany completed application forms. Fees are non-refundable.

(3) Certifications shall be renewed every 3 years. The renewal fee is due no later than the expiration date of the certificate. A late renewal penalty fee shall be assessed for any renewal application postmarked after the expiration date.

NR 114.56 Classification of wastewater treatment plants. (1) Each wastewater treatment plant shall be assigned a basic or advanced rating. An advanced wastewater treatment plant is one that meets any one of the following criteria:

- (a) Is a mechanical plant with an annual average design flow greater than 1.0 MGD.
- (b) Has a biochemical oxygen demand (BOD) limit of 10 mg/L or less.
- (c) Has surface water limits for total phosphorus or total nitrogen and utilizes a biological nutrient removal process.
- (d) Uses a tertiary phosphorus removal process to achieve ultralow phosphorus limits.
- (e) Is a municipal treatment plant that receives wastewater from a major contributing industry.
- (f) Is a municipal treatment plant that produces Class A biosolids.

(2) Wastewater treatment plants that do not meet any of the criteria in s. NR 114.56 (1) shall be classified as a basic facility.

(3) Wastewater treatment plants that utilize special or unique biological, physical, chemical, or other unique treatment methods shall have an operator certified in subclass U.

(4) Thirteen wastewater treatment plant subclasses are established in Table 1.

**Table 1
Wastewater Treatment Plant Categories and Subclasses**

CATEGORY	SUBCLASS	SUBCLASS NAME	DESCRIPTION
<i>Biological treatment</i>	A1	Suspended Growth Processes	Activated sludge and variants
	A2	Attached Growth Processes	Trickling filters, RBCs and biotowers
	A3	Recirculating Media Filters	
	A4	Ponds, Lagoons and Natural Systems	

	A5	Anaerobic Treatment of Liquid Waste	High strength liquid waste treatment system
<i>Solids separation</i>	B	Solids Separation	Clarifiers, membranes, filters, tertiary phosphorus removal, etc.
<i>Solids treatment</i>	C	Biological Solids/Sludge – Handling, Processing and Reuse	Aerobic and anaerobic digestion, thickening, dewatering, land application
<i>Nutrient removal</i>	P	Total Phosphorus	
	N	Total Nitrogen	
<i>Disinfection</i>	D	Disinfection	Chlorination, ultraviolet radiation, ozone
<i>Laboratory</i>	L	Laboratory	Registered or certified on-site laboratories
<i>Special</i>	U	Unique Treatment Systems	Unique, special treatment plants that use biological, chemical or physical methods
<i>Collection System</i>	SS	Sanitary Sewage Collection System	

NR 114.57 Qualifications and level of wastewater treatment plant operators. (1)

Two levels and 13 subclasses of wastewater treatment plant operators are established. Operator subclasses are the same as plant subclasses listed in Table 1. To qualify for certification at a given level and subclass, a person shall meet the appropriate examination, education and experience requirements.

(a) *Operator-in-training.* To qualify for operator-in-training in a specific subclass, a person shall pass the basic general wastewater examination and a basic subclass examination.

(b) *Basic level.* To qualify for basic certification in a specific subclass, a person shall pass the basic general wastewater examination, the specific subclass exam and have one year of satisfactory experience in that subclass.

(c) *Advanced Level.* An advanced certification point system is established in Table 2. To qualify for advanced certification in a given subclass, a person shall have earned a total of 10 points and met the requirements of s. NR 114.57 (1) (b). Of the 10 points, 4 to 6 years of experience accounts for 4 to 6 points. A minimum of 4 points of experience is required. Six points is the maximum number of points that may be given for experience.

**Table 2
Advanced Certification Point System**

TYPE	POINT METHOD	POINTS	MINIMUM
-------------	---------------------	---------------	----------------

			HOURS
Experience	48 Months Work Experience, Minimum	4	
	60 Months Work Experience	5	
	72 Months Work Experience, Maximum	6	
Degree	4-year Undergraduate Degree or Graduate Degree	6	
	2-year Water/Wastewater Associates Degree	6	
Apprenticeship	State Approved Apprenticeship Program	6	
Exam	100 Question Multiple Choice Exam	4	
Advanced course		2	80
		1.5	60
		1	40
		0.5	20

(2) A person shall submit an advanced certification application provided by the department documenting education, experience and the advanced certification points earned. Diplomas or certificates showing successful education completion shall be attached to the application. Transcripts highlighting wastewater related classwork shall also be attached. Applicants shall be notified of the status of their advanced certification with 90 days of receipt of a complete application.

(3) The department shall establish and update a list of eligible advanced course offerings by September 1 of each year. Trainers shall submit an application provided by the department for approval of advanced courses by no later than June 1 of each year. Trainers of listed courses shall annually renew their course application by June 1 each year and notify the department of any changes in course content. An advanced course of 18-19 hours may be eligible for .5 points if listed by the department.

(4) A general wastewater examination is not required for unique treatment systems (subclass U) or sanitary sewage collection systems (subclass SS) basic certifications.

(5) Upon development and availability of the sanitary sewage collection system subclass SS study guide and examination, and at the time of permit reissuance, collection system operators shall have a permit term of 5 years to obtain collection system certification.

NR 114.58 Certificate issuance, renewal and continuing education. (1) Upon satisfactory fulfillment of the qualifications required by this subchapter, the department shall issue a certificate to a person indicating the certification level and subclasses for which the person has qualified.

(2) All certificates shall expire 3 years from the date of issuance. Certificates may be updated to show additional examinations passed, additional experience gained and changes in certification level and classifications, but the expiration date shall not change. Updating a certificate shall not extend nor change the expiration date. Certificates shall only be renewed subject to the requirements of sub. (3).

(3) A person who desires to renew a certificate shall submit evidence of having met the continuing education requirements under sub. (4) on forms provided by the department. Training or courses must be approved by the department. These may include, but are not limited to courses sponsored by the department, university, technical college, technical sessions at meetings of professional organizations, in-house training and on-line training classes that are wastewater related. Failure to successfully complete and document the required number of hours of continuing education training within the 3-year period shall result in rejection of a certificate renewal application.

(4) Renewal applications shall meet the following continuing education requirements:

(a) Operators-in-training and basic wastewater treatment plant certified operators require 18 hours per 3-year renewal period.

(b) Advanced wastewater treatment plant operators require 24 hours per 3-year renewal period.

(c) Wastewater treatment plant operators may use up to 6 hours of health and safety training per 3-year renewal period.

(d) Operators-in-training and basic wastewater treatment plant operators may use up to 3 hours of supervisor or management training per 3-year renewal period. Advanced wastewater treatment plant operators may use up to 6 hours of supervisor or management training per 3-year renewal period.

(5) A person whose certificate has expired may within one year of expiration, be reinstated by paying the renewal fee, the late penalty fee and fulfilling the continuing education requirements. A person not renewing within the one year period shall have to re-take the basic subclass examinations. To regain advanced certification, the basic examinations must be passed and the person shall have to reapply for advanced level certification.

(6) Certificates may be issued through reciprocity, without examination, to a comparable level and subclass to any person who holds a current wastewater treatment plant operator certificate in any state, territory or possession of the United States, or any country, if in the judgment of the department, the person requesting comparable certification meets the equivalent requirements of this subchapter in examinations, education and experience.

NR 114.59 Sanctions. (1) The department may, on its own motion, make investigations and conduct hearings and may, on its own motion or on a signed and verified written complaint, revoke, suspend or refuse to renew any operator's certificate, or reprimand the operator if the department finds that the holder of the certificate has done any of the following:

(a) Made a material misstatement in the application for certification or any application for a renewal of certification.

(b) Demonstrated incompetence to operate the type of facility or subclass for which the certificate was issued.

(c) Bypassed sewage from a treatment plant without notifying the department as required by the WPDES permit.

(d) Failed to comply with any other provision requiring department notification in the facility's WPDES permit.

(e) Tampered with or manipulated any samples to misrepresent the actual sample results.

(f) Falsified any monitoring, operating or other records submitted to the department.

(g) By intentional or negligent action, caused or significantly contributed to a violation of any provision of chs. 281 or 283, Stats. or any administrative codes, permits or orders adopted or issued under those chapters.

(h) Used deception or any form of dishonesty when writing examinations, or removed examination materials from the examination site.

(2) Notice of revocation of, suspension of or refusal to renew a certificate shall be served on the certified operator and shall state the reasons for revocation, suspension or refusal to renew.

(3) Revocation of, suspension of or refusal to renew a certificate shall take effect on the 10th day after the notice is served, unless the certified operator files a written answer with the department prior to the 10th day. If an answer is filed, the revocation, suspension of or refusal to renew is stayed and the department shall conduct a hearing on the matter within 30 days after receipt of the answer. At least 10 days prior to the date of the hearing, the department shall send a written notice to the operator indicating the date, time and location of the hearing. The final determination of the department, including the basis for the decision, shall be provided in writing to the operator. A suspended operator may not be the operator-in-charge of a facility for the duration of the suspension.

(4) Application may be made for taking the necessary examinations for a new certificate one year after the date of revocation or refusal to renew.

(5) Any order revoking or suspending a certificate is subject to judicial review as provided in ch. 227, Stats.

NR 114.60 Subclass Conversions. (1) Operator wastewater certifications in the subclasses on the effective date of this subsection [LRB inserts date] shall be converted as outlined in Table 3. An operator at Grade 3 or Grade 4 certification in a subclass, except subclasses K or L, on the effective date of this subsection [LRB inserts date] shall have earned 10 points towards advanced certification. Having 10 points, operators shall become advanced in any subclasses that they are Grade 1 or higher. Operators not granted 10 points, shall have all subclasses, except those at Grade T, converted over to basic certification. All subclasses at Grade T shall be converted to operator-in-training, regardless of grade levels held in other subclasses.

(2) Operators that have passed the former advanced general wastewater examination and at least 4 advanced subclass examinations shall be granted 4 points towards advanced certification, equivalent to the 4 points for passing the new advanced examination.

Table 3
Certification Subclass Conversion Table

FORMER SUBCLASS NAME	FORMER SUBCLASS		NEW SUBCLASS NAME	NEW SUBCLASS
<i>Primary treatment</i>	<i>A</i>	→	Solids Separation	B
<i>Trickling filters and rotating biological contractors</i>	<i>B</i>	→	Attached Growth Processes	A2
		→	Solids Separation	B
		→	Biological Solids/Sludge – Handling, Processing and Reuse	C
<i>Activated sludge</i>	<i>C</i>	→	Suspended Growth Processes	A1
		→	Solids Separation	B
		→	Biological Solids/Sludge – Handling, Processing and Reuse	C
<i>Stabilization ponds and aerated lagoons</i>	<i>D</i>	→	Ponds, Lagoons and Natural Systems	A4
<i>Disinfection</i>	<i>E</i>	→	Disinfection	D
<i>Anaerobic digestion</i>	<i>F</i>	→	Biological Solids/Sludge – Handling, Processing and Reuse	C
<i>Mechanical sludge dewatering and treatment</i>	<i>G</i>	→	Biological Solids/Sludge Handling, Processing and Reuse	C
<i>Filtration</i>	<i>H</i>	→	Solids Separation	B
<i>Phosphorus removal</i>	<i>I</i>	→	Total Phosphorus	P
<i>On-site laboratory testing</i>	<i>J</i>	→	Laboratory	L
<i>Special</i>	<i>K</i>	→	Unique Treatment Systems	U

<i>Electroplating and metal finishing</i>	<i>L</i>	→	Unique Treatment Systems	<i>U</i>
---	----------	---	--------------------------	----------

NOTE: The department shall use its discretion converting Special K subclasses that are specific to the newly created subclasses.

SECTION 19. EFFECTIVE DATE. (1) Except as provided in sub. (2), this rule shall take effect on the first day of the 13th month beginning after publication in the Wisconsin Administrative Register as provided in s 227.22 (2) (intro.), Stats.

(2) SECTION 18 s. NR114.57 (3) shall take effect on the first day of the month following publication in the Wisconsin Administrative Register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 20. BOARD ADOPTION. The forgoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

Dated at Madison, Wisconsin _____

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Cathy Stepp, Secretary