

SUBJECT: Adoption of Board Order DG-24-10 and creation of Chapter NR 852 related to Water Conservation and Water Use Efficiency.

FOR: AUGUST 2010 BOARD MEETING

TO BE PRESENTED BY: Eric Ebersberger, Bureau of Drinking Water & Groundwater

SUMMARY:

On May 27, 2008 Governor Doyle signed 2007 Act 227, which contains Wisconsin's ratification of the Great Lakes-St Lawrence River Basin Water Resources Compact (Compact), and establishes the basis for a statewide water conservation and water use efficiency program.

Chapter NR 852 establishes mandatory water conservation and efficiency requirements for persons with certain levels of new or increased withdrawals within the Great Lakes basin, for diversions of Great Lakes waters, and for withdrawals statewide that result in a water loss exceeding 2 million gallons per day. Persons subject to Ch. NR 852 are categorized into one of three levels, Tier 1, Tier 2, or Tier 3. This tiered approach is being used to differentiate between the requirements for various types and levels of regulated activities, for example, withdrawals versus diversions.

There are four mandatory water conservation and efficiency measures (CEMs) for all persons for whom water conservation and efficiency requirements are mandatory under this chapter. These CEMs are determined to be cost effective, and environmentally sound and economically feasible for all water use sectors. Implementation of additional CEMs is required for Tier 2 and Tier 3 only.

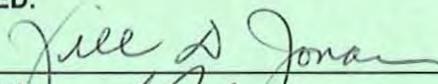
Chapter NR 852 also promotes voluntary statewide water conservation and water use efficiency through identifying CEMs; and guides other Department regulatory, planning, resource management, liaison and financial aid determinations that require water conservation or water use efficiency.

RECOMMENDATION: Adoption of Board Order DG-24-10 and creation of Chapter NR 852 related to Water Conservation and Water Use Efficiency.

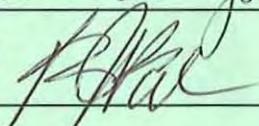
LIST OF ATTACHED MATERIALS:

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|----|-------------------------------------|---|-----|-------------------------------------|----------|
| No | <input type="checkbox"/> | Fiscal Estimate Required | Yes | <input checked="" type="checkbox"/> | Attached |
| No | <input checked="" type="checkbox"/> | Environmental Assessment or Impact Statement Required | Yes | <input type="checkbox"/> | Attached |
| No | <input type="checkbox"/> | Background Memo | Yes | <input checked="" type="checkbox"/> | Attached |

APPROVED:


Bureau Director,

7/29/2010
Date


Administrator,

7/29/2010
Date


Secretary, Matt Frank

7-29-10
Date

- | | |
|---------------------------|----------------------|
| cc: Laurie J. Ross - AD/8 | Kristy Rogers - DG/5 |
| Eric Ebersberger - DG/5 | Dino Tsois - DG/5 |
| Linda Haddix - LS/8 | |
| Judy Ohm - LS/8 | |
| Steve Elmore - DG/5 | |

DATE: July 28, 2010

FILE REF: DG-24-10, NR 852

TO: Members, Natural Resources Board

FROM: Matt Frank, Secretary 

SUBJECT: Recommendation for adoption of proposed Wis. Adm. Code Chapter NR 852

1. Why is the rule being proposed?

The Great Lakes—St. Lawrence River Basin Water Resources Compact (Compact) and Wisconsin's implementing legislation (2007 Wisconsin Act 227) direct the department to promulgate administrative rules specifying water conservation and efficiency measures for the purpose of implementing a statewide water conservation and efficiency program. The rule is being proposed to further define and clarify statutory authority for water conservation and efficiency measures (CEMs) for certain water withdrawals and diversions from the Great Lakes basin and water withdrawals statewide that require water loss approvals under s. 281.35, Stats., that is, withdrawals resulting in a water loss averaging more than 2,000,000 gallons per day in any 30-day period. The rule also promotes statewide voluntary conservation through the identification of CEMs. The rule identifies CEMs by water use sector for water withdrawals and for diversions from the Great Lakes Basin and for withdrawals—statewide—resulting in a water loss exceeding 2 million gallons per day. The rule will also guide other department regulatory, planning, resource management, liaison and financial aid determinations that require or encourage water conservation and efficiency.

2. Summary of the rule.

The rule implements CEMs for water withdrawals within the Great Lakes Basin, for diversions, and for withdrawals statewide that require a water loss approval. Persons subject to the rule are categorized into one of three levels, Tier 1, Tier 2, or Tier 3.

- Tier 1 includes persons proposing new and increased withdrawals in the Great Lakes Basin that average 100,000 gallons per day or more in any 30-day period but do not equal at least 1,000,000 gallons in any 30 consecutive days.
- Tier 2 includes persons proposing new and increased withdrawals in the Great Lakes Basin that equal at least 1,000,000 gallons per day for any 30 consecutive days.
- Tier 3 includes persons proposing new and increased diversions from the Great Lakes basin and increased withdrawals statewide that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period.

There are four mandatory CEMs for all persons in Tier 1, Tier 2 or Tier 3 under the rule. The four mandatory CEMs have been determined to be cost-effective and environmentally sound and economically feasible for all water use sectors.

The rule sets forth procedures to implement additional CEMs for persons in Tier 2 and Tier 3 and establishes requirements to conduct an analysis to determine if the CEMs are environmentally sound and economically feasible and cost-effective. The rule also sets forth

requirements and procedures for submitting a water conservation plan to the department and establishes a process for approval and reporting, and a process for enforcement.

3. How does this proposal affect existing policy?

Wisconsin's Compact implementing legislation (2007 Wisconsin Act 227) directs the department to establish a statewide water conservation and efficiency program and to develop rules specifying water conservation and efficiency measures to implement the program. Section 281.35, Stats., and Chapter NR 142, Wis. Admin. Code, establish procedures for water loss approvals which are required for persons statewide with a water withdrawal that results in a water loss averaging more than 2,000,000 gallons per day in any 30-day period. The rule specifies mandatory CEMs for these high water loss approvals.

4. Hearing Synopsis, Public Comments, Rules Clearinghouse Comments, and Post Hearing Contacts.

Public Hearings

The department held five joint hearings for NR 852 along with the hearings for NR 850 (Water Use Fees) and NR 856 (Water Use Registration and Reporting). All of the hearings were at 6:00 p.m. The first hearing was in Milwaukee on June 28, 2010. The hearings in Green Bay and Ashland were conducted together using videoconferencing on June 29, 2010. The final two hearings in Wausau and Madison were also conducted together using videoconferencing on June 30, 2010. Department staff that assisted at the hearings included Eric Ebersberger, Dino Tisoris, Kristy Rogers, Steve Elmore, Shaili Pfeiffer, and Judy Ohm. There was low participation at the hearings with a total of 24 participants. Eighteen people registered with two people indicating in support, three in opposition, and seven as interest may appear. Three persons provided oral comments. Most participants at the hearings were primarily interested in how the rules would impact their operations.

Public Comment

Information on the proposed rule was posted on the department website on June 2, 2010 and information was sent electronically to approximately 620 people using GovDelivery on June 3, 2010. The public comment period closed on July 7, 2010. The department received public comments from 29 individuals and organizations. The comments, along with the department's responses, are included in Attachment 1.

There were 4 comments related to the applicability of chapter NR 852 requirements. Some persons commenting felt that the requirements should not apply to their businesses due to the nature of their water use and the fact they return the water to the watershed after use. One organization thought the rule should not apply to withdrawers with a high water loss statewide and another commented that consecutive public water systems should not be subject to this rule. In response to these comments, the department made changes to clarify the statutory authority to require water conservation and water use efficiency for new and increased withdrawals in the Great Lakes Basin, diversions, and those with high water loss statewide.

Nine comments were related to definitions contained in chapter NR 852. Definitions were modified in response to these comments. One comment requested that a definition be

added, but this definition was determined by the department not to be necessary due to its presence in statute.

The largest number of comments (29 in number) related to the specific CEMs required of all persons subject to this chapter. These comments ranged from claims that certain water withdrawals should be exempt from mandatory water conservation requirements to requests for clarification of the exact requirements. Several comments related to clarifying that retrofitting of existing equipment is not required. Several comments related to water reuse, and several public water utilities stated their opposition to being involved in promoting water reuse with their water customers. The department modified the CEMs in response to these comments, in particular, sections were prefaced with language indicating retrofitting is not required. Public water system promotion of water reuse for customers of public water systems was removed from the requirements.

Comments were made related to requirements for persons proposing new or increased diversions of Great Lakes water (Tier 3). These comments pertained to the demonstration of conservation and efficient use of existing water supplies and requiring written documentation of analyses performed. The department incorporated language requiring additional written information to satisfy these concerns.

Eight comments were received related to cost effectiveness analyses and analyses of environmental soundness and economic feasibility. The department amended the rule to separate out a cost-effectiveness analysis from an analysis of environmental soundness and economical feasibility. Only persons proposing a new or increased withdrawal subject to the Compact decision-making standard or a new or increased diversion are subject to completing an analysis of environmental soundness and economic feasibility.

A total of 6 comments were received related to the approval and reporting process and rule enforcement. The department responded to these comments with minor changes to the rule as indicated in Attachment 1.

Rules Clearinghouse Comments

Most changes recommended by the Legislative Council Rules Clearinghouse were incorporated. However, the Legislative Council Rules Clearinghouse questioned the need for a definition of "water use audit" within the rule. The department chose to retain the definition on the assumption that the definition adds clarity.

Post Hearing Contacts

Several individuals and organizations that provided substantial comments have been contacted in follow up.

5. Information on environmental analysis, if needed.

No environmental analysis is required. This action is a Type III action under ch. NR 150, Wis. Adm. Code.

6. Final Regulatory Flexibility Analysis

The proposed rule does not have a significant economic impact on small businesses. This rule will affect small businesses that supply their own water using water supply systems in the Great Lakes basin with certain water withdrawals as identified in Tier 1, Tier 2 or Tier 3 and businesses statewide that withdraw water that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period. Small businesses will have to submit an annual report describing and quantifying the success or failure of the implemented CEMs and documentation of any other implemented CEMs as required for Tier 2 or Tier 3 withdrawals. The implementation of water conservation and efficiency measures required for this rule may require basic engineering and accounting skills to analyze the CEMS for cost effectiveness and determine if the CEMs are environmentally sound and economically feasible. The department plans to develop guidance and analytical tools that will help small businesses implement conservation and efficiency measures with internal staffing. Depending on the business sector, there may be a need to hire external professionals to assist with engineering or accounting skills to implement the CEMs. Small businesses that receive water solely from a public water supply will not be impacted by this rule.

Attachment 1

Summary of Public Comments and Department Responses Rules Clearinghouse Comments and Department Responses NR 852 Water Conservation and Water Use Efficiency

Written comments on chapter NR 852 were received from:

1. Wisconsin Legislative Council – Rules Clearinghouse
2. Chris E. Hardy, Public Works Director, Winneconne Waterworks, Village of Winneconne, WI
3. Jem L. Brown, General Manager, Wisconsin Rapids Water Works and Lighting Commission
4. Patrick Stevens, General Counsel, Wisconsin Builders Association
5. Paul Zimmerman, Executive Director of Public Affairs, Wisconsin Farm Bureau Federation
6. Jeff Taylor, President, Wisconsin Aquaculture Association
7. Ron Johnson, Aquaculture Outreach Specialist, UW-Extension
8. Linda Krepsky, Wisconsin Aquaculture Association
9. Tad Storm, Glacier Ponds, Wisconsin Aquaculture Association
10. Herby Radmann, The Bullfrog's Eat My Fish Farm, Wisconsin Aquaculture Association
11. Ed Wilusz, VP Government Relations, Wisconsin Paper Council
12. Dave Lawrence, Assistant Director, Wisconsin Rural Water Association
13. Ed Glatfelter, Director of Water Conservation Programs, Alliance for the Great Lakes (submitted on behalf of a "Community of Environmental Groups" including, Marc Smith, Senior Policy Manager, National Wildlife Federation, Jodi Habush Sinykin, Of Counsel, Midwest Environmental Advocates, Karen M. Schapiro, Executive Director, Milwaukee Riverkeeper, Peter McAvoy, Vice President, Sixteenth Street Community Health Center, George E. Meyer, Executive Director, Wisconsin Wildlife Federation, Melissa Malott, Water Program Director, Clean Wisconsin)
14. Douglas Fuller
15. Jordan K. Lamb, DeWitt, Ross & Stevens, on behalf of the Wisconsin State Cranberry Growers Association
16. Barry Moder, Water Lead Operator, Hustisford Utilities
17. Scott Manley, Environmental Policy Director, Wisconsin Manufacturers and Commerce
18. Tom Lochner, Wisconsin State Cranberry Growers Association
19. Keith E. Haas, P.E., General Manager, Racine Water Utility
20. Lawrie J. Kobza, Legal Counsel, Municipal Environmental Group – Water Division
21. Tom Heikkinen, General Manager, Madison Water Utility
22. Steve Roush, Superintendent of Water Operations, Oconomowoc Utilities
23. Dave Wasserburger, Water Superintendent, Marshfield Water Utility
24. Pat Osborn, Executive Director, Aggregate Producers of Wisconsin and Pat Goss, Executive Director, Wisconsin Transportation Builders Association
25. Steven N. Yttri, General Manager, Oak Creek Water and Sewer Utility
26. Daniel S. Winkler, P.E., Director of Public Works and Utilities, Lake Geneva
27. Mark Johnson, La Crosse Utilities
28. John Panuska, University of Wisconsin Extension
29. Tom Grisa, Brookfield Water Utility

Applicability of Water Conservation and Efficiency Requirements

1. From Aggregate producers of Wisconsin and Wisconsin Transportation Builders Association: *Dewatering operations from aggregate mining operations return water to the basin and should be exempt from water conservation and efficiency regulations.*

Department Response: Non-metallic mining facilities with water withdrawals subject to s. NR 852.02(1) are part of the industrial water use sector described in s. NR 852.03(12). The requirement to submit a water conservation plan under s. NR 852.04(1) and 852.07 applies to non-metallic mining operations. Additionally, mandatory water conservation and efficiency requirements are triggered by the amount of a new or increased withdrawal—regardless of consumptive use. Water withdrawn is unavailable for other uses, however temporarily.

2. From Wisconsin Manufacturers and Commerce: *Tier 3 CEM Requirements for new or increased withdrawals statewide with a water loss of greater than 2,000,000 gallons per day in any 30-day period. Water conservation and efficiency measures are required statewide for new or increased withdrawals with a water loss of 2,000,000 gallons per day in any 30-day period. The statewide water conservation and efficiency statutory reference s. 281.246(sic)(8)(b) 1 states "promotion of environmentally sound and economically feasible conservation measures through a voluntary statewide program." DNR lacks the statutory authority to require mandatory compact-level water conservation and efficiency measures outside the Great Lakes Basin.*

Department Response: Section 281.35, Stats., requires conservation measures of an applicant requesting a water loss approval for a withdrawal, *statewide*, that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period. As part of the grounds for approval for a water loss under s. 281.35, Stats., the department must determine that the applicant's current water use and the applicant's proposed plans for the withdrawal and use of the water resources incorporate reasonable conservation practices. In granting a water loss approval under s. 281.35, Stats., the department must specify any conditions, limitations and restrictions the department determines are necessary to protect the environment and the public health, safety and welfare and to ensure the conservation and proper management of the waters of the state. In addition, s. 281.35(10), Stats., specifically grants the department the authority to promulgate rules necessary to implement the section. The department is proposing the CEMs in NR 852 as a common and consistent standard for determining reasonable conservation practices for purposes of water loss approvals—statewide.

3. From Public Water Utilities and Wisconsin Rural Water Association: *One community's actions should not trigger rules (new CEMs) for another community. New rules or CEMs should not apply to "consecutive systems".*

Department Response: The reference to consecutive water systems has been deleted.

4. From the Wisconsin Builders Association and Municipal Environmental Group – Water: *Applicability. This provision indicates that the requirements of this rule apply to those served by a public water supply system. The rule, however, focuses on the imposing requirements on the entity withdrawing water, and not for example, on an individual*

residence. Consequently, this language should be modified. Add language that is more explicit and refers applicability to the rule by referencing "persons" in s. NR 852.02(1) a-c.

Department Response: Language has been changed in s. NR 852.02 (1) (a) to (c) and the word "persons" has been added to specify applicability in chapter NR 852. The withdrawer of water is the person responsible for complying with chapter NR 852.

Definitions

5. From Wisconsin Builders Association: *NR 852.03(7): This provision defines "environmentally sound" to mean not destructive to the ecosystem. We question what this definition means.*

Department Response: The definition of "environmentally sound" as specified in s. NR 852.03(7) means "not destructive to the ecosystem". The ecosystem is defined at s. NR 852,03 (6) as "the interacting components of air, land, water, and living organisms."

6. From the Municipal Environmental Group – Water: *NR 852.03(22). Definition of "Public Water Supply Water Use Sector." Clarify language in s. NR 852.03(22) to reference that public water systems are the owners and operators that distribute water and not person who use water from public systems.*

Department Response: The definition has been clarified in accordance with the comment [See s. NR 852.03(21)].

7. From the Municipal Environmental Group – Water: *NR 852.03(24). Definition of "Retrofit or retrofitting." The term "retrofit" should include modification or replacement of existing equipment. It should not be limited to modification or replacement with parts or equipment developed or made available after the time of original manufacture or construction.*

Department Response: The definition of "retrofit" has been changed so that it includes the modification or replacement of existing equipment [See s. NR 852.03(23)].

8. From the Municipal Environmental Group – Water: *NR 852.03(25). Definition of "System losses." The definition should account for other authorized system uses as part of system losses.*

Department Response: The definition has been changed to reference "other authorized system uses" as system losses [See s. NR 852.03(24)].

9. From the Municipal Environmental Group – Water: *NR 852.03(26). Definition of "Water conservation and efficiency measures" or "CEMs." The definition should clarify that the CEM is to be employed to reduce water use from the water supply system. A public water supply system includes facilities up the customer service connection. A public water system should not be responsible for conservation efforts of its customers. Also, reference to "water reuse" should be eliminated from the rule. The goal the conservation rule should be to increase water efficiency. To the extent that water reuse practices increase water efficiency, those practices would be covered by the rule.*

Department Response: The definition of “CEM” remains unchanged. The use of CEM is a broad term that applies to all sectors practicing water conservation and efficiency measures. The reference to “water reuse” remains in the rule. Water reuse can be an appropriate and applicable water efficiency measure that can assist all sectors in meeting the CEM and water conservation goals. [See s. NR 852.03(25)].

10. From the Municipal Environmental Group – Water: NR 852.03(27). Definition of "Water reuse." *References to "water reuse" in these rules should be eliminated. Also, any reference to "stormwater" in these regulations should be eliminated. These rules should cover the use of water from the water supply system. Since stormwater does not come from the water supply system, stormwater should not be explicitly referred to in these rules. To the extent that use of stormwater may increase water efficiency, those practices would be covered by the rule.*

Department Response: The definition of “water reuse” remains, however the definition has been amended to clarify the definition of “water reuse”. As previously stated, water reuse can be an appropriate and applicable water efficiency measure that can assist all sectors in meeting the CEM and water conservation goals. [See s. NR 852.03(27)].

11. From the Municipal Environmental Group – Water: NR 852.03(27a). Add definition of "Water supply system." *A definition of "water supply system" should be added to the rules in order to clarify that the rules apply to conservation of water used from the water supply system.*

Department Response: The applicable definition of “water supply system” can be found at s. 281.346(1)(wp), Stats.

12. From the Municipal Environmental Group – Water: NR 852.03(28). Definition of "Water use audit." *NR 852.03(28) should be revised and clarified. The reference to water reuse should be deleted from the water use audit as water reuse would not normally occur during the initial water use cycle (i.e. point of entry into the system to the end use).*

Department Response: The definition continues to refer to water reuse, which can be an appropriate and applicable water efficiency measure that can assist all sectors in meeting the CEM and water conservation goals. The department believes that all sectors should have the option to implement appropriate “water reuse” as a CEM and apply reuse efforts in their water use audit. [See s. NR 852.03(28)].

13. From the Municipal Environmental Group – Water: NR 852.03(29). Definition of "Water use intensity." *NR 852.03(29) should be revised and clarified to make it clear that this definition applies to the water supply system, not customers of the water supply system.*

Department Response: The definition of “water use intensity” remains unchanged. The definition of water intensity applies to all sectors and needs to be defined as such so that all sectors can appropriately apply the term to meet the needs of evaluating CEMs in their water conservation efforts [See s. NR 852.03(29)].

Required Elements, Tier 1, Tier 2, and Tier 3 (Table 1 and Table 2)

14. From John Panuska: *The rule states using WISP, which is fine, however just stating WISP will lead to confusion. The old WISP is outdated and the Excel version has bug problems. We are currently updating WISP.*

Department Response: CEM #IR-RI was modified to reflect the use of the current version of the Wisconsin Irrigation Scheduling Program (WISP).

15. From Wisconsin Aquaculture Association and aquaculture facilities: *Aquaculture does not easily fit into the categories and outlined activities of Table 1 or Table 2, s. NR 852.04(2) and NR 852.05(2).*

Department Response: The CEMs listed in Table 1 and 2 are general in nature and appropriately apply to the aquaculture industry except for CEM #LS-R3 in Table 2. This CEM is specific to animal cooling and would not apply to aquaculture operations. Language was added to the description of this CEM to reflect that it is to be completed when applicable.

16. From Aggregate producers of Wisconsin, Wisconsin Transportation Builders Association, Wisconsin Aquaculture Association, and aquaculture facilities: *Conservation and efficiency measures currently exist in our sector operations or processes.*

Department Response: Any existing water conservation practices may be used as a water conservation and efficiency measure and documented in a water conservation plan.

17. From Wisconsin Manufacturers and Commerce: *Source and estimated Measurements. Source Measurement requirements in Table 1 should allow for estimates as part of the measurement methods as presented in s. 281.346.*

Department Response: Changes have been made to Table 2 in ch. NR 852 to include the reference to estimated measurements.

18. From the Wisconsin Paper Council and Wisconsin Manufacturers & Commerce: *Proposed CEMs may not require retrofits.*

Department Response: Changes have been made to Table 2 in ch. NR 852 to clarify any reference to retrofits. The preface to the tables has been amended to clarify that any CEMs that include retrofitting are not required.

19. From the Wisconsin Paper Council: *One thing that is not clear in the rule is whether these mandatory measures apply to an entire facility or just to the portion of the facility associated with an increased withdrawal (it appears clear that a new withdrawal would encompass an entire facility). It appears that the intent is to cover the entire facility. However, if the entire facility is covered, it raises the question of whether any of the mandatory measures run afoul of the statutory prohibition on retrofits at existing facilities. A reading of Table 1 requirements for industrial sources that would appear to not conflict with the retrofit ban would be that:*

- *A water use audit is required, but the need for retrofits that may be identified in the audit are not mandated.*
- *Water inflow and outflow must be determined, but retrofits to accomplish this are not mandated.*
- *A protocol for identifying leaks and a corrective action plan must be established, but retrofits to repair leaks are not mandated (but would be common sense).*
- *A training plan must be developed for employees.*
- *Water withdrawals must be measured monthly or more frequently, but retrofits to enhance measurement are not required.*

Please confirm or correct our understanding of how the mandatory measures in Table 1 are to be implemented.

Department Response: A new or increased withdrawal would encompass the entire facility and not just a portion of a facility served by an increased withdrawal. A new or increased withdrawal would apply to the entire *property* and water conservation measures would apply to the entire facility and associated process operations. Application of water conservation and efficiency measures (CEMS) as a result of a new or increased withdrawal at a facility would not require retrofits. Language has been added to s. NR 852.04(2), and in ss. NR 852.05(1) and (2) to emphasize that only CEMs in Table 1 and 2 determined to not require retrofits are to be implemented as part of the water conservation plan.

20. From the Wisconsin Paper Council: *The 10 percent reduction of water use or increase in water efficiency specified in s. NR 852.05(2) is arbitrary.*

21. From Wisconsin Rural Water Association: *And although we understand the rationale behind including provisions to measure increases in efficiency, we are opposed to the arbitrary set percentage (such as 10%) required for such improvements.*

Department Response to comments 20 and 21: The department concluded that the 10 percent reduction in water use or increase in water use efficiency was a reasonable and achievable percentage based on a general review of other states' programs and various CEMs. Additionally, the 10 percent reduction in water use or increase in water use efficiency under s. 852.05 is an option, not a requirement, for persons implementing Tier 2 or Tier 3 CEMs.

22. From Public Water Utilities and Wisconsin Rural Water Association: *s. NR 852.05 (2) should recognize CEMs that have been implemented prior to a request for a new or increased withdrawal.*

Department Response: Chapter NR 852 allows for the continued use and implementation of existing CEMs. Also, the Water Conservation Plan required under s. NR 852.07 requires documentation of existing CEMs.

23. From Public Water Utilities and Wisconsin Rural Water Association: *NR 852 rules affecting municipal water systems should not promote reuse of graywater. Graywater systems present issues with cross-connection and potential contamination of public water systems. NR 852 should not address the use of stormwater because it is not part of the water supply system.*

Department Response: The “water reuse” CEMs (PWS –R4, CI-R4, IR-R4, LS-R4, IN-R4, PP-R4 & OR-R1) in Table 2 require a person to conduct a technical assessment to determine the feasibility of water reuse. Water reuse is not a requirement if determined to not be feasible , cost-effective, or not allowed under current law. Additionally, the language in PWS-R4, Table 2 has been changed and the reference to establish a program to promote customer reuse has been deleted.

24. From Public Water Utilities and Wisconsin Rural Water Association: *Municipal water systems have no control over, and should not be made responsible for customers ' private internal plumbing.*

Department Response: The Residential and Commercial and Industrial Demand Management Program CEMs (PWS- R2 & PWS- R3) in Table 2 require the establishment and publication of a program for residential and commercial and industrial water use audits and survey leaks upon customer request. Public utilities have the ability to flag and identify aberrant water usage by customers through meter readings and billing actions. The residential and commercial and Industrial water audit and survey leak program can further identify aberrant water use situations or assist residents and businesses with water conservation measures. The conditions to implement the residential and commercial and industrial water use audit and leak detection program under the Table 2 CEMs allow for waivers of liability and written permission for public utilities conducting surveys.

25. From Public Water Utilities and Wisconsin Rural Water Association: *Municipal water utilities should be allowed flexibility in providing information and educational materials to its customers. Based on experience with previous efforts to distribute other written information, they can be expensive to distribute and a waste of paper and other resources. Rules should allow the use of web pages and other technologies to make these materials available to the public.*

Department Response: The Information and Education Outreach CEM (PWS-3) in Table 1 requires that the public utilities provide information to employees and the public regarding water conservation and efficiency. PWS-3 further states that information and education material specific to landscape watering practices be provided to customers and employees. The use of web pages or other electronic media to provide the information and education materials is allowed and encouraged by the department and flexibility is allowed by the rule.

26. From the Community of Environmental Groups: *Water Conservation Plan – Part of Permit.* *Add the water conservation plan as an explicit part of any permit approving an application by adding a subparagraph (5) to that effect in NR 852.07.*

Department Response: A clarification was made to s. NR 852.04 to indicate that all persons identified in Tier 1, Tier 2, or Tier 3 shall submit a water conservation plan with an application for new or increased withdrawal, diversion, or intrabasin transfer.

27. From the Community of Environmental Groups: *Leak Detection Threshold.* *Leak detection in 852.04 PSW-2 should be required for a supply with losses above 10%.*

Department Response: This requirement is aligned with the Public Service Commission (PSC) requirement for system losses by utility size. If and when the PSC makes changes to their requirements, the DNR will make changes to this rule to reflect the PSC changes.

28. From the Community of Environmental Groups: Credit for Water Re-use Improvements. *Since water reuse is one of many means of reducing water use and/or increasing water efficiency, the words "water reuse" should be deleted from NR 852.05 Required Elements– Tier 2 & Tier 3 (2) to prevent the implementation of a water reuse measure with little overall impact from satisfying the 10% reduction option.*

Department Response: Water reuse is included as a method of conserving water. Water that is reused satisfies a need for water with water that would otherwise be discharged to the environment without additional beneficial use.

29. From the Municipal Environmental Group – Water: NR 852.04. Required Elements - All. *Revise NR 852.04 to require an applicant to submit written documentation on the completion or implementation of (1) the water conservation plan, and (2) the CEMS in Table 1, with its application for a new or increased withdrawal, diversion, or intrabasin transfer.*

Department Response: The "required elements" as specified in s. NR 852.04 has been changed to include a reference to written documentation of completed CEMs in Table 1. Written documentation of water conservation plans is referenced in s. NR 852.07(1), which requires that water conservation plans be submitted to the department on a form provided by the department.

30. From the Wisconsin Builders Association and the Municipal Environmental Group – Water: Water use audit. *All persons subject to this rule are required to implement the applicable conservation efficiency measures (CEMs) set forth in this table. The water audit CEM that is required to be implemented by most sectors is described as a water audit "conducted in accordance with department guidelines." While we recognize that the rule contains a definition of "water use audit", this language gives the Department blanket authority to change audit requirements without going through the rulemaking process. The Department should be more specific in the rule in regard to what is required in the water use audit. Revise PWS-1, Water Use Audit, in two ways. First, require the results of the water use audit to be in writing so that the DNR can confirm that the audit has been done. Second, delete the reference to AWWA M36. A public water system regulated by the PSC must follow the PSC's water use audit process. It is expected that the PSC's process will follow that outlined in AWWA M36. To add the reference to M36 here is unnecessary and makes this section confusing.*

Department Response: Language in PWS-1 in Table 1 has been changed to require a written water use audit and the reference to AWWA M36 has been deleted. The reference to conducting a water use audit, "in accordance with department guidelines", was deleted.

31. From the Municipal Environmental Group – Water: NR 852.04. Required Elements - All, Table 1, PWS-2. *Revise PWS-2, Leak Detection and Repair Program, in three ways. First, require the program to be in writing so that the DNR can confirm that the program exists. Second, the purpose of the program should be to "control" system losses, not minimize*

system losses, since it may not be cost-effective to address some system losses. Third, delete the reference to replacing distribution system infrastructure on a set schedule.

Department Response: Language in PWS-2 in Table 1 has been changed to 1) prepare written leak detection and repair program; 2) reference "control" system losses, not "minimize losses"; and 3) delete the reference to replacing the distribution infrastructure on a set schedule.

32. From the Municipal Environmental Group – Water: NR 852.04. Required Elements - All, Table 1, PWS-3. *Revise PWS-3, Information and Education Outreach, in three ways. First, require written information to be provided with the application so that the DNR can confirm that written materials on the specific items in PWS-3 exist. The application approval can then require confirmation that the written materials or training have actually been provided to customers or employees as appropriate. Second, revise the description of the items to include in the written educational materials, and delete the reference to community water conservation goals as the community may not have water conservation goals. Third, the training plan requirement should be revised to make it clear that the plan refers to actions employees could take at the public water system facilities.*

33. From the Community of Environmental Groups: Information & Education Outreach – Goals. *In NR 852.07 (2), Water Conservation Plan, require a statement of a water supply's water conservation goals, consistent with the state's water conservation goals and objectives, which should be quantifiable in terms of level of participation and explicit efficiency benchmarks.*

Department Response: A requirement to make available all information and education material to the department has been added to PWS-3, Table 1 and to other equivalent CEMs in the other sector groups. Language has been added to reference that the training plan applies to "public water system facilities". The impacts of CEMs on water conservation and water use need to be assessed with regard to qualitative and quantitative conservation goals. Section NR 852.07 was amended to include a requirement that quantifiable goals be included in the water conservation plan.

34. From the Municipal Environmental Group – Water: NR 852.04. Required Elements - All, Table 1, PWS-4. *Revise PWS-4, Source Measurement, in two ways. First, require written confirmation be submitted with the application showing that source water withdrawals are monitored so that the DNR can confirm that this is done. It is expected that the approval of the application would include a requirement that such monitoring continue. Second, replace the phrase "to allow for identifying and understanding" with "in order to monitor." The replacement phrase better reflects the existing expertise of water utility personnel.*

Department Response: The relevant language in PWS -4 Table 1 remains unchanged. S. 281.346(3), Stats., and the proposed Water Use Registration and Reporting Rule (NR 856) require annual reporting of monthly levels of withdrawal. More frequent monitoring of withdrawals is encouraged, and may be incorporated into a water conservation and efficiency plan. Persons must annually report progress on plan implementation. Also, the language "to allow for identifying and understanding variability in water use over time" remains unchanged to provide for an evaluation and analysis of the source measurements.

35. From the Municipal Environmental Group – Water: NR 852.05 (Intro). Required Elements - Tier 2 and Tier 3. *Revise NR 852.05 (Intro) to require that written documentation on the completion, implementation, or plan for implementation of the items under sub. (1) or (2) be submitted with the application for a new or increased withdrawal, diversion, or intrabasin transfer. As discussed under the comment on NR 852.04, it is advantageous to both the DNR and the applicant to have these written documents prepared prior to submitting an application for an increase.*

Department Response: Written documentation of CEMs is addressed in s. NR 852.07 Water Conservation Plans and in s. NR 852.10 (renumbered as s. NR 852.11) Approval and Reporting Process.

36. From the Municipal Environmental Group – Water: NR 852.05(1). Required Elements - Tier 2 and Tier 3. *Revise NR 852.05(1) to require the implementation of the CEMs identified in Table 2 if they do not require retrofitting, are allowed under current law, and are environmentally sound and economically feasible. Adding these other factors is consistent with the statute.*

Department Response: Section NR 852.05 requires the implementation of the CEMs identified in Table 2 that do not require retrofitting and that are cost-effective or environmentally sound and economically feasible—as required by the appropriate analysis under s. NR 852.09 or s. 852.10.

37. From the Municipal Environmental Group – Water: NR 852.05. Required Elements - Tier 2 and Tier 3, Table 2, PWS-1. *Revise PWS-1, Distribution System Pressure Management, in three ways. First, require that a written report documenting the analysis of pressure management of the distribution system be submitted with the application. Second, delete the reference to identifying opportunities to reduce customer use and limit plumbing fixture leaks. This language is much too broad. Municipal water systems should not be responsible for its customers' water usage or its customers' plumbing. Third, the written report should include an identification of projects which would reduce distribution system leaks, and an analysis of those projects to determine whether they would require retrofitting, are allowed under current law, and are environmentally sound and economically feasible. The projects identified would not automatically become CEMs, but would either be implemented by the water utility as a way to avoid the need for an increased withdrawal, or be considered by the DNR in the approval process.*

Department Response: The purpose of the PWS-R1, Table 2 is to manage pressure in the water system to reduce high pressure areas in order to limit the occurrence of leaks downstream of the service connection, to reduce leaks in residential and commercial plumbing, and to reduce fixture failure from high pressure in the water main distribution piping. The language in PWS-R1, Table 2 was modified to reflect the comment. The requirement to analyze system pressures in the distribution system remains a part of the rule.

38. From the Wisconsin Builders Association: NR 852.05, Table 2: *This table provides in part that a program will be established to provide water use audits and leak surveys “by request”. This provision is not clear as to whether the water supplier is making the request*

of the customer, or the customer is making the request of the water supplier. We also question what costs would be associated with this program.

39. From the Municipal Environmental Group – Water: NR 852.05. Required Elements - Tier 2 and Tier 3, Table 2, PWS-2. MEG-Water members do not believe they should be responsible for checking their customers' water use or plumbing. However, if a customer has a large increase in water usage, the utility may either at the customer's request or on its own, try to find out the reason for the large increase. This is done as a customer service. These rules require the establishment of a Residential Demand Management Program. MEG-Water does not object to this program provided this is handled as a customer service which will not increase the costs to other customers. With this qualification, MEG-Water proposes revising PWS-2, Residential Demand Management Program, in four ways. First, provide that the residential demand management program is to be in writing, and to be submitted with the DNR with the withdrawal application. Second, provide that the residential demand management program could be a self-audit program. Based upon an internet search, it looks like that there are other utilities in the United States that have created a self-audit program for residential customers. Third, provide that the program may, but is not required to, offer that water system staff or a contractor will arrange for the completion of a water use audit and leak survey for the residential property upon the customer's request. Fourth, explicitly provide that the municipality may charge a fee for the completion of the audit and survey. It is essential that this program not increase costs for other customers.

Department Response to comments 37 and 38: The language in PWS-R2 has been changed to clarify that the water audit or leak detection survey is conducted upon customer request. Additionally, public water systems regulated by the PSC may seek recovery of reasonable program costs through rates approved by the Commission under Ch. 196, Stats. Written documentation of the program implementation is referenced in s. NR 852.07 Water Conservation Plans and in s. NR 852.11) Approval and Reporting Process.

40. From the Municipal Environmental Group – Water: NR 852.05. Required Elements - Tier 2 and Tier 3, Table 2, PWS-3. Revise PWS-3, Commercial Demand Management Program, in the same ways as the Residential Demand Management Program is revised.

41. From Brookfield Water Utility: NR 852.05. Required Elements - Tier 2 and Tier 3, Table 2, PWS-3. Revise PWS-3, Commercial Demand Management Program to include Industrial customers in this program.

Department Response to comments 39 and 40: As stated above with respect to PWS-R2 in Table 2, the PWS-R3 description in Table 2 has been amended to clarify that the water audit or leak detection survey is conducted upon customer request. Additionally, the language has been changed to include industrial customers. With respect to the request to allow the utility to charge a fee, public water systems regulated by the PSC may seek recovery of reasonable program costs through rates approved by the Commission under Ch. 196, Stats. Written documentation of the program implementation is referenced in s. NR 852.07 Water Conservation Plans and in s. NR 852.11) Approval and Reporting Process.

42. From the Municipal Environmental Group – Water: NR 852.05. Required Elements - Tier 2 and Tier 3, Table 2, PWS-4. MEG-Water members strongly object to this water reuse

section for several reasons. First, they are greatly concerned that water reuse by persons connected to the municipal water system raises the risk of contaminating the municipal water system. Second, municipal water utilities are not willing to be responsible for plumbing facilities within a water customer's premises. Third, municipal water utilities do not believe that the promotion of the use of stormwater by water customers is a municipal water utility function. As a compromise, MEG-Water members would be willing to conduct a technical assessment to evaluate the feasibility of reducing the intensity of its water use at its own facilities. This assessment would be in writing, and submitted to the DNR along with the withdrawal application. The assessment would identify cost-effective projects which would reduce water use intensity at the public water supply system facilities.

Department Response: The language in PWS-R4, Table 2 has been changed and the reference to establish a program to promote customer reuse has been deleted. Additionally, the "water reuse" CEMs (PWS -R4, CI-R4, IR-R4, LS-R4, IN-R4, PP-R4 & OR-R1) in Table 2 require a person to conduct a technical assessment to determine the feasibility of water reuse. Water reuse is not a requirement if determined to not be feasible or not allowed under current state law (e.g. sanitary or health issues related to cross-connection concerns).

Required Elements, Tier 3 Only

43. From the Community of Environmental Groups: *Demonstrating Efficient Use & Conservation of Existing Supplies for Diversion Exceptions.* *Add specific guidelines for demonstrating the efficient use and conservation of existing supplies as required in Section 281.346(4)(f) and (g) of Wisconsin law.*

Department Response: Section NR 852.06 has been amended to require that persons applying for a new or increased diversion document the efficient use and conservation of existing water supplies over time, including quantitative analyses of water use intensity.

44. From the Municipal Environmental Group – Water: *NR 852.06. Required Elements - Tier 3 Only.* *Revise NR 852.06 to require applicants for a new or increased withdrawal, diversion, or intrabasin transfer to submit with its application (1) a written report documenting an analysis to identify additional CEMs that are environmentally sound and economically feasible; and (2) a written implementation plan for implementing the CEMs that are necessary to demonstrate the efficient use and conservation of existing water supplies. Consistent with MEG-Water's other comments, MEG believes these written documents are necessary for the DNR's review of the application for the new or increased withdrawal, diversion or intrabasin transfer, and should be submitted with the application.*

Department Response: Language has been added to s. NR 852.06 to reference submittal of written documentation for cost-effectiveness analyses and analyses of environmental soundness and economic feasibility for CEM implementation for Tier 3 applicants. Written documentation of the program implementation is referenced in s. NR 852.07 Water Conservation Plans, s. NR 852.11 Approval and Reporting Process, and s. NR 852.06 Required Elements – Tier 3 Only.

Water Conservation Plans

45. From the Community of Environmental Groups: Compliance with Tier 1 Prior to Approval. Clarify the proposed rule in NR 852.07 to contain language that a withdrawal or diversion permit shall not be issued without prior implementation of Tier 1 provisions.

Department Response: The water conservation plan required by this chapter is required to include documentation of CEMs implemented as a part of s. NR 852.04 (2). The plan will not be approved unless documentation is submitted indicating the prior implementation of provisions in s. NR 852.04 (2).

46. From the Community of Environmental Groups: Water Use Intensity Measures. Amend the language in NR 852.07 (2) to delete the word "a" so that multiple appropriate measures of intensity can be required.

Department Response: The language was changed to include multiple measures of water use intensity.

47. From the Community of Environmental Groups: Finished Water Production Costs. Delete the requirement for costs associated with producing finished water from a water conservation plan (NR 852.07 (2) (b)).

Department Response: This requirement was deleted. Costs associated with treating and pumping water are included in the cost-effective analysis under s. NR 852.09.

48. From the Municipal Environmental Group – Water: NR 852.07(2)(d). Water Conservation Plans. Revise NR 852.07(2)(d). The monitoring plan should assess the impact of the implemented CEMs, instead of the "success or failure" of the implemented CEMs. The phrase "success or failure" is too subjective and would require judgments to be made on what is a success and what is a failure.

Department Response: Section NR 852.07 (2) has been revised to assess the "impact" of the implemented CEMs and the reference to "success or failure" has been deleted.

Cost Effectiveness Analysis and Environmental Soundness and Economic Feasibility Analysis

49. From Wisconsin Manufacturers and Commerce: Applicability of Environmentally Sound & Economically Feasible Conservation Measures. Permit applications falling into the Tier 2 or Tier 3 conservation requirements are required to evaluate various CEMs, and must implement them if they are found to be "environmentally sound and economically feasible." However, this term of art applies only to permit actions that trigger the Compact Decision Making Standard under s. 281.346(6)(c). Many (if not most) of the withdrawals falling into Tier 2 or Tier 3 of the proposed rule will not trigger the Compact Decision Making Standard, and applying the "environmentally sound and economically feasible" conservation standard to these permits is inappropriate and contrary to the law. Rather, most of the projects falling into Tier 2 or Tier 3 of the proposed rule would trigger the State Decision Making Standard, which requires "cost effective conservation practices" under s. 281.346(5m)(d). Accordingly, the "environmentally sound and economically feasible" water conservation measures under

Tier 2 and Tier 3 of the proposed rule should apply only to those projects that trigger the Compact Decision Making Standard under s. 281.346(6)(c).

Department Response: The department's understanding is that the Legislature intended that the state decision-making and compact decision-making standards be the same. However, the statutory language does not explicitly reflect this intention and uses different terms to describe the standards. The department changed s. NR 852 to describe the applicability of the two standards for conservation measures and practices: 1) "environmentally sound and economically feasible"; and (2) "cost effective". (See s. NR 852.09 and s. NR 852.10). The analysis of environmental soundness and economic feasibility applies to applications for new or increased diversions and to applications for new or increase withdrawals subject to the Compact decision-making standard—i.e. those withdrawals that will equal at least 10 million gallons per day for any 30 consecutive days with an associated water loss exceeding 5 million gallons per day in every 90-day period.

50. From Wisconsin Manufacturers and Commerce: *Environmentally Sound and Economically Feasible Analysis, NR 852.09. The term "Environmentally Sound and Economically Feasible" as defined in s. 281.346(1)(i) is different from the application of s. NR 852.09(1) and (2) "Environmentally sound and Economically Feasible Analysis".*

Department Response: The department made changes to the rule to address the concern. The changes are in s. NR 852.10. (See response to Comment #49.)

51. From Wisconsin Builders Association: *NR 852.09 (3): This provides that the department "may" provide tools that "shall" be used to aid in the submittal of information under this section. This provision should be modified to provide that the department "shall" provide tools that "may" be used for the submittal of information.*

Department Response: Section NR 852.09 (3) (renumbered NR 852.10) has been changed and the reference to tools being developed has been removed.

52. From the Wisconsin Paper Council: *Economically feasible and cost-effective analysis over a five year planning period is too long and uncommon in business and industry payback period evaluations.*

Department Response: The five year planning period has been established to allow for sufficient time to evaluate the cost-effectiveness of implementing CEMs. The use of a defined planning period has limitations because it ignores any benefits that occur after the payback period ends and, therefore, does not measure additional long-term savings of the implementation of CEMs beyond the planning period. For this reason, the department has determined that a 5 year planning period is a reasonable time to allow for a cost-effective evaluation of water conservation and efficiency measures.

53. From the Community of Environmental Groups: *Review and Approval Capacity. Require independent review of NR 852.09 analysis, with findings of fact, under the direction of the department, with an application fee sufficient to provide funds for outside services to fulfill this need.*

Department Response: Section NR 852.09 has been amended to allow the department to require an independent review of the submitted cost effectiveness analysis.

54. From the Community of Environmental Groups: Direct and Avoided Environmental Costs. *Include specific guidance in NR 852.09 (2) for providing direct and avoided environmental cost information similar to the guidance provided for economic costs.*

Department Response: Applicants must assess and document environmental costs, which are likely to be very case-specific. The department will work with persons on a case-by-case basis, using its best professional judgment.

55. From the Municipal Environmental Group – Water: NR 852.09(1). Environmentally Sound and Economically Feasible Analysis. *Revise NR 852.09(1) to apply to either a CEM or a project identified in a CEM. Under Table 2 above, MEG-Water proposes that some of the CEMs for the public water supply water use sector be a written analysis or technical assessment. MEG-Water proposes that a public water system be required to do these studies prior to applying for an increased withdrawal or diversion in order to evaluate whether there are cost-effective actions that could be taken to defer the need for an increased withdrawal or diversion. Under MEG-Water's proposal, the study or assessment is the CEM and it requires an analysis of potential projects. It would make sense that the study or assessment evaluate whether the projects considered by the study are cost effective under this standard. However, these projects should not automatically become CEMs.*

MEG-Water suggests that NR 852.09(1) be revised to provide as follows:

NR 852.09 Environmentally Sound and Economically Feasible Analysis. (1) An analysis may be conducted to determine if a CEM or a project identified in a CEM in ss. NR 852.05(1) or 852.06(1) is environmentally sound and economically feasible. The analysis shall make a determination as to whether the CEM or a project identified in a CEM is all of the following:

Department Response: The language in NR 852.09(1) (renumbered NR s. 852.10) has been changed to clarify the “Environmentally sound and economically feasible analysis”, however, the language has not been changed to include a reference to “a project identified in a CEM”. The required analysis of environmental soundness and economic feasibility (and the cost-effectiveness analysis) applies to the CEMs. CEMs—or projects that are identified in a CEM—that are not cost-effective, or environmentally sound or economically feasible are not mandatory. “Studies”, “assessments” or “projects”, are considered part of the process to analyze CEMs. For public water supply systems serving a population of 10,000 or more, an evaluation of water conservation and efficiency measures will be required as part of the water supply service area planning process under the proposed Chapter NR 854 “Water Supply Service Area Plans”. For public water supply systems serving a population of less than 10,000, the required CEMs in Table 1 and Table 2 will be used to ensure the efficient use of water for a new or increased withdrawal.

56. From the Municipal Environmental Group – Water: NR 852.09(2). Environmentally Sound and Economically Feasible Analysis. *Revise NR 852.09(2) to clarify that the costs to be considered are the costs of the water supply system --not the costs of the water supply system's customers.*

Department Response: The department added language in s. NR 852.09 (renumbered s. NR 852.10) to clarify that the costs to be considered are the costs to the withdrawer.

Approval and Reporting Process

57. From the Community of Environmental Groups: Periodic Review and Reassessment of Compliance. Clarify that anytime a withdrawal or diversion application is modified or renewed, the permit holder must reassess and re comply with the provisions of NR 852.

Department Response: The proposed rule NR 860 Water Use Permitting contains this requirement.

58. From the Community of Environmental Groups: Narrative Summary Reporting. Strike the term "narrative summary" from NR 852.10 (5).

Department Response: Section NR 852.10 (5) (renumbered s. NR 852.11(5) (a)) was amended to include a quantifiable summary of impacts to water use intensity.

59. From the Community of Environmental Groups: Approval and Reporting Process – Certification. Add a new subparagraph NR 852.10 (5)(e) requiring a certification of compliance with the approved conservation plan and conservation efficiency measures (CEMs) from a responsible official, including a definition of any deficiencies and steps being taken to come into compliance.

Department Response: Required annual reporting will allow the department to track the ongoing compliance with the approved water conservation plan.

60. From the Community of Environmental Groups: Data Base Public Access. Place quantifiable water conservation and efficiency performance data required by NR 852.10 (5) in a state-wide database system accessible to the public.

Department Response: This may be a part of a statewide water conservation and water use efficiency program and water use database, but will not be included in the rule.

61. From the Municipal Environmental Group – Water: NR 852.10. Approval and Reporting Process. This section appears to require a separate approval for the conservation plan. This type of approval is not referenced in the statute, and seems to be unnecessary. This chapter is triggered by a water user applying to the DNR for approval for a new or increased withdrawal, diversion or intrabasin transfer. This application will require an approval, and it seems as if the sufficiency of a water user's conservation plan and other actions should be evaluated as part of that approval process. Having a separate approval process for just the conservation elements of the application would be confusing and unnecessary. In considering an application for a new or increased withdrawal, diversion, or intrabasin transfer (under Tier 2 or Tier 3), the DNR is to consider whether cost-effective conservation practices have been implemented for existing uses of water. Therefore, it would be expected that the DNR would consider the written submittals provided under this chapter, in determining whether this criterion is met. If this criterion is not met, the statute provides that

the DNR is to deny the application request. Similarly, the DNR is to consider (under Tier 2 or Tier 3) whether cost-effective conservation practices will be implemented to ensure efficient use of the water, for the new withdrawal, or of the increased amount of an existing withdrawal. Therefore, the DNR would also be considering the written submittals provided under this chapter, to determine whether this criterion is met. It is expected that the DNR would include in an approval, conditions requiring that certain conservation measures be implemented in order to ensure that this criterion is met. Any required reporting on compliance with the approval conditions should be part of the approval for a new or increased withdrawal, diversion, or intrabasin transfer.

Department Response: The department incorporated several of the suggested edits in s. NR 852.10 (renumbered s. NR 852.11). Section NR 852.11 (3) specifically states that the approval of the provisions in ch NR 852 will come in the *form of a letter, finding of fact in a permit, or a statement in an approval*. A separate approval for the water conservation requirements will not be issued. The rule was not changed to eliminate the annual specific reporting requirements. The rule outlines specific information that is needed to monitor the impact of the water conservation plan and to ensure that the plan is implemented through time.

Enforcement

62. From the Municipal Environmental Group – Water: NR 852.11. Enforcement. *In NR 852.11(3), delete the reference to "abatement of nuisance, and restoration." The reference to nuisance and restoration does not fit with these rules. This chapter deals with the conservation elements that must be submitted with a withdrawal or diversion application, and subsequently implemented, either as a way of avoiding the increased withdrawal or diversion, or as a condition of the increased withdrawal or diversion. Any nuisance would only arise from a user's exceedence of its permitted water withdrawal amount -- not from a violation of any of the provisions of this chapter.*

Department Response: The enforcement language in s. NR 852.11 (renumbered s. NR 852.12) remains unchanged. The language is standard for department enforcement procedures and response to regulatory violations.

Fiscal Estimate — 2009 Session

Original Updated
 Corrected Supplemental

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number DG-24-10

Subject
 Water Conservation and Water Use Efficiency Rule

Fiscal Effect

State: No State Fiscal Effect
 Indeterminate

Check columns below only if bill makes a direct appropriation or affects a sum sufficient appropriation.

Increase Existing Appropriation Increase Existing Revenues
 Decrease Existing Appropriation Decrease Existing Revenues
 Create New Appropriation

Increase Costs — May be possible to absorb within agency's budget.
 Yes No
 Decrease Costs

Local: No Local Government Costs
 Indeterminate

1. Increase Costs
 Permissive Mandatory
 2. Decrease Costs
 Permissive Mandatory

3. Increase Revenues
 Permissive Mandatory
 4. Decrease Revenues
 Permissive Mandatory

5. Types of Local Governmental Units Affected:
 Towns Villages Cities
 Counties Others Water Utilities
 School Districts WTCS Districts

Fund Sources Affected
 GPR FED PRO PRS SEG SEG-S

Affected Chapter 20 Appropriations
 20.370 (4)(cg), 20.370 (4)(ai)

Assumptions Used in Arriving at Fiscal Estimate

Water Conservation and Water Use Efficiency Rule Summary:

This new rule clarifies and further defines new statutory requirements for water conservation and water use efficiency for withdrawals of waters of the state within the Great Lakes Basin, diversions of water from the Great Lakes Basin, and water withdrawals statewide that require a water loss approval. The new law implements the following:

- Specifies mandatory water conservation and efficiency measures for waters of the Great Lakes Basin and withdrawals statewide that require a water loss approval (i.e. withdrawals resulting in a water loss averaging more than 2,000,000 gallons per day in any 30-day period).
- Promotes voluntary statewide water conservation through the identification of water conservation and efficiency measures.
- Guides other Department regulatory, planning, resource management, liaison and financial aid determinations.

Persons subject to this chapter are categorized into one of 3 tiers:

- Tier 1 includes new and increased withdrawals in the Great Lakes Basin that average 100,000 gallons per day or more in any 30-day period but that do not equal at least 1,000,000 gallons per day for any 30 consecutive days.
- Tier 2 includes new and increased withdrawals in the Great Lakes Basin that equal 1,000,000 gallons per day or more for any 30 consecutive days.
- Tier 3 includes new and increased diversions in a community or county that straddles the sub-continental divide and new and increased withdrawals statewide that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period.

This tiered approach is being used to differentiate between the requirements for different types and levels of regulated activities. The level of water conservation and efficiency requirements are increased from Tier 1, to Tier 2, to Tier 3.

Long-Range Fiscal Implications

None.

Prepared By: Joe Polasek	Telephone No. 266-2794	Agency Department of Natural Resources
Authorized Signature 	Telephone No. 266-2794	Date (mm/dd/ccyy) 04-20-10

Fiscal Estimate — 2009 Session

**Page 2 Assumptions Narrative
Continued**

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number DG-24-10

Assumptions Used in Arriving at Fiscal Estimate – Continued

In addition to completing a Water Conservation Plan, there are four mandatory water conservation and efficiency measures (CEMs) for all persons for whom water conservation and efficiency requirements are mandatory under this chapter. These CEMs have been determined to be cost effective, environmentally sound and economically feasible for all water use sectors. Implementation of additional CEMs are required for Tier 2 and Tier 3 only.

The rule sets forth definitions, sector-specific water conservation and efficiency measures, elements of a water conservation plan, procedures for conducting an analysis of whether a conservation and efficiency measure is environmentally sound and economically feasible, a process for approval and reporting, and a process for enforcement.

Fiscal Impact:

State Fiscal Impact

All costs that the Department will incur are the result of the water conservation and efficiency requirements enacted in 2007 Wisconsin Act 227.

The primary financial impact to the state will be the review of water conservation plans, which include documentation of the implementation of water conservation and efficiency measures. This review will be done internally by a Water Supply Specialist-Advanced. Annually, an estimated 30 water withdrawers will be impacted by this rule. Additionally, there will be annual costs associated with outreach on the voluntary water conservation and efficiency program, which will be done internally by a Natural Resources Staff Specialist. There will be a one-time cost to develop tools for water users to conduct a economical feasibility analysis.

Additionally, state facilities with new or increased withdrawals in the Great Lakes basin will have to comply with this rule. For example, the state operates several fish hatcheries that may be financially impacted if they expand or a new hatchery is established and need a new or increased water withdrawal. However, the Department cannot reliably predict the number of state-owned facilities in the Great Lakes basin that will require a new or increased water withdrawal above the threshold levels, therefore the assumptions included for the state fiscal effect below do not include dollar amounts for fiscal impacts for state fish hatcheries or other state-owned facilities.

Annual State Fiscal Impact

Estimated number of persons annually subject to NR 852 = 30 water withdrawers
Hours for the Department to review and approve water conservation plans = 20 hrs x 30 plans = 600
Annual fiscal impact to the Department for water conservation plan review = \$35/hr x 600 hours = \$21,000
Full time equivalent (FTE) for water conservation plan review = 600 hrs / 1820 hrs/FTE = 0.3 FTE
Annual fiscal impact to the Department for water conservation outreach = \$35/hr x 420 hrs = \$14,700
Full time equivalent (FTE) for water conservation outreach = 420 hrs / 1820 hrs/FTE = 0.2 FTE
TOTAL ANNUAL STATE FISCAL IMPACT = \$35,700 or 0.50 FTE

One-Time State Fiscal Impact

Estimated number of hours to complete economically feasible analysis tools = 1040 hrs
Economically feasible analysis tool development (developed internally) = 1040 hrs / 1820 hrs/FTE = 0.6 FTE
One-time state fiscal impact for tool development (developed internally) = \$35/hr x 1040 hrs = \$36,400
One-time state fiscal impact for tool development (contracted out) = \$70/hr x 1040 hrs = \$72,800
TOTAL ONE-TIME STATE FISCAL IMPACT = \$109,200

Local Government

The Department assumes that approximately 5 municipal water systems per year will apply for a new or increased withdrawal and will be required to complete a water conservation plan and implement water conservation and efficiency measures. The number of permittees may increase in the long term along with continued population growth and increased economic activity.

Water conservation and efficiency measures do not include retrofitting requirements, but rather, the required elements include planning and operational changes to achieve water savings. CEMs included in this rule are designed to be revenue neutral; planning costs incurred should be offset by capital and operational costs avoided. If an element is not economically feasible as determined by a prescribed analysis, the water system will not be required to implement it. The cost to the permittee will primarily be an upfront cost to complete a water conservation plan and establish CEMs. In subsequent years, water savings can be achieved with minimal capital and operational costs.

Public water systems regulated by the Public Service Commission have the ability to recover conservation and efficiency related costs through rates charged to customers.

Annual Local Government Fiscal Impact

Number of hours for permittee to complete requirements = 160
Fiscal impact to each individual permittee = \$50/hr x 160 = \$8,000
Local government permittees affected = 15% of 30 = 5 water withdrawers
Total annual impact to local government sector = 5 x \$8000 = \$40,000

Private Sector

The private sector will be impacted by this rule in 6 areas: (1) Privately owned "public" water supply systems; (2) Commercial and institutional businesses with their own water supply; (3) Dairy farm and livestock operations (including aquaculture) with their own water supply; (4) Agricultural irrigation operations with their own water supply; (5) Industrial operations on their own water supply; (6) Electric power production using water in their process; and (7) Other water users with their own water supply. It is estimated that the number of hours for a permittee to complete the water conservation plan and applicable water conservation and efficiency measures would be equivalent to the hours required of a public water system (local government) permittee (160 hours/permittee).

Annually, approximately 25 private sector water withdrawers are estimated to trigger a new or increased withdrawal and will be required to complete a water conservation plan and implement water conservation and efficiency measures. The number of permittees may increase in the long term along with continued population growth and increased economic activity.

Water conservation and efficiency measures do not include retrofitting requirements, but rather, the required elements include planning and operational changes to achieve water savings. CEMs included in this rule are designed to be revenue neutral; planning costs incurred should be offset by capital and operational costs avoided. If an element is not economically feasible as determined by a prescribed analysis, the water system will not be required to implement it. The cost to the permittee will primarily be an upfront cost to complete a water conservation plan and establish CEMs. In subsequent years, water savings can be achieved with minimal capital and operational costs.

Annual Private Sector Fiscal Impact

Number of hours for permittee to complete requirements = 160 hours
Fiscal impact to each individual permittee = \$50/hr x 160 = \$8,000
Privately owned permittees affected = 85% of 30 = 25 water withdrawers
Total annual impact to private sector = 25 x \$8000 = \$200,000

Fiscal Estimate Worksheet — 2009 Session
 Detailed Estimate of Annual Fiscal Effect

Original Updated
 Corrected Supplemental

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number DQ-24-10

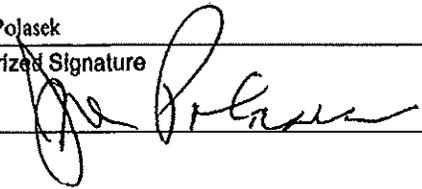
Subject
 Water Conservation and Water Use Efficiency Rule

One-time Costs or Revenue Impacts for State and/or Local Government (do not include in annualized fiscal effect):

Annualized Costs:		Annualized Fiscal Impact on State Funds from:	
		Increased Costs	Decreased Costs
A. State Costs by Category			
State Operations — Salaries and Fringes		\$ -	\$ -
(FTE Position Changes)		(FTE)	(FTE)
State Operations — Other Costs		-	-
Local Assistance		-	-
Aids to Individuals or Organizations		-	-
Total State Costs by Category		\$ -	\$ -
B. State Costs by Source of Funds			
GPR		\$ -	\$ -
FED		-	-
PRO/PRS		-	-
SEG/SEG-S		-	-
State Revenues	Complete this only when proposal will increase or decrease state revenues (e.g., tax increase, decrease in license fee, etc.)	Increased Revenue	Decreased Revenue
GPR Taxes		\$ -	\$ -
GPR Earned		-	-
FED		-	-
PRO/PRS		-	-
SEG/SEG-S		-	-
Total State Revenues		\$ -	\$ -

Net Annualized Fiscal Impact

	State	Local
Net Change in Costs	\$ _____	\$ _____
Net Change in Revenues	\$ _____	\$ _____

Prepared By: Joe Polasek	Telephone No. 266-2794	Agency Department of Natural Resources
Authorized Signature 	Telephone No. 266-2794	Date (mm/dd/ccyy) 04-20-10

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCE BOARD
CREATING RULES

The Wisconsin Natural Resource Board proposes an order to create chapter NR 852 relating to water conservation and water use efficiency for water withdrawals and affecting small business.

DG-24-10

Analysis Prepared by the Department of Natural Resources

1. **Statutes Interpreted:** Sections 281.343(4b), 281.346(8), Stats.
2. **Statutory Authority:** Sections 227.11(2)(a), 281.346(4)(g), 281.346(8) and 281.35(10)(b), Stats.
3. **Explanation of Agency Authority:** Section 227.11(2)(a), Stats., expressly confers rulemaking authority on the department to promulgate rules interpreting any statute enforced or administered by it, if the agency considers it necessary to effectuate the purpose of the statute.

Section 281.343(4b) directs the department to develop and implement a water conservation and efficiency program and to promote environmentally sound and economically feasible water conservation measures.

Sections 281.346(4)(g) and 281.346(8), Stats., direct the department to promulgate rules to establish water conservation and efficiency measures.

Section 281.35(10)(b), Stats., authorizes the department to promulgate rules for implementing the water loss approval program.

4. **Related Statute or Rule:** Wisconsin Statutes Sections 30.18, 281.34, 281.343, 281.344, 281.346, 281.35; chapters NR 809, NR 811, PSC 196, PSC 185, Comm 101, Comm 145 and rules under development pertaining to the following: Water Use Registration and Reporting, Water Use Permitting, Water Use Fees, Water Use Public Involvement, Water Loss from Consumptive Uses, Water Supply Service Area Plans, and Requirements for the Operation and Maintenance of Public Water Systems.
5. **Plain Language Analysis:** This board order creates a new rule that clarifies and further defines new statutory requirements for water conservation and water use efficiency for regulated withdrawals of waters of the state within the Great Lakes Basin, diversions of water from the Great Lakes Basin, and water withdrawals statewide that require a water loss approval. Key provisions of the new law include the following:

- Specifies mandatory water conservation and efficiency measures for regulated withdrawals and diversions of waters of the Great Lakes Basin and withdrawals statewide that require a water loss approval.
- Promotes voluntary statewide water conservation through the identification of water conservation and efficiency measures.
- Guides other department regulatory, planning, resource management, liaison and financial aid determinations.

Persons subject to this chapter are categorized into one of 3 levels:

- Tier 1 includes new and increased withdrawals in the Great Lakes Basin that average 100,000 gallons per day or more in any 30-day period but that do not equal at least 1,000,000 gallons per day for any 30 consecutive days.
- Tier 2 includes new and increased withdrawals in the Great Lakes Basin that equal 1,000,000 gallons per day or more for any 30 consecutive days.
- Tier 3 includes new and increased diversions in a community or county that straddles the sub-continental divide and water loss approval applications statewide. A water loss approval is required for withdrawals that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period.

This tiered approach is being used to differentiate between the requirements for different types and levels of regulated activities. The level of water conservation and efficiency requirements are increased from Tier 1, to Tier 2, to Tier 3.

In addition to completing a Water Conservation Plan, there are four mandatory water conservation and efficiency measures (CEMs) for all persons for whom water conservation and efficiency requirements are mandatory under this chapter. These CEMs have been determined to be cost-effective, environmentally sound and economically feasible for all water use sectors. Implementation of additional CEMs is required for Tier 2 and Tier 3 only.

The rule sets forth definitions, sector specific water conservation and efficiency measures, elements of a water conservation plan, procedures for conducting environmental soundness and economic feasibility analyses and cost effectiveness analyses, processes for approval, reporting, and enforcement.

- 6. Federal Regulatory Analysis:** There are no comparable federal regulations pertaining to water conservation and water use efficiency. However, in passing the Great Lakes – St. Lawrence River Basin Water Resources Compact (Compact), each of the Great Lakes states have similar requirements to establish a water conservation and efficiency program that is

consistent with the goals and objectives identified by the Great Lakes Compact Council.

7. Comparison with Rules in Adjacent States:

The following table compares regulatory requirements for water conservation and efficiency in adjacent states:

Water Conservation and Water Use Efficiency Comparison				
Wisconsin	Illinois	Iowa	Michigan	Minnesota
Specifies mandatory water conservation and water use efficiency measures within user sectors for certain levels of new or increased withdrawals and diversions from waters of the Great Lakes Basin and for water withdrawals statewide that require a water loss approval. Promotes voluntary statewide water conservation through the identification of water conservation and efficiency measures.	Specifies all water withdrawals over 100,000 gallons per day in the Great Lakes Basin to obtain a permit. Conservation practices within the user category are specified through permitting process. Requires permittees to submit a plan to reduce wasteful water and unaccounted for water by 8 percent. Requires permittees to submit an annual water use audit form.	Specifies all persons making a water withdrawal of at least 25,000 gallons per day to obtain a water use permit. Iowa statute provides for a water allocation (permit) system based on beneficial use preventing waste, unreasonable use and unreasonable methods of use of water resources. Conservation is expected.	Specifies all persons making large quantity withdrawals averaging 100,000 gallons a day for 30-days to evaluate generic water conservation measures applicable to their sector for review and acceptance by the Dept. of Nat. Resources and Environment. Requires legislative review of the status and preparation and acceptance of water user sector conservation measures by April 1, 2010.	Specifies mandatory efficient use and conservation of water through permitting process for all water users withdrawing water at a rate of 10,000 gallons a day or a million gallons per year. Water conservation must be addressed in water supply plans required for public water systems serving more than 1000 people. Requires mandatory conservation rate structures for all public water utilities located within the basin. Specifies voluntary measures including information and education, retrofitting water fixtures and encouraging water reuse.

8. Summary of the Factual Data and Analysis that Support the Proposed Rule:

Published scientific literature, industry manuals, information from other states, consultation with the Department of Commerce and Public Service Commission, and input from an advisory committee were used as the basis for developing the water conservation plan requirements and required water conservation and efficiency measures.

9. Analysis and Supporting Documentation in Support of the Determination of the Rule’s Effect on Small Business:

Any person who diverts any amount of water, has a new or increased withdrawal averaging 100,000 gallons per day or more in any 30-day period from the Great Lakes Basin, or a withdrawal with a water loss over 2,000,000 gallons per day must complete a water conservation plan and implement water conservation and efficiency measures. To comply, small businesses follow the same requirements as other persons who withdraw water in the same quantity. The water conservation and water use efficiency requirements are clearly identified in this rule and do not include requirements

to retrofit existing equipment. Water conservation and efficiency measures that are not environmentally sound or economically feasible or cost effective do not need to be implemented.

10. Effect on Small Business: This rule will affect small businesses located in the Great Lakes Basin that supply their own water with water supply systems that actually withdraw water in amounts averaging 100,000 gallons per day or more in any 30-day period or have a new or increased withdrawal statewide that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period. Water conservation and efficiency measures that are not environmentally sound or economically feasible or cost effective do not need to be implemented. Small businesses that receive water from a public water supply will not be impacted by this rule.

11. Agency Contact Person:

Steven Elmore, Water Resources Management Specialist
Wisconsin Department of Natural Resources
Bureau of Drinking Water & Groundwater
(608) 264-9246
Steve.Elmore@wisconsin.gov

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

submission: Comments are to be submitted to Kristy Rogers, Bureau of Drinking Water and Groundwater, P.O. Box 7921, Madison, WI 53707 by July 7, 2010.

SECTION 1. Chapter NR 852 is created to read:

CHAPTER NR 852
WATER CONSERVATION AND WATER USE EFFICIENCY

NR 852.01 Purpose
NR 852.02 Applicability
NR 852.03 Definitions
NR 852.04 Required Elements – All
NR 852.05 Required Elements – Tier 2 and Tier 3
NR 852.06 Required Elements – Tier 3 Only
NR 852.07 Water Conservation Plans
NR 852.08 Water Conservation and Efficiency Measures
NR 852.09 Cost-Effectiveness Analysis
NR 852.10 Environmental Soundness and Economic Feasibility Analysis
NR 852.11 Approval and Reporting Process
NR 852.12 Enforcement

NR 852.01 Purpose. The purpose of this chapter is to establish a statewide water conservation and efficiency program, as required by s. 281.346(8), Stats.; to specify mandatory water conservation and efficiency measures for withdrawals in the Great Lakes Basin and water loss approvals statewide; to promote voluntary statewide water conservation through the identification of water conservation and efficiency measures; and to guide other department regulatory, planning, resource management, liaison and financial aid determinations.

NR 852.02 Applicability. Persons subject to this chapter are categorized into one of three levels, Tier 1, Tier 2, or Tier 3, in order to differentiate between the requirements for different amounts and types of a withdrawal, diversion, or water loss. Unless exempted under sub. (4), this chapter applies to persons applying for a new or increased withdrawal, diversion, or water loss approval according to the following categories:

(1) Tier 1: Persons applying for a new or increased withdrawal regulated under s. 281.346(4s), Stats.

Note: Section 281.346(4s), Stats., requires coverage under a general permit for withdrawals from the Great Lakes basin that average 100,000 gallons per day or more in any 30-day period but that do not equal at least 1,000,000 gallons per day for any 30 consecutive days.

(2) Tier 2: Persons applying for a new or increased withdrawal regulated under s. 281.346(5), Stats.

Note: Section 281.346(5), Stats., requires an individual permit for withdrawals from the Great Lakes basin that equal 1,000,000 gallons per day or more for any 30 consecutive days.

(3) Tier 3:

(a) Persons applying for a new or increased diversion regulated under s. 281.346(4)(c), (d), and (e), Stats.

Note: Section 281.346(4)(c), Stats., regulates diversions to a straddling community, s. 281.346(4)(d), Stats., regulates intrabasin transfers within a straddling community, and s. 281.346(4)(e), Stats. regulates diversions to a community in a straddling county.

(b) Persons applying for a water loss approval under s. 281.35, Stats.

Note: Section 281.35, Stats., regulates withdrawals statewide that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period.

(4) This chapter does not apply to water withdrawals for any of the following purposes:

(a) To supply vehicles, including vessels and aircraft, for the needs of the persons or animals being transported or for ballast or other needs related to the operation of the vehicles.

(b) To use in a noncommercial project that lasts no more than 3 months for fire fighting, humanitarian, or emergency response purposes.

(c) Temporary pit or trench dewatering including construction pits, sewer extension construction, pipe trenches, and other similar operations.

NR 852.03 Definitions. In this chapter:

(1) "Commercial and institutional water use sector" means water users that supply their own water and use water for commercial and institutional uses, including entities such as motels, hotels, restaurants, office buildings, hospitals, schools and other institutions, both civilian and military. Water use in the commercial and institutional water use sector includes water used for air conditioning and other similar uses and for amusement and recreational purposes, such as snowmaking and water slides.

(2) "Consumptive use" has the meaning specified in s. 281.346(1)(e), Stats.

Note: Section 281.346(1)(e) defines "consumptive use" to mean "a use of water that results in the loss or failure to return some or all of the water to the basin from which the water is withdrawn due to evaporation, incorporation into products, or other processes."

(3) "Cost-effectiveness analysis" means a systematic comparison of the total resources costs, including monetary costs and environmental costs, as well as other nonmonetary costs of implementing a conservation and efficiency measure to identify whether avoided costs and environmental benefits exceed the costs of implementing a conservation and efficiency measure over a planning period.

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

(5) "Diversion" has the meaning specified in s. 281.346(1)(h), Stats.

Note: Section 281.346(1)(h), Stats., defines "diversion" to mean "a transfer of water from the Great Lakes basin into a watershed outside the Great Lakes basin, or from the watershed of one of the Great Lakes into that of another, by any means of transfer, including a pipeline, canal, tunnel, aqueduct, channel, modification of the direction of a water course, tanker ship, tanker truck, or rail tanker except that 'diversion' does not include any of the following: 1. The

transfer of a product produced in the Great Lakes basin or in the watershed of one of the Great Lakes, using waters of the Great Lakes basin, out of the Great Lakes basin or out of that watershed. 2. The transmission of water within a line that extends outside the Great Lakes basin as it conveys water from one point to another within the Great Lakes basin if no water is used outside the Great Lakes basin. 3. The transfer of bottled water from the Great Lakes basin in containers of 5.7 gallons or less."

(6) "Ecosystem" means the interacting components of air, land, water, and living organisms, including humans.

(7) "Environmentally sound" means not destructive to the ecosystem.

(8) "Environmentally sound and economically feasible water conservation measures" has the meaning specified in s. 281.346 (1) (i), Stats.

Note: Section 281.346 (1)(i), Stats., defines "Environmentally sound and economically feasible water conservation measures" to mean "those measures, methods, or technologies for efficient water use and for reducing water loss and waste or for reducing the amount of a withdrawal, consumptive use, or diversion that are, taking into account environmental impact, the age and nature of equipment and facilities involved, the processes employed, the energy impacts, and other appropriate factors, all of the following: 1. Environmentally sound. 2. Reflective of best practices applicable to the water use sector. 3. Technically feasible and available. 4. Economically feasible and cost-effective based on an analysis that considers direct and avoided economic and environmental costs."

(9) "Great Lakes basin" has the meaning specified in s. 281.346 (1)(je), Stats.

Note: Section 281.346(1)(je), Stats., defines "Great Lakes basin" to mean "the watershed of the Great Lakes and the St. Lawrence River upstream from Trois-Rivieres, Quebec, within the jurisdiction of the parties."

(10) "Increased diversion" means a diversion that exceeds the interbasin transfer amount specified in an approval issued under s. 281.344(3m), Stats., or the diversion amount specified in an approval issued under s. 281.346(4), Stats.

(11) "Increased withdrawal" means a withdrawal that exceeds the baseline established in accordance with s. 281.346(2)(e), Stats., or the withdrawal amount established under s. 281.346(4g), (4s), or (5), Stats.

(12) "Industrial water use sector" means water users that supply their own water for use in the manufacturing of metals, chemicals, paper, food, beverage, and other products and for use in mining, quarrying and milling. Industrial water use sector does not include water users that supply their own water for use in brine extraction from oil and gas operations.

(13) "Intrabasin transfer" has the meaning specified in s. 281.346(1)(jm), Stats.

Note: Section 281.346(1)(jm), Stats., defines "intrabasin transfer" to mean "the transfer of water from the watershed of one of the Great Lakes into the watershed of another of the Great Lakes."

(14) "Irrigation water use sector" means water users that supply their own water to apply on lands to assist in the growing of crops and pastures or in the maintenance of recreational lands such as parks and golf courses.

(15) "Livestock water use sector" means water users that supply their own water for use in raising or keeping animals such as fish, horses, cattle, sheep, hogs, and poultry.

(16) "Meter" has the meaning specified in s. PSC 185.12 (11).

Note: Section PSC 185.12(11) defines "meter" to mean "an instrument installed to measure the volume and/or rate of flow of water delivered through it."

(17) "New diversion" means a diversion that started on or after December 8, 2008.

(18) "New withdrawal" means a withdrawal that started on or after December 8, 2008, and averages 100,000 gallons per day or more in any 30-day period, and a withdrawal that was occurring before December 8, 2008 but was not eligible for a baseline, and that has increased the rate of withdrawal so that it averages 100,000 gallons per day or more in any 30-day period.

Note: Withdrawals not eligible for a baseline include those that were less than the minimum regulated amount of an average of 100,000 gallons per day in any 30-day period.

(19) "Other water use sector" means water users that supply their own water and that are not a public water supply water use sector, commercial and institutional water use sector, irrigation water use sector, livestock water use sector, industrial water use sector, or power production water use sector. Water use in the other water use sector includes water used for fish or wildlife, environmental, navigation and water quality purposes.

(20) "Power production water use sector" means water users that supply their own water for use in generating electricity or power. Water use in the power production water use sector includes water used for thermoelectric once-through cooling, thermoelectric re-circulated cooling, and hydroelectric.

(21) "Public water supply water use sector" means public water supply systems that distribute water to the public through a physically connected system of treatment, storage and distribution facilities serving a group of largely residential customers that may also serve industrial, commercial and other institutional customers.

(22) "Public water system" has the meaning specified in s. NR 809.04(57).

Note: Section NR 809.04(57) defines "public water system" to mean "a system for the provision to the public of piped water for human consumption through pipes or other constructed conveyances, if the system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. A public water system is either a "community water system" or a "non-community water system". A system: (a) Includes any collection, treatment, storage and distribution facilities under control of the operator of the system and used primarily in connection with the system. (b) Includes any collection or pretreatment storage facilities not under the system's control which are used primarily in connection with the system. (c) Does not include any "special irrigation district."

Note: The definition of public water system in this chapter is broader and includes more water systems than those governed by the public service commission under its definition of a public utility in ch. 196, Stats.

(23) "Retrofit or retrofitting" means to modify or replace existing fixtures, appliances or equipment that is already in service.

(24) "System losses" means the difference between the volume of water entering the distribution system and the volume of water that is sold or otherwise authorized for system uses.

(25) "Water conservation and efficiency measures" or "CEMs" means structural or non-structural measures, practices, techniques or devices employed to reduce water use, or increase water reuse or water use efficiency.

(26) "Water loss" has the meaning specified in s. 281.346(1)(wm), Stats.

Note: Section 281.346(1)(wm), Stats., defines "water loss" to mean "the amount of water that is withheld from or not returned to the basin from which it is withdrawn as a result of a diversion or consumptive use or both."

(27) "Water reuse" means the collection and adequate treatment of clear water, storm water or other wastewater for subsequent use in toilet flushing, irrigation, or other processes that do not require water to meet drinking water quality standards.

(28) "Water use audit" means an examination of water use and reuse data that tracks the flow of water in the system from the point of withdrawal or, if the water is provided to the water supply system through a third party, the point of entry into the system, through any treatment and distribution to the end use. The water use audit assesses the quantitative efficiency of a water supply system, and evaluates impacts to water resources and operational and financial aspects of the system, and identifies and quantifies system losses.

Note: The water use audit for a public water supply water use sector includes tracking the water up to the customer service connection.

(29) "Water use intensity" means a measure of water use per unit production, sales unit, or customer served.

(30) "Water use sector" means one of the following types of water use sectors: commercial and institutional, industrial, irrigation, livestock, other, power production, or public water supply.

(31) "Withdraw" has the meaning specified in s. 281.346 (1)(y), Stats.

Note: Section 281.346(1)(y), Stats., defines "withdraw" to mean "to take water from surface water or groundwater."

(32) "Withdrawal" has the meaning specified in s. 281.346 (1)(z), Stats.

Note: Section 281.346(1)(z), Stats., defines "withdrawal" to mean "the taking of water from surface water or groundwater, including the taking of surface water or groundwater for the purpose of bottling the water."

NR 852.04 Required Elements – All. All persons identified in Tier 1, Tier 2 or Tier 3 shall submit with the application for a new or increased withdrawal, diversion, or water loss approval all of the following:

(1) A water conservation plan meeting the requirements in s. NR 852.07.

(2) Written documentation showing that the person has implemented or completed the CEMs in Table 1 that do not require retrofitting, as applicable for each water use sector.

Table 1

Mandatory Conservation and Efficiency Measures

CEM #	DESCRIPTION	REQUIRED ELEMENTS
Public Water Supply Water Use Sector (PWS)		
PWS-1	Water Use Audit	Perform a water use audit and prepare written documentation of the audit results using the process outlined in one of the following: 1. Public water systems regulated by the Public Service Commission shall follow the water audit procedures indicated in ch. PSC 185. 2. Public water systems not regulated by the Public Service Commission, shall submit water audit results with the water conservation plan required in s. NR 852.07.
PWS-2	Leak Detection and Repair Program	Prepare a written program to control system losses in accordance with one of the following: 1. Public water systems regulated by the Public Service Commission shall follow the procedures indicated in ch. PSC 185 regarding system losses. 2. If a public water system not regulated by the Public Service Commission has 1,000 or more service connections and system losses greater than 15%, or has fewer than 1,000 service connections and system losses greater than 25%, the public water system shall complete a survey of leaks using one of the available technical methods and complete a corrective action plan.
PWS-3	Information and Education Outreach	1. Provide information to employees and customers regarding water conservation and water use efficiency. Include all of the following items: reasons water conservation is necessary, consequences of not conserving water, and actions needed to achieve the water conservation goals of the community. Provide information and education in an effective format to customers and employees specific to landscape watering practices. Public water systems regulated by the Public Service Commission shall follow the utility billing procedures indicated in ch. PSC 185. 2. Develop and deliver a training plan to educate and train employees on the implementation of water conservation and efficiency measures at public water system facilities. Information and education materials shall be made available to the department.
PWS-4	Source Measurement	Measure or estimate all water withdrawals monthly or more frequently to allow for identifying and understanding variability in water use over time. Public water systems regulated by the Public Service Commission shall follow the metering requirements provided in ch. PSC 185.
Commercial and Institutional Water Use Sector (CI)		
CI-1	Water Use Audit	Conduct a water use audit and prepare written documentation of the audit results.
CI-2	Leak Detection and Repair Program	Establish a protocol to repair leaks in a timely manner. Conduct a survey of leaks and develop a corrective action plan.
CI-3	Information and Education	Develop and deliver training to educate and train employees on the implementation of water conservation and efficiency measures at the facility. Information and education materials shall be made available to the department.
CI-4	Source Measurement	Measure or estimate all water sources at a frequency that allows for identifying and understanding variability in water use over time.

Irrigation Water Use Sector (IR)		
IR-1	Water Use Audit	Conduct a water use audit, including the system's application efficiency or distribution uniformity as applicable and prepare written documentation of the audit results.
IR-2	Leak Detection and Repair Program	Establish a protocol to repair leaks in a timely manner. Conduct a survey of leaks that includes an account of the general condition of the irrigation system and develop a corrective action plan.
IR-3	Information and Education	Develop and deliver training to educate employees on the implementation of water conservation and efficiency measures at the facility. Information and education materials shall be made available to the department.
IR-4	Source Measurement	Measure or estimate all water withdrawals monthly or more frequently to allow for identifying and understanding variability in water use over time.
Livestock Water Use Sector (LS)		
LS-1	Water Use Audit	Conduct a water use audit and prepare written documentation of the audit results.
LS-2	Leak Detection and Repair Program	Establish a protocol to repair leaks in a timely manner. Conduct a survey of leaks and develop a corrective action plan.
LS-3	Information and Education	Develop and deliver training to educate employees on the implementation of water conservation and efficiency measures at the facility. Information and education materials shall be made available to the department.
LS-4	Source Measurement	Measure or estimate all water withdrawals monthly or more frequently to allow for identifying and understanding variability in water use over time.
Industrial Water Use Sector (IN)		
IN-1	Water Use Audit	Conduct a water use audit, determine water inflow and outflow from the facility and prepare written documentation of the audit results. Facilities shall identify once-through cooling processes in the audit report.
IN-2	Leak Detection and Repair Program	Establish a protocol to repair leaks in a timely manner. Conduct a survey of leaks and develop a corrective action plan.
IN-3	Information and Education	Develop and deliver training to educate employees on the implementation of water conservation and efficiency measures at the facility. Information and education materials shall be made available to the department.
IN-4	Source Measurement	Measure or estimate all water withdrawals monthly or more frequently to allow for identifying and understanding variability in water use over time.
Power Production Water Use Sector (PP)		
PP-1	Water Use Audit	Conduct a water use audit, determine water inflow and outflow from the facility and prepare written documentation of the audit results. Facilities shall identify once-through processes in the audit report.
PP-2	Leak Detection and Repair Program	Establish a protocol to repair leaks in a timely manner. Conduct a survey of leaks and develop a corrective action plan.
PP-3	Information and Education	Develop and deliver training to educate employees on the implementation of water conservation and efficiency measures at the facility. Information and education materials shall be made available to the department.
PP-4	Source Measurement	Measure or estimate all water withdrawals monthly or more frequently to allow for identifying and understanding variability in water use over time.

Other Water Use Sector (OR)		
OR-1	Water Use Audit	Conduct a water use audit and prepare written documentation of the audit results
OR-2	Leak Detection and Repair Program	Establish a protocol to repair leaks in a timely manner. Conduct a survey of leaks and a corrective action plan.
OR-3	Information and Education	Develop and deliver training to educate employees on the implementation of water conservation and efficiency measures at the facility.
OR-4	Source Measurement	Estimate or measure all water withdrawals monthly or more frequently to allow for identifying and understanding variability in water use over time.

NR 852.05 Required Elements – Tier 2 and Tier 3. (1) Persons identified in Tier 2 and Tier 3 shall complete the elements specified in s. NR 852.04 and the elements specified under either sub. (2) or (3).

(2) A person identified in Tier 2 or Tier 3 shall implement all CEMs identified in Table 2 for the applicable water use sector that do not require retrofitting, except those CEMs that are not cost-effective or environmentally sound and economically feasible, as determined by an analysis conducted by the applicant pursuant to s. NR 852.09 or s. NR 852.10, and approved by the department.

Table 2
Required Conservation and Efficiency Measures

CEM #	DESCRIPTION	REQUIRED ELEMENTS
Public Water Supply Water Use Sector (PWS)		
PWS-R1	Distribution System Pressure Management	Analyze distribution system pressure management to identify opportunities to reduce water use and minimize plumbing fixture leaks.
PWS-R2	Residential Demand Management Program	Establish and publicize a program to complete residential customer water use audits and leak surveys upon customer request based on high or aberrant water use. In developing the program, a waiver of liability and written permission from the customer may be needed.
PWS-R3	Commercial and Industrial Demand Management Program	Establish and publicize a program to complete commercial and industrial customer water use audits and leak surveys upon customer request based on high or aberrant water use. In developing the program, a waiver of liability and written permission from the customer may be needed.
PWS-R4	Water Reuse	Conduct a technical assessment to evaluate the feasibility of water reuse in the operation of the facility. Implement water reuse projects identified by the assessment and allowed under current state law.
Commercial and Institutional Water Use Sector (CI)		
CI-R1	Cleaning and Dust Control	Implement procedures to reduce or eliminate water use for cleaning or dust control. For example, use microfiber or sponge mops in place of cotton mops.
CI-R2	Cooling Process Sensors	Install sensors in cooling processes that use water to allow the cooling process to operate only when needed.
CI-R3	Towel and Bed Linen Reuse	Encourage lodging guests to reuse towels and bed linens in order to reduce laundry water use, if applicable.

CI-R4	Water Reuse	Conduct a technical assessment to evaluate the feasibility of water reuse. Implement water reuse projects identified by the assessment and allowed under current state law.
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Irrigation Water Use Sector (IR)		
IR-R1	Irrigation scheduling	Use the most current version of Wisconsin Irrigation Scheduling Program (WISP) or comparable program to determine the timing and quantity of irrigation. The scheduling program shall include rainfall, irrigation, and soil moisture monitoring in the field. Note: The Wisconsin Irrigation Scheduling Program (WISP) is a University of Wisconsin – Extension research-based program that uses a water budget approach to irrigation scheduling.
IR-R2	Crop/Turf Maintenance	1. Crop Residue Management. As appropriate, implement residue management and conservation tillage to enhance the ability of the soil to retain moisture. 2. Turf Maintenance. Implement recommended practices for proper turf maintenance. Examples of practices include integrated pest management, frequency of mower blade sharpening, and height of mower cut.
IR-R3	Target Areas	Eliminate or minimize non-target irrigation including drift caused by wind and irrigation of impervious surfaces and non-targeted areas to the extent practicable.
IR-R4	Water Reuse	Conduct a technical assessment to evaluate the feasibility of water reuse. Implement water reuse projects identified by the assessment and allowed under current state law.
Livestock Water Use Sector (LS)		
LS-R1	Cleaning and Dust Control	Pre-clean animal living and production areas prior to washing with water. Reduce or eliminate the use of “new” water for cleaning and dust control.
LS-R2	Determine Water Needs	Conduct a technical assessment of the requirements for fresh water inputs for healthy livestock production. Appropriately size, control, and distribute the watering system based upon the requirements.
LS-R3	Animal Cooling	Cycle a water-based animal cooling system based on temperature, if applicable.
LS-R4	Water Reuse	Conduct a technical assessment to evaluate the feasibility of water reuse. Implement water reuse projects identified by the assessment and allowed under current state law.
Industrial Water Use Sector (IN)		
IN-R1	Cooling Towers	Conduct an evaluation of the existing cooling tower system operation. The evaluation shall review all phases of cooling tower operation including the amount of water used for make up and release as blowdown, water quality characteristics, treatment application and chemicals used, metering, use of automated monitoring and controls, repair and maintenance schedules and procedures. A complete evaluation will consider the installation of sub-meters to the cooling tower makeup water line. Installation of any new cooling towers shall incorporate the measures identified in IN-R1.
IN-R2	Sub-measuring	Implement sub-measuring to account for water usage in specific processes to determine water use and loss in a process and to identify additional water efficiency goals.
IN-R3	Steam Systems	Implement steam system conservation by assessing the system operation and maintenance. Repair system leaks, maximize condensate recovery, and consider installation of continuous blowdown heat recovery.
IN-R4	Water Reuse	Conduct a technical assessment to evaluate the feasibility of water reuse. Implement water reuse projects identified by the assessment and allowed under current state law.

Power Production Water Use Sector (PP)		
PP-R1	Cooling Towers	Conduct an evaluation of the existing cooling tower system operation. The evaluation shall review all phases of cooling tower operation including the amount of water used for make up and release as blowdown, water quality characteristics, treatment application and chemicals used, metering, use of automated monitoring and controls, repair and maintenance schedules and procedures. A complete evaluation will consider the installation of sub-meters to the cooling tower makeup water line. Installation of any new cooling towers shall incorporate the measures identified in PP-R1.
PP-R2	Sub-measuring	Implement sub-measuring to account for water usage in specific processes to determine water use and loss in a process and to identify additional water efficiency goals.
PP-R3	Steam Systems	Implement steam system conservation by assessing the system operation and maintenance. Repair system leaks, maximize condensate recovery, and install continuous blowdown heat recovery.
PP-R4	Water Reuse	Conduct a technical assessment to evaluate the feasibility of water reuse. Implement water reuse projects identified by the assessment and allowed under current state law.
Other Water Use Sector (OR)		
OR-R1	Water Reuse	Conduct a technical assessment to evaluate the feasibility of water reuse. Implement water reuse projects identified by the assessment and allowed under current state law.

(3) A person identified in Tier 2 or Tier 3 shall implement CEMs selected from Table 2 in par. (a), the Optional CEM list in s. NR 852.08(2), or other CEMs as proposed by the applicant and approved by the department, which can be shown to reduce water use or increase water reuse or efficiency by 10 percent, in accordance with all of the following:

(a) The percent reduction in water use or increase in water reuse or efficiency in this subsection shall be based upon a comparison of the water use or water use intensity from the most recent complete year. Water use and water use intensity shall be adjusted to account for unique facility, economic, or weather variability.

(b) The calculation of the 10 percent reduction in water use or increase in water reuse or efficiency shall be in addition to any reduction in water use or increase in water reuse or efficiency achieved through implementation of the CEMs set forth in s. NR 852.04(2) and shall not be included in the calculated percent reduction.

(4) For persons other than persons applying for a new or increased diversion, the person shall implement the CEMs identified under sub. (1) within 2 years of the date of the department approval under s. NR 852.11.

(3) For persons applying for a new or increased diversion, the person shall implement the CEMs identified under sub. (1) prior to submitting an application.

NR 852.06 Required Elements – Tier 3 Only. (1) In addition to the required elements specified in s. NR 852.04 and s. NR 852.05, persons identified in Tier 3 shall conduct the appropriate analysis pursuant to s. NR 852.09 or s. NR 852.10 to identify additional CEMs that are cost-effective or environmentally sound and economically feasible and implement the identified CEMs following the applicable timeframes under s. NR 852.05(2) and (3).

(2) Persons applying for a new or increased diversion shall also document the efficient use and conservation of existing water supplies by providing an analysis of community water use over the past 5 years, at a minimum. The analysis shall quantitatively describe water use through time and how it has changed with the implementation of CEMs. The analysis shall include quantitative calculations of water use including but not limited to, the ratio of peak daily demand to average daily demand and per capita residential water use.

NR 852.07 Water Conservation Plans. (1) A person who is required to submit a water conservation plan under s. NR 852.04(1) shall submit a plan in a form provided by the department and shall provide all of the information requested on the form and accompanying instructions.

(2) A water conservation plan required by this chapter shall, at a minimum, contain all of the following:

(a) A description and quantification of current water use and reuse as identified by a water use audit, including a calculation of water use intensity appropriate to the water use sector. Those public water systems regulated by the public service commission shall follow applicable procedures to account for water use as provided in ch. PSC 185 and the calculations shall be included in the water use audit.

(b) A description of the water conservation and water use efficiency goals, including quantifiable goals.

(c) Documentation of the implementation of the CEMs set forth in s. NR 852.04 (2) and a description of any other existing conservation, efficiency, and reuse measures, including when they were implemented.

(d) A monitoring plan to assess the impact of the implemented CEMs.

(3) Persons identified in Tier 2 shall submit all of the following information in the water conservation plan, in addition to the information required under sub. (2):

(a) An implementation timeline for implementing the CEMs or documentation of the implementation of the CEMs in s. NR 852.05, as appropriate.

(b) If applicable, the results of an analysis conducted under s. NR 852.09 to determine if a CEM required in Table 2 is cost-effective.

(c) If applicable, the results of an analysis conducted under s. NR 852.10 to determine if a CEM required in Table 2 is environmentally sound and economically feasible.

(4) Persons identified in Tier 3 shall submit all of the following information in the water conservation plan, in addition to the information required under sub. (2):

(a) An implementation timeline for implementing the CEMs or documentation of the implementation of the CEMs in s. NR 852.05, as appropriate.

(b) If applicable, the results of an analysis conducted under s. NR 852.09 to determine if a CEM required in Table 2 is cost-effective.

(c) If applicable, the results of an analysis conducted under s. NR 852.10 to determine if a CEM required in Table 2 is environmentally sound and economically feasible.

(d) The results of the analysis to identify additional CEMs as required by s. NR 852.06(1).

(e) An implementation timeline for implementing the CEMs or documentation of the implementation of the CEMs identified in s. NR 852.06(1), as appropriate.

(f) If applicable, the analysis in s. NR 852.06(2).

NR 852.08 Water Conservation and Efficiency Measures. (1) Persons subject to this chapter shall implement CEMs in compliance with the CEM required elements in s. NR 852.04(2) Table 1, s. NR 852.05(1)(a) Table 2, the optional list in sub. (2), or additional CEM required elements as identified by the department.

(2) The department shall maintain a list of optional CEMs by water use sector that have been determined to be adequate and effective to reduce water use or increase water reuse or efficiency. The optional list may be used to meet the requirements in ss. NR 852.05(1)(b) and 852.06(1) and the optional list may include retrofitting options.

NR 852.09 Cost-Effectiveness Analysis. (1) Persons identified in Tier 2 or Tier 3 applying for a new or increased withdrawal not subject to the Compact decision-making standard under s. 281.346(6), Stats., and persons applying for a water loss approval under s. 281.35, Stats., may conduct a cost-effectiveness analysis to determine if a CEM in s. NR 852.05 or 852.06 is cost-effective, considering direct and avoided economic and environmental costs over a 5-year planning period. The cost effectiveness analysis shall at a minimum include all of the following and be reflective of the costs to the withdrawer:

(a) Actual energy and operational costs to pump, treat, transmit water, and treat and dispose of wastewater.

(b) Estimated avoided economic and environmental costs resulting from pumping less water and using less energy.

(c) Estimated capital and operating costs associated with developing new sources of water for this specific new or increased withdrawal.

(d) Estimated capital and operating costs associated with implementing required CEMs.

(e) All other estimated costs or fees associated with obtaining or disposing of the water.

(2) The department may require an independent review of the analysis submitted under sub. (1).

Note: The Compact decision-making standard under s. 281.346 (6), Stats., applies to new or increased withdrawals that will equal at least 10,000,000 gallons per day for any 30 consecutive days, unless the water loss associated with the new or increased withdrawal will average less than 5,000,000 gallons per day in every 90-day period.

NR 852.10 Environmental Soundness and Economic Feasibility Analysis. Persons identified in Tier 2 or Tier 3 applying for a new or increased withdrawal subject to the Compact decision-making standard under s. 281.346(6), Stats., or a diversion, may conduct an analysis to determine if a CEM in s. NR 852.05 or 852.06 is environmentally sound and economically feasible. The analysis shall make a determination as to whether the CEM is all of the following:

(1) Environmentally sound.

(2) Reflective of best practices applicable to the water use sector.

(3) Technically feasible and available.

(4) Economically feasible.

(5) Cost-effective, based on an analysis under s. NR 852.09.

NR 852.11 Approval and Reporting Process. (1) The department's review of an application for a new or increased withdrawal, diversion, or water loss approval shall include a review of the water conservation plan required under s. NR 852.04(1).

(2) The department may not issue an approval for an application for a new or increased withdrawal, diversion, or water loss approval unless the water conservation plan meets the applicable requirements under this chapter.

(3) A water use permit, diversion approval, or water loss approval may include conditions or requirements to ensure the implementation of the water conservation plan. The water conservation plan approval will be in the form of a finding of fact in a permit, or a statement in an approval.

(4) The department shall follow the review timelines set forth in the associated department permit or approval process applicable to an activity that requires compliance with this chapter.

(5) An application for new or increased withdrawal, diversion, or water loss approval shall not be considered complete until information required by this chapter has been submitted and all applicable requirements of the Wisconsin environmental policy act, s. 1.11, Stats., have been met.

(6) Persons with an approved water conservation plan shall report all of the following annually in the manner prescribed by the department:

(a) A summary of the impact of the implemented CEMs, including quantifiable impacts to water use intensity.

(b) A description of any additional CEMs implemented.

(c) For Tier 2, in addition to the information required under pars. (a) and (b), documentation of the implementation of CEMs required under s. NR 852.05, if applicable.

(d) For Tier 3, in addition to the information required under pars. (a) and (b), documentation of the implementation of CEMs required under ss. NR 852.05 and 852.06, if applicable.

NR 852.12 Enforcement. (1) Violations of this chapter may be prosecuted by the department under Chapter 281, Stats., and other applicable department authorities.

(2) Any violation of this chapter shall be treated as a violation of the statutes they interpret or under which they are promulgated.

(3) Violations may result in forfeitures, abatement of nuisance, and restoration.

SECTION 2. EFFECTIVE DATE. This rule 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 3. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

Dated in Madison, Wisconsin, _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____

(SEAL)

Matthew J. Frank, Secretary