

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

**CORRECTED:**

Secretary's Memo, page 7, last line - 11/30/12  
Board Order, page 28, NR 210.205 - 12/03/12

**SUBJECT:**

Request adoption of Board Order WT-23-11, proposed rules affecting Chapters NR 110, NR 205, NR 208 and NR 210 related to bypassing, sanitary sewer overflows, and the operation and maintenance of sewage collection systems and sewage treatment facilities regulated under the WPDES program.

**FOR: December 2012 Board meeting**

**PRESENTER'S NAME AND TITLE:** Susan Sylvester, Director, Bureau of Water Quality/Duane Schuettpelz

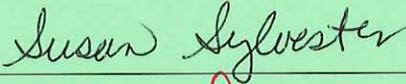
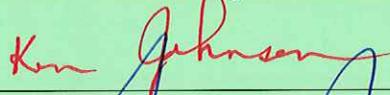
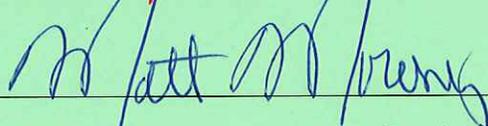
**SUMMARY:**

Sanitary sewer overflows (SSOs) are discharges of untreated sewage from sewage collection systems or untreated or partially treated overflows at sewage treatment facilities. Such discharges may be harmful to human health and the environment and are not compliant with state statutes and the federal Clean Water Act. Although SSOs are not allowed under existing state and federal regulations, they do occur for a variety of reasons. These rule revisions are necessary to establish greater clarity and establish detailed requirements relating to SSOs and the proper operation of sewerage systems to minimize and prevent such discharges. The rules specifically prohibit SSOs, authorize the issuance of permits for satellite collection systems, create protocols for permittee and Department actions when noncompliance occurs, allow approval of the practice of blending at sewage treatment facilities and clarify the application of existing "bypass" rules to all wastewater treatment facilities. The significant additional requirement of these rule revisions is that all sewage collection system owners (including owners of private sewage collection systems) must develop and operate a capacity, management, operation and maintenance (CMOM) program as prescribed by the rules. On-going and routine maintenance and management of sewage collection systems will extend the operational life of such systems and reduce the number of SSO occurrences. An Economic Impact Analysis (moderate impact) has been prepared, public hearings held, and comments received from interested parties and the U.S. Environmental Protection Agency. All parties who provided comments are generally supportive of these rule revisions, but requested modest revisions to the rule to improve implementation. Modifications to the proposed rule revisions have been made in response to comments received.

**RECOMMENDATION:** That the Board adoption of Board Order Board Order WT-23-11.

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

- background memo
- Statement of scope
- Fiscal estimate and economic impact analysis (EIA) form
- Response summary
- Attachments to background memo
- Governor approval of statement of scope
- Environmental assessment or impact statement
- Board order/rule

| Approved by                       | Signature  | Date    |
|-----------------------------------|--|---------|
| Susan Sylvester , Bureau Director |  | 11/5/12 |
| Ken Johnson, Administrator        |  | 11/5/12 |
| Cathy Stepp, Secretary            |  | 11/7/12 |

cc: Board Liaison - AD/8  
Duane Schuettpelz - WQ/3

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

Department rule coordinator - LS/8

DATE: November 2, 2012

TO: All Members of the Natural Resources Board

FROM: Cathy Stepp, Secretary

SUBJECT: Background memo on Board Order WT-23-11 relating to Sewage Collection Systems and Sewage Treatment Facilities Regulated Under the WPDES Program (Chapters NR 110, NR 205, NR 208 and NR 210).

**1. Subject of Proposed Rule:** The rules address the Department's oversight of sewage collection systems in Wisconsin through the WPDES program. The rules emphasize long-term preventative maintenance and management of these systems to reduce or eliminate sanitary sewer overflows (SSOs) and the human health and environmental risks they may present.

**2. Background:** Over the past 4 decades, communities in Wisconsin have engaged in many projects for the construction and improvement of sewage treatment facilities. These facilities have resulted in significant improvements in water quality and have also lessened the public health risks and environmental impacts associated with the discharge of inadequately treated sewage to streams, lakes and groundwater. New sewer construction continues to serve the growing population and businesses in the state.

Nearly all communities in Wisconsin own and operate separate sewage collection systems in which sanitary sewage is collected and transported in pipes separate from the storm water drainage system. Only parts of the City of Superior and parts of the City of Milwaukee and Village of Shorewood (within the Milwaukee Metropolitan Sewerage District) have combined sanitary and storm water collection systems. These rules are directed primarily at the separated sewage collection systems, though the need for appropriate control of discharges from combined sewer systems is also necessary to protect public health and the environment.

Sanitary sewers collect wastewater from homes, commercial establishments and industry and transport the wastewater to treatment facilities. These sewers and appurtenant components such as manholes are normally built below ground, making them susceptible to the intrusion of rainwater and groundwater through cracks and joints or other deficiencies in the structural components. These leaks (usually called infiltration/inflow (I/I)) allow the entry of relatively clean water and may cause the flow in the sewer to increase substantially.

In addition to leakage directly into the collection system sewers, there are other sources of I/I. Building sewers or "laterals" (the connections between individual buildings and the street sewers) are provided to carry sewage from the building plumbing system to the sewers. However, like sanitary sewers, these building sewers may be significant sources of clear water. Cracks, age, type of material and poor construction all may be responsible for creating places that water in the soil can enter the sewer or building sewer. In some instances, roof leaders or downspouts and foundation drains are connected to the building sewer allowing excess water to enter the sewage collection system.

The leakage of rainwater or snowmelt (or a combination of both) into sanitary sewers occurs in all sewage collection systems. Sewers are typically designed with an allowance for groundwater infiltration and other inflow (I/I), in addition to factors such as population served and the number of residential and commercial establishments within the area served. Cracks or other openings in sewer system pipes (including building sewers) and manholes allow precipitation and groundwater to enter the sewage

collection system. During high precipitation events, street flooding can induce very large quantities of I/I into the sanitary sewers.

When a sewage collection system has insufficient capacity to transport the sewage and I/I entering the sewers, the system will relieve itself by releasing the excess flow in one of several ways. Sewage may back up into basements through the building sewer. Basement backups can cause extensive property damage and pose a public health threat. Sewage may also be released to the land surface, surface waters, storm sewers or other drainageways as a sanitary sewer overflow (SSO). These releases may occur from collection system structures such as manholes, gravity overflow structures or pipes or via portable or permanently installed pumps. If excess flow reaches the sewage treatment facility, some treatment units may become flooded and an overflow or "bypass" may occur.

SSOs are also caused by mechanical, structural or electrical problems in the sewerage system. Sewers may become plugged or blocked with debris, grease from food preparation, tree roots or other material. In many instances, these blockages create sewage backups into buildings and sewer cleaning eliminates the actual occurrence of or potential for an overflow. Similarly, collapsed sewers may create an overflow or backup situation. Electrical failures at pump stations do not allow sewage to be pumped downstream in the system and may result in an overflow. SSOs caused by these types of system failures may be preventable with proper operation and maintenance of the system components such as sewer and pump replacement or repair. In some instances, these types of failures may be the result of accidents and cannot be anticipated or prevented. Most lift stations are now required to have a second source of power, but that is not always the case for older systems.

Why should people be concerned about the discharge of sewage from SSOs and/or combined sewer overflows (CSOs)? The discharge of untreated sanitary sewage directly to surface waters creates several adverse water quality impacts, including a risk to human health, effects on fish and other aquatic life, and other aesthetically objectionable conditions. Pollutants include solids, oxygen-demanding materials, toxic substances and nutrients. Bacteria, viruses and other infectious microorganisms in sewage may transmit disease to people who ingest or are otherwise exposed to waters that contain large quantities of these organisms. Untreated sewage can make waters unsafe for swimming and other recreational uses and can contaminate drinking water when supplies are drawn from a nearby surface water. People may also have incidental contact with untreated sewage discharges to surface water or the land surface, thereby creating a significant health hazard. Such discharges can also introduce pollutants to surface waters that deplete dissolved oxygen and add nutrients that cause increased algae and plant growth. Sewage also contains various solid materials that are aesthetically unpleasing. Building backups are a hazard to the health of home and business owners and may impose significant costs for clean-up and replacement of contents.

**3. Why are these rules being proposed?** Existing rules related to SSOs and bypasses within sewage treatment facilities are located in different chapters and sections of the Wisconsin Administrative Code (i.e., NR 110, NR 205, NR 208, and NR 210). The administrative, regulatory and enforcement mechanisms in these different chapters vary depending on their respective statutory authorizations, which can result in inconsistent implementation and application of these requirements. The definition of similar terms differs from rule to rule creating even greater confusion.

Although current state and federal laws and regulations are intended to prohibit the discharge of untreated sanitary sewage and have been adopted to minimize public health risks, the current rules lack clarity and consistency, thereby causing uncertainty in their implementation on the part of the Department, the regulated community and the public. The purpose of these rule additions and amendments is primarily to establish clear and detailed regulatory requirements associated with bypasses and discharges of untreated or partially treated sewage. The rules make clear their application to satellite sewage collection systems (those systems that discharge into another system for treatment). The rules establish provisions unique to sewage discharges and create consistency in the terminology and requirements applicable to publicly

sewage discharges and create consistency in the terminology and requirements applicable to publicly owned treatment works and privately owned facilities collecting and treating primarily sanitary sewage. Most importantly, these rules require that all owners of sewage collection systems (primarily municipalities) create a capacity, management, operation and maintenance (CMOM) program to operate in conjunction with other components of the WPDES program (including the Compliance Maintenance Annual Report) to protect water quality and public health.

The changes will make Wisconsin's rules conform more closely to the U.S. Environmental Protection Agency's (U.S. EPA) interpretation of federal regulations, a long-standing point of concern by that agency. The rules will also address U.S. EPA's concerns regarding existing SSO regulations. In a letter dated July 18, 2011, U.S. EPA identified 75 potential issues with Wisconsin's statutory and regulatory authority for the WPDES permit program. Wisconsin's regulation of SSOs was the first issue identified in that letter. The Department believes these rule changes will address U.S. EPA's concerns (see further discussion in the Response Summary).

The purpose of the CMOM program is to assure sewage collection system owners proactively maintain this important community infrastructure. Sewage collection systems are an important and expensive municipal asset. It is important these systems be constructed, operated and proactively maintained to assure that this important infrastructure investment does not deteriorate. While the rules require that WPDES permits issued by the Department prohibit the discharge of untreated or partially treated sewage, they also recognize and require "common sense" activities that permittees should use to protect the large monetary investment they have in their sewage collection systems. The CMOM program is a proactive approach to assuring the long term integrity of these systems, rather than having this provision incorporated into an enforcement action after a SSO violation has occurred. Inclusion of this requirement in permits creates a "level playing field" for all system owners in the state and delineates actions needed for proper operation and maintenance of a sewage collection system.

There is no specific Wisconsin rule relating to combined sewer systems. The Clean Water Act requires these systems to be regulated to conform to the U.S. EPA 1994 Combined Sewer Overflow Control Policy. Because there are a small number of such systems in Wisconsin, these rules establish that specific requirements corresponding to the U.S. EPA policy be applied on a case-by-case basis in the respective WPDES permits to the aforementioned systems. In addition, the CMOM provisions and several other reporting requirements contained in the rule will apply to the combined sewer systems.

The rules establish a provision whereby the Department may approve an operational practice called "blending" when wastewater entering the sewage treatment facility is larger than its design capacity. This practice, which allows a treatment facility to reroute part of the flow around the biological treatment process, is not specifically addressed in current state or federal regulation. Under the rules, if the Department determines a sewage treatment facility would suffer severe property damage if blending were not approved and there are no feasible alternatives to approval of blending, this practice could be approved as a condition of a permit. Restrictions on allowing this practice include implementing the rerouting only during times of excessive flow, maintaining compliance with permit effluent limitations, satisfactory implementation of the CMOM program, and a demonstration that there are no feasible alternatives.

A provision that would apply to all wastewater treatment facilities, including both sewage treatment and industrial wastewater treatment facilities, is included in these rules when treatment units at the facility must be bypassed for essential maintenance to assure effective operation. This action is defined as a controlled diversion and current rules are unclear as to what requirements apply in these circumstances. The rules establish the conditions that a permittee must meet when controlled diversions are needed for essential maintenance to assure efficient operation of the treatment facility.

Lastly, the rules create a provision under which the Department may incorporate a requirement in a WPDES permit that a sewage collection system owner undertake an evaluation of the system whenever existing facilities plans do not fully address collection system issues. Specific conditions, primarily related to permit violations, are established which would cause the Department to determine such an evaluation was needed. The System Evaluation and Capacity Assurance Plan (SECAP) that may be required is essentially an investigation of the system to determine causes of the permit violations and development of a plan to address the causative factors.

**4. Summary of the Rules:** Several terms and definitions are created or amended in all the rule chapters under this order to assure clarity and to make them consistent with the usage of terms across all the chapters. Additionally, the most significant modifications to the specific rule chapters are as follows:

NR 110, Sewerage Systems – This chapter contains design standards and requirements applicable to sewerage systems.

- The so-called “sewer ban” provisions that are associated with SSOs are repealed. The Department believes restrictions on sewer extensions may be more effective when incorporated into formal enforcement actions, where appropriate. Other conditions under which a “sewer ban” may be imposed are clarified and essentially unchanged.
- Standards are established for the content and conduct of a SECAP which maybe required under Chapter NR 210. It is noted that SECAP requirements cannot duplicate facilities planning work previously done or underway.
- Design requirements are established for SSO structures and sewage treatment facility overflow structures.

NR 205, General Provisions – Chapter NR 205 contains WPDES program definitions, general conditions applicable to WPDES permits and requirements for the issuance of WPDES general permits.

- Non-compliance reporting requirements are modified to more clearly establish reporting requirements for SSOs and sewage treatment facility overflows.
- The section on bypassing (discharging wastewater without complete treatment) is revised to assure the provisions are inclusive for all permittees. Additionally, the provisions relating to bypassing are modified to establish specific conditions for blending at sewage treatment facilities and controlled diversions at all wastewater treatment facilities, including industrial dischargers. Bypasses not specifically noted are prohibited, but may be approved three specific conditions in the rule are met. Provisions relating to scheduled bypassing are clarified.
- Reporting requirements when there is permit noncompliance are clarified, as are procedures for reporting certain bypass events.

NR 208, Compliance Maintenance – Chapter NR 208 contains requirements for preparing and submitting compliance maintenance annual reports and requires sewerage system owners to take necessary actions to prevent non-compliance with permit requirements in the future.

- Point assignments for discrete SSO occurrences are removed from the rule. Permittees and owners of sewage collection systems who report overflows are required to provide a response on actions taken to reduce or eliminate such occurrences in the future.

NR 210, Sewage Treatment Works – This chapter contains the WPDES requirements for publicly owned treatment works (sewerage systems) and privately owned treatment works that treat primarily domestic sewage and wastewater from commercial establishments. The current rule contains only effluent limitations and monitoring and reporting requirements for sewage treatment facilities.

- Specific authority is included for the issuance of WPDES permits for satellite collection systems (the Department has been issuing permits to such systems since 1989).
- A specific requirement is established for combined sewer systems whereby such systems must conform to the terms and conditions in the WPDES permit. The Department intends to issue such permits consistent with U.S. EPA's CSO policy contained in the Clean Water Act.
- Specific provisions are established to prohibit SSOs and sewage treatment facility overflows. Permittee response actions and reporting and notification requirements are established.
- A list of factors is established which will guide the Department in making a determination of compliance with the prohibition on overflows. The specific enforcement action in response to an overflow is left to the discretion of the Department based upon a case-by-case evaluation of the information available.
- The rule creates specific provisions relating to building backups. Discrete or individual building backups are exempted from the rule requirements. However, recurring building backups caused by constraints in the downstream sewage collection system may be cause for the Department to establish permit terms and conditions to eliminate or reduce building backups through reduction or removal of I/I or other factors causing the backups.
- The rule creates a requirement that all sewage collection system permittees establish a CMOM program to reduce or prevent the likelihood of SSOs and to ensure the long-term viability of sewage collection systems. Specific components that must be included in the CMOM program are established.
- The rule revises the restrictions on bypasses and establishes terms and conditions under which the Department may approve, through the permit issuance process, the practice of blending (diverting sewage around biological treatment units). The rule includes conditions that apply during controlled diversions at sewage treatment facilities.
- A list of conditions is created under which the Department may require, in a WPDES permit, a permittee to conduct an evaluation or plan for correction of deficiencies in the sewage collection system (SECAP). A provision that allows an approved facilities plan or a facilities plan in preparation to substitute for this requirement is included to eliminate potential redundancy.

**5. How does this rule affect existing policy?** As noted, these rule changes will establish significantly greater consistency and clarity in permitting and compliance actions relating to SSOs. Although existing rules contain prohibitions on releases of sewage without treatment, the new and amended rules will allow permittees to know what the state's expectations are with respect to the operation of their sewage collection systems. Under existing rules, instances of non-compliance may be addressed through enforcement differently from time-to-time and place-to-place.

The rules clarify the restrictions on bypasses and will allow the Department to approve "blending", a practice not recognized in existing rules. The requirement to establish a CMOM program is new in Wisconsin regulations. It should be pointed out, however, that many, if not most, municipalities have in

place preventative maintenance practices that essentially meet the principles of the CMOM program. The Department has been actively promoting such a program among the regulated community for the past few years, and it has received considerable support.

Whenever a SSO occurs, the sewage collection system owner must, under existing rules (and federal regulation) report the incident to the Department. The rule revisions establish, with greater clarity, what information must be submitted and also contain provisions to notify the public and public health officials.

Under the current Chapter NR 208 rule, the number of SSO events is counted and grades determined based on that information. Because each SSO occurrence is assigned points regardless of sewage collection system size, the larger systems are disadvantaged in the grading process. To remove the unfairness of the current rule, no points are assigned to individual SSO occurrences, and permittees will be required only to report actions they took or are taking to address SSO events during the year and in succeeding years.

**6. Has the Board dealt with these issues before?** A WDNR Report to the Natural Resources Board<sup>1</sup> in 2001, noted that SSOs were a cause for concern. The report contained recommendations for action, including improved tracking and reporting systems, development of improved rules, more aggressive enforcement responses, and outreach to permittees to assure greater attention is devoted to sewage collection systems. Additionally, there were several recommendations relating specifically to the Milwaukee Metropolitan Sewerage District (MMSD) and the satellite communities within the MMSD service area. Most of these latter recommendations have been implemented through MMSD facilities planning activities and enforcement actions for overflows in 2008. The Natural Resources Board in 2001 endorsed the actions in the report, including the rule-making recommendations.

**7. Who will be impacted by the Rules? How?** WPDES permittees that own and operate sewage collection systems and/or sewage treatment facilities will be affected by these rule changes. Such permittees are primarily municipalities, including those who own only a sewage collection system (satellite sewage collection system) and discharge sewage into another system for treatment. There are also a small number of private sewage collection systems in the state that will be affected by the rules. The improvements in clarity of applicable requirements for reporting permit noncompliance and during controlled diversions will affect all permit holders.

Many of the provisions of these rules are already being implemented through existing permit terms and conditions. In some instances, permit requirements have been developed in response to U.S. EPA directives to assure conformance to federal regulations and policy. Permittees report SSO events, and the Department has initiated enforcement against many municipalities under the terms of existing rules or permit conditions. The rules will, however, establish greater certainty, clarity and consistency on matters relating to compliance with prohibitions on the release of untreated or partially treated sewage. Creating a special set of requirements related to the practice of "blending" will allow the Department to approve certain facilities who qualify under the rule to implement this practice and still protect water quality. It will relieve these systems from the potential compliance uncertainty that currently exists when this practice is implemented.

As noted, the creation of a requirement to implement CMOM programs is the most significant new item in these rules. Although many municipalities have programs in place to manage, operate and maintain their sewage collections systems, there are some whose programs are deficient. Establishing a set of consistent requirements will assure that this important and expensive part of community infrastructure will serve the residents far into the future. Proactive implementation of CMOM program activities will

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<sup>1</sup> Wisconsin Dept. of Natural Resources. "Sewer Overflows in Wisconsin-A Report to the Natural Resources Board", March 15, 2001.

mitigate the potentially more costly effects of sewage collection system failures later. Therefore, the up-front costs associated with creating a CMOM program that conforms to the rules, will usually be offset through long-term savings as the program is implemented. Significant flexibility is provided in the rule language to allow different size collection system owners to tailor the CMOM to correspond to their individual needs.

**8. Soliciting public input on the economic impact synopsis:** A draft economic impact analysis was prepared following preparation of the draft rule. This analysis was announced for public comment to all interested parties and a public meeting on the EIA was held on April 6, 2012. Minor changes were made to the draft economic impact analysis, but no information was provided that disagreed with the conclusion that the primary economic effect of the rule are costs associated with the development of CMOM programs by each system owner. Costs associated with implementation of preventative maintenance activities, in general, and the CMOM program, in particular, are implicit under existing state rules and federal regulations.

**9. Environmental Analysis:** The Department has made a determination that these rule revisions are a Type III action under Chapter NR 150, Wis. Adm. Code, and no environmental analysis is required.

**10. Small Business Analysis:** Implementation of these rules will primarily occur through actions of municipal sewage collection system owners. Costs for sewage collection system operation, maintenance and improvements are normally assessed to all users of the system. Small businesses may experience increases in user fees associated with enhanced collection system operation and maintenance activities by municipalities or other local taxing authorities. Such costs are determined at the local level. In some instances, it may be determined that excessive I/I originates from a building sewer. If the building sewer from a small business is identified as a source of excessive I/I, the municipality may require rehabilitation of the building sewer by the property owner. It is difficult to determine the statewide or individual effect on small business owners due to the variability in requirements that may occur in each municipality and the unknown number of deficient building sewers. There are no existing or new monitoring and reporting requirements in these rules for small businesses discharging to municipal sewage collection systems.

In the case of private ownership of a sewerage system (e.g., a mobile home park), some of which are small businesses, these rule revisions do not substantially change the compliance and reporting requirements for SSO events. The increased clarity created by the proposed rules should be beneficial to all sewage collection system owners. Existing permits require such reporting and prohibit SSO discharges and permit noncompliance may result in an enforcement response by the Department. In such cases, now, and in the future, the private system owner is responsible for the replacement or repair of sewerage system components that may be causing or contributing to SSOs. The number of these cases is likely to be very limited because of the small number of private system permittees. Each of these private system owners will be responsible for developing a CMOM program for the sewage collection system. Because these systems are relatively small, development of the CMOM should be minimal and not exceed a few hundred to a few thousand dollars. CORRECTED

**RESPONSE SUMMARY  
NATURAL RESOURCES BOARD ORDER WT-23-11**

The Department published notice of public hearings on proposed revisions to NR 110, NR 205, NR 208, and NR 210 on July 1, 2012 in the Administrative Register. The public comment period was open through July 31, 2012. Public hearings were held at Oshkosh (July 16, 2012), Eau Claire (July 17, 2012) and Milwaukee (July 18, 2012). There were 2 non-Department attendees at each of the Oshkosh and Eau Claire hearings and 12 non-Department attendees at the Milwaukee hearing.

Four attendees at the hearings provided verbal comment, all in support of the proposed rule. Specific support was given to the inclusion of the blending provisions, the treatment in the rule to building backups, the requirement to develop capacity, management, operation and maintenance (CMOM) programs and the flexibility in the rules.

Seven written comments were received on the rule proposal. The entities providing comment were:

- City of Brookfield
- City of Superior
- Milwaukee Metropolitan Sewerage District (MMSD)
- Milwaukee Riverkeeper
- Municipal Environmental Group (MEG)
- Villages of Elm Grove and Thiensville (joint letter)
- U.S. Environmental Protection Agency (Region 5)

Comments from the first six entities are summarized immediately below; U.S. EPA comments follow.

**SUMMARY OF PUBLIC COMMENTS**

Comment: Several entities objected to the proposal that would require “public notice” of sanitary sewer overflows (SSOs) in a local newspaper due to cost and inability to assure that the notice is published in a timely manner.

Response: The Department agrees with this objection because of cost and, also, such formal public notices are not published very timely; modification to the rule requires formal notification of local news media, including local newspapers.

Comment: Several entities objected to the scoring and grading system for the compliance maintenance annual report (CMAR) because it does not account for variations in municipality size, the reason the SSO occurred, the volume of the SSO and the negative public perception a “failing grade” may produce even though the number of SSO occurrences were small relative to system size. One person proposed a relatively complex formula that attempts to account for the various factors. Milwaukee Riverkeeper indicated that any SSO is prohibited and the system owner should, thus, receive a failing grade.

Response: The final rule eliminates the assignment of points in a CMAR for discrete SSO occurrences, but requires the permittee to provide a response indicating actions taken or underway to address any reported SSOs. Regardless of the CMAR reporting requirements, all SSO occurrences are prohibited and potentially subject to enforcement action by the Department.

Comment: The City of Superior provided comments and recommendations regarding how the several “combined sewage treatment facilities” operated by the City would be regulated. Portions of the City’s sewage collection system are served by combined sewers and the City is concerned that overflows from that part of the system not be reported as SSOs.

Response: The Department agrees and has made changes to assure that these systems (only Superior has them) are not regulated as SSOs, but rather are included under the combined sewer system requirements of the rule (e.g., follow U.S. EPA CSO policy).

Comment: MMSD, MEG and the Village of Elm Grove and Thiensville comments specifically support “blending” and the CMOM provisions.

Response: See response to U.S. EPA comments.

Comment: MMSD noted concern about how facilities planning and the system evaluation and capacity assurance plan requirements inter-relate and whether approval of one is subject to the need for the other; also, expressed concern about the relationship between a facilities plan and the requirement to provide a “feasible alternatives” analysis under the prohibition provisions of the rule.

Response: The Department agrees that clarifications are needed to eliminate potential redundancies. Additional language has been added to appropriate places in the rule to assure that facilities plans and other requirements in the rule do not create unnecessary duplication of effort.

Comment: MMSD, MEG, Milwaukee Riverkeeper and the Village of Elm Grove and Thiensville comments specifically support the CMOM provisions, though MEG indicated that implementation of CMOM will be expensive and that development of CMOM for some (especially satellites) may require significant expenditures.

Response: No changes made to the CMOM requirements of the rule.

Comment: MEG noted concern about a potential default assumption that a “narrow 2% median income” analysis will be used to define what is or is not feasible and requests further clarification of the note that feasible alternatives include the overall costs and benefits of alternatives.

Response: The Department agrees that the noted default assumption will not be applied when determining whether an activity is or is not feasible. Such determinations will be made on a case-by-case basis as now happens in facilities planning.

Comment: MEG supports the provision that building backups are not SSOs.

Response: No changes made to the rule.

## **SUMMARY OF U.S. EPA COMMENTS**

Comment: Revisions to the NPDES program delegation will need to be approved once the rules are adopted.

Response: The Department agrees and will submit the rules to U.S. EPA once the rules are published.

Comment: Objects to the changes in s. NR 205.07 (1) (u) that allow “bypasses” for blending and conflicts with federal regulations; notes that the Department cannot “authorize” blending in a permit, but may “approve” blending subject to specific requirements. When controlled diversions are necessary, U.S. EPA suggests that can be done “only for essential maintenance to assure efficient operation”.

Response: Blending, as a form of bypass, at sewage treatment facilities will be regulated under the specific provisions of NR 210.12. Changes are made to the language of this section of the rule wherein the Department “approves” blending subject to findings on a case-by-case basis that correspond to the conditions contained under the federal bypass regulations. Changes are made to the rule sections on controlled diversions to allow this activity “only for essential maintenance to assure efficient operation”.

Comment: Objects to the blending provisions in s. NR 210.12 because the entirety of flow does not go through a full “secondary treatment process” and, therefore, does not meet all the conditions that would apply to bypassing.

Response: Secondary treatment is defined by specific numerical effluent limitations, not by passage of wastewater through specific treatment processes or units. With the modifications in the rule language, approval to practice blending at specific sewage treatment facilities will conform to decisions allowed under the federal bypass regulation. See response to previous U.S. EPA comment.

Comment: – Objects to the language in s. NR 210.21 (1) as it relates to the bypass provisions of NR 205.07 (1) (u) and the federal bypass regulation; indicates that there must be an unconditional prohibition on SSOs, subject to enforcement discretion.

Response: The Department agrees with some of the editorial suggestions made, and will remove the reference in s. NR 210.21 (1) to the noted provision in NR 205. To assure that appropriate enforcement discretion is exercised in determining compliance, the Department believes it fair to incorporate into the rule factors of primary importance to be used in the enforcement process. This will address U.S. EPA’s concerns and should help achieve greater clarity and consistency sought by permittees.

*The following “additional comments” are provided by U.S. EPA, but are characterized as recommendations:*

Comment: The Department should include additional provisions related to enforcement discretion in guidance.

Response: Significant guidance on SSO enforcement already exists, but may need review once rules are revised.

Comment: Suggests additional elements for CMOM programs.

Response: The Department believes the current language in the rule, along with other resources available to permittees, is sufficient and provides the flexibility for the variety of system sizes and complexities.

Comment: Suggests that there be more timely reporting of basement backups, instead of the annual reports under CMAR.

Response: The Department believes this is excessive reporting and the agency is unprepared to receive the potential volume of information.

Comment: Reserves comment on provision in NR 210.13 that allows controlled diversions around final effluent filters.

Response: This provision has been removed from the rule and any diversions around final filters will be subject to review by Department staff under appropriate rules.

### **LEGISLATIVE COUNCIL RULES CLEARINGHOUSE (LCRC) COMMENTS**

LCRC provided comments on the draft rule on June 12, 2012. Most comments were recommendations that improve or correct the clarity, grammar and form and have been incorporated into the final rules. A few comments were misunderstandings of technical matters and changes to the rule language were not made as recommended. Specifically, changes were not made in response to comments 2.o., 2.p., 2.r., 2.t., and 5.a.

**ADMINISTRATIVE RULES  
FISCAL ESTIMATE AND  
ECONOMIC IMPACT ANALYSIS**

Type of Estimate and Analysis

Original    Updated    Corrected

November 2, 2012

Administrative Rule Chapter, Title and Number

NR 110, Sewerage Syst.; NR 205, Gen'l Prov.; NR 208, Compl.Maint.; NR 210, Sewage Trtmt. Works

Subject

Revision and creation of rules on the operation and maintenance of sewage collection systems

Fund Sources Affected

Chapter 20, Stats. Appropriations Affected

GPR    FED    PRO    PRS    SEG SEG-S

Fiscal Effect of Implementing the Rule

No Fiscal Effect  
 Indeterminate

Increase Existing Revenues  
 Decrease Existing Revenues

Increase Costs  
 Could Absorb Within Agency's Budget  
 Decrease Costs

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

State's Economy

Specific Businesses/Sectors

Local Government Units

Public Utility Rate Payers

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

Yes    No

Policy Problem Addressed by the Rule

SEE ATTACHMENT -- PART I

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

SEE ATTACHMENT -- PART II

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

SEE ATTACHMENT -- PART III

Long Range Implications of Implementing the Rule

SEE ATTACHMENT -- PART IV

Compare With Approaches Being Used by Federal Government

SEE ATTACHMENT -- PART V

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

SEE ATTACHMENT -- PART VI

Name and Phone Number of Contact Person

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**ATTACHMENT TO ADMINISTRATIVE RULES  
FISCAL ESTIMATE AND  
ECONOMIC IMPACT ANALYSIS**

NR 110, Sewerage Syst.; NR 205, Gen'l Prov.; NR 208, Compl.Maint.; NR 210, Sewage Trtmt. Works  
Revision and Creation of Rules on the  
Operation and Maintenance of Sewage Collection Systems

**PART I**

Policy Problem Addressed by the Rule

The discharge of untreated sanitary sewage directly to surface waters creates several adverse water quality impacts, including a risk to human health, effects on fish and other aquatic life, and other aesthetically objectionable conditions. Pollutants in sanitary sewer overflows (SSOs) include solids, oxygen-demanding materials, toxic substances and nutrients. Bacteria, viruses and other microorganisms in sewage may transmit disease to people who ingest or are otherwise exposed to waters that contain large quantities of these organisms. Discharges of untreated sewage make waters unsafe for swimming and other recreational uses, contaminate drinking water when supplies are drawn from nearby surface waters and introduce pollutants to surface waters that deplete dissolved oxygen and add nutrients that cause increased algae and plant growth. Sewage also contains various solid materials that are aesthetically displeasing. Building backups, while not defined as SSOs, are a hazard to the health of home and business owners and may impose significant costs for clean-up and replacement of personal property.

The number of SSO events in a given year is significantly dependent on rainfall and other climatic conditions during that year. For example, in 2008, a year that experienced several large and severe precipitation events, the total reported SSO volume discharged in the state was 1,181 million gallons. By contrast, in 2009, a relatively low precipitation year, there were only 82 million gallons discharged from SSOs. During 2010, the total SSO discharge volume was 364 million gallons. The total number of SSO events reported in 2008 was 574, in 2009 167 events were reported and in 2010 there were 398 events.

The purpose of these rule additions and amendments is primarily to establish clear and unambiguous regulatory requirements associated with discharges of untreated or partially treated sewage. The revisions will make Wisconsin's rules conform more closely to the U.S. Environmental Protection Agency's (U.S. EPA) interpretation of federal regulations, a long-standing point of concern by that agency. The rule revisions were developed with the assistance and advice of an advisory committee of interested parties, including local government representatives, environmental interest groups, U.S. EPA, and others. A draft of this analysis was made publicly available and written and oral comments received. There were no requests received for additional coordination by local governments.

The rules establish provisions unique to sewage discharges and create consistency in the terminology and requirements applicable to publicly owned treatment works and privately owned facilities collecting and treating primarily sanitary sewage. The rules will allow sewage treatment facilities to employ efficient treatment practices when experiencing high wastewater flow, and most importantly, these rules require all owners of sewage collection systems (primarily municipalities) to create a capacity, management, operation and maintenance (CMOM) program which will assure those owners proactively maintain this important community infrastructure.

**PART II**

Summary of Rule's Economic and Fiscal Impact

Sewage collection system owners have a fiduciary responsibility to the citizens of their community to operate, maintain, repair, replace or otherwise manage these systems in the best interest of the community. Furthermore, robust and well-maintained sewage collections systems (and other infrastructure) are beneficial to the economic health of communities and attractive to new and existing businesses. Therefore, irrespective of these rule changes, sewage collection system owners will in the

course of normal proper operations undertake actions to protect community infrastructure, prevent illegal SSOs or other system failures, eliminate building backups and minimize risks to human health and the environment. That being the case, any costs associated with the on-going operation and maintenance of a sewage collection system cannot be directly and solely attributed to these rule revisions. It is well-documented that the long-term benefits of maintaining public infrastructure significantly outweigh the short-term costs associated with those maintenance activities. Reducing the entry of infiltration and inflow of precipitation and runoff into sewage collection systems through implementation of a CMOM program will be less costly than responding to unplanned emergencies. Furthermore, the resulting reductions in wastewater volume means that ratepayers (including businesses) will not have to pay the increased costs for additional sewerage system capacity to deal with the excessive flow from leaking sewage collection systems.

Under current state and federal statutes and rules, SSOs are not permitted, with certain specific exceptions, and subject to enforcement action by the state or federal government. These enforcement actions usually are intended to require the offending permittee to fix any sewage collection system deficiencies that lead to the non-compliance. In some instances, monetary forfeitures may also apply, depending on the specific circumstances and the response to and outcome of the enforcement action. Establishing and implementing a CMOM program will reduce actual or potential SSO discharges and permit violations, thereby reducing the number of enforcement actions necessary. The existence of a CMOM program can significantly change the nature of the Department's enforcement response and reduce the short-term enforcement-related fiscal implications (e.g., monetary forfeitures), provided permittees are implementing activities to reduce or minimize the entry of excessive flow into their sewage collection systems as described in the CMOM program.

Building backups and damages caused to private property by such incidents and that may be caused by deficiencies in the sewage collection system create potential financial liability issues for the system owner. Implementing actions required by the rule will serve to reduce the number of building backups and any subsequent emergency activities for which the permittee may be responsible.

Therefore, the principal "new" cost associated with implementation of these rules is the requirement that all owners of sewage collection systems develop or create a CMOM program. These are primarily municipalities, but also include a small number of private sewage collection systems. Under the rule, creating a CMOM program requires the preparation of all documents and plans necessary to implement activities for the proper operation and maintenance of the sewage collection system. Many system owners already have in place preventative maintenance practices that essentially meet the principles of the CMOM program requirements established in the rules. The Department, U.S. EPA and other organizations have been actively promoting such a program among the regulated community for the past several years and the CMOM concept has received considerable support from system owners.

Many small communities, including those serving populations less than 10,000 to 15,000 and most satellite sewage collection systems, likely do not have the full capacity to develop a CMOM program without assistance, training and/or guidance from consulting professionals. The larger regional sewerage system owners should be able to provide assistance to the owners of connected satellite sewage collection systems, thereby reducing potential costs for CMOM preparation for those smaller satellite systems. Consultants and other businesses involved in sewage collection system work will realize monetary benefits from the services they provide assisting owners with CMOM development.

Statewide costs to develop CMOM programs for all sewage collection system owners is difficult to predict due to the variability in size of systems and the status of each individual community's current operation and maintenance program. In some instances, a permittee may have to start from scratch to develop a program in conformance with the rule's requirements. In other cases, permittees may simply have to "tweak" existing documentation to comply with the rule. In still others, CMOM programs are already in place (e.g., sewage collection systems owned and operated by municipalities within the

Milwaukee Metropolitan Sewerage District (MMSD), have developed CMOM programs under a court-established stipulation in 2005).

In a small informal survey of Wisconsin systems, it was reported that 11 of 18 respondents had a CMOM program in place.<sup>1</sup> Although the rules require that all sewage collection system owners develop a CMOM program, the rules allow 3 years for developing the program and provide opportunities for flexibility such that individual communities can tailor the CMOM to their unique circumstances.

Based on information available, the estimated cost to develop a CMOM program for a small community that has minimal documentation of its preventative maintenance activities and has the ability to develop the program in-house could be as low as \$1,000. More likely, costs will range upward of \$5,000. If a consultant is involved to provide training or was contracted to actually prepare the CMOM documentation, the costs would be in the range of \$10,000 to \$15,000. CMOM program development for medium-sized communities is estimated to cost in the range of \$15,000 to \$20,000. Larger systems might expect costs proportionately greater. It should be noted that these costs are estimates only and should not be used for budgeting purposes. Careful, individual assessments of needs are important considerations in determining what the actual costs will be in each case.

Once the CMOM program is created, the permittee will likely have to collect and analyze sewage collection system data and undertake construction or other rehabilitation projects to implement the program. Irrespective of a CMOM program, these activities could be very costly, but are a necessary component to the effective and efficient management and proper operation of a sewage collection system and those costs cannot be directly attributed to the enactment of these rules. The City of Hayward recently developed a CMOM program and reported on its success as follows:

*She [Diana Lewis, administrative assistant and lead operator] considers the time spent developing and sustaining the program well worthwhile. "This way, everything is very organized and put together," she says. "All the information is there in case there are questions from anyone who is new. It's good to keep a complete asset inventory so you know what you have. It's an easy way to have your maintenance schedule ready to go, so you can see where you're at and take a proactive approach, rather than wait until something breaks."*

*McCue [public works director] adds, "I think it's having a great impact on our performance. It's making sure we get out there and check everything regularly. If you have an issue with a certain party, say for example a sewer backup, you have the maintenance report to fall back on and say, 'yes, we did maintain that line – it was cleaned on this day.' It helps with your liability to have that kind of information.*

*"It's also helpful in case of an emergency like an overflow, to be able to go quickly to the GIS map, and pull up a manhole and say 'There it is. Here's the next one, the flow is in this direction, here's the pipe size.' With that information we can make sure we've got the right tools for the job before we get there.*

*"It's a lot easier to take care of everything when you have a plan and the information is all in one place."<sup>2</sup>*

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<sup>1</sup> Langhans, John, MSA Professional Services. "Collection System Cost Survey Results", presented at Northwoods Collection System Seminar-2011., Marshfield, WI, July 28, 2011

<sup>2</sup> Rulseh, Ted J., "Playing in the Big Leagues". Municipal Sewer and Water Magazine, COLE Publishing, Inc., 1720 Maple Lake Dam Rd., PO Box 220, Three Lakes, WI 54562-0220. July 2011

Because existing rules and permits contain reporting requirements similar to those specified in this rule, there should be no or minimal additional cost associated with this activity. Under existing rules, if a system owner, under the Compliance Maintenance Annual Reporting (NR 208) rule, identifies more than 4 SSO events (as defined in the rule) in any given year, a “failing grade” for this section of the report will be noted in the reporting system. Some owners have objected to this scoring criterion because it does not account for variations in community size, the reason the SSO occurred, and the volume of the SSO discharge. Furthermore, there is concern that adverse publicity and potential lawsuits by third parties could result in significant costs, even though the sewage collection system is operating within all design parameters. The final rule eliminates the scoring for discrete SSO events, but does require sewage collection system owners to provide a response indicating actions taken or underway to address any reported SSOs.

Businesses may experience indirect costs associated with collection system improvements by municipalities through their user fees and other local taxing authorities for sewage collection system maintenance and improvements. It is difficult to determine the statewide or individual system effect of small business due to the variability in requirements that may occur in each municipality.

The effect of this rule on businesses will primarily be indirectly through the actions of municipal sewage collection system owners. Costs for sewage collection system maintenance and improvements are normally assessed to all users of the system, including businesses, residential users and commercial entities. Such costs are determined at the local level. In some instances, it may be determined that excessive quantities of infiltration and inflow originate from a building sewer on private property. If the building sewer is identified as a source of excessive uncontaminated flow, the municipality may require rehabilitation or replacement of the building sewer by the property owner. Bringing privately-owned infrastructure into compliance with plumbing codes, disconnecting foundation drains or repairing leaks in building sewers could cost from \$5,000 to \$20,000 for small commercial buildings, but would be larger for larger buildings.

In the case of private ownership of a sewerage system (e.g., a mobile home park) identified as a source of SSO, replacement or repair of sewerage system components will continue to be the responsibility of the owner. The number of these cases is likely to be very limited because of the small number of private system permittees. The rule does not specifically mandate that improvements be made to sewage collection systems. However, if SSOs continue and permittee does not take action to resolve the noncompliance, the Department could incorporate specific requirements in a permit or enforcement action could be pursued.

The City of Superior noted that significant costs could be imposed on their city under one interpretation of the rule presented for public comment. In response, modifications have been made in the final rule to assure the combined sewer system requirements of the rule apply to the City of Superior’s combined sewage treatment facilities.

The additional costs to the Department resulting from these rule revisions will be minimal. Minor revisions to permit documents will be necessary and can be easily incorporated into the permit data management system. The rules do not require specific, routine review and approval of CMOM documents, but staff will, if necessary, review CMOM program activities as part of ongoing evaluations of permit compliance. Although considerable effort has already been devoted to training on CMOM program development through grant monies provided by U.S. EPA, some additional training of municipal officials and consultants will likely be needed. Because the rules create greater clarity and consistency in what is required, the Department should find it less time consuming and less controversial when making determinations of compliance or noncompliance with permit conditions prohibiting SSOs, thereby reducing the staff time necessary in analyzing events associated with noncompliance.

### **PART III**

#### **Benefits of Implementing the Rule and Alternatives to Implementing the Rule**

An initial benefit of these rule revisions is to establish clear and consistent regulatory requirements associated with discharges of untreated or partially treated sewage. Although current state and federal laws and regulations are intended to prohibit the discharge of sanitary sewage without treatment and have been adopted to minimize public health risks, the current rules lack clarity and consistency, thereby causing uncertainty in their implementation on the part of the Department, the regulated community and U.S. EPA. The rules establish provisions unique to sewage discharges and create consistency in the terminology and requirements applicable to publicly owned treatment works and privately owned facilities collecting and treating primarily sanitary sewage.

Most importantly, these rules require that all permittees have a CMOM program in place within 3 years of rule promulgation. The purpose of the CMOM program is to assure sewage collection system owners proactively maintain this important community infrastructure. Sewage collection systems are an important and expensive municipal asset. It is important these systems be constructed, operated and proactively maintained to assure that this essential infrastructure investment does not deteriorate. While the rules require that WPDES permits issued by the Department prohibit the discharge of untreated or partially treated sewage, they also recognize and require "common sense" activities that permittees should use to protect the large monetary investment they have in their sewage collection systems and will reduce both costs and emissions from reductions in energy usage for pumps, chemical purchases and wear and tear on equipment. The CMOM program is a proactive approach to assuring the long term integrity of these systems rather than having this provision incorporated into an enforcement action after a permit violation. This requirement will create a level playing field for all sewage collection system owners in the state.

The Department believes that well-maintained and operated sewage collection and treatment systems are important to both the short-term and long-term economic viability and competitive attractiveness of the state and its many local communities. Stabilization of property values and increases in the desirability of neighborhoods will also be realized when CMOM program implementation reduces the risk of basement backups. Over time, permittees will realize cost savings in the operation and maintenance of their sewerage systems.

The rule also establishes a provision whereby the Department may approve an operational practice called "blending" when wastewater volume entering the sewage treatment facility is greater than the design capacity of the facility. This practice, which allows a treatment facility to, subject to specific regulatory restrictions, reroute part of the flow around the biological treatment process, is not currently addressed in either state or federal regulation. This will save permittees costs associated with construction of additional treatment capacity to account for these infrequent high wastewater flows.

Lastly, these rules will allow the Department to more fairly and judiciously apply enforcement discretion for non-compliance with statutory requirements restricting the discharge of untreated sewage to surface waters. The Department will be able to more deliberately take enforcement action for violations of the SSO prohibition and take into account the individual circumstances associated with each event. While it will be necessary to force action in some instances through aggressive enforcement responses, the intent of these rules will improve the overall management of our sewerage system infrastructure. The rules will allow sewage collection system owners to direct their limited resources toward prevention, rather than responding to emergencies or enforcement actions.

Two alternatives to promulgation of these rule revisions are to retain the current rule language or remove all language in current rules dealing with the subject of untreated sanitary sewer overflows. As noted, the uncertainty and ambiguity of the current rules is unacceptable. The regulated community has expressly asked the Department to modify the rules from the current situation. Deleting the requirement to prohibit sanitary sewer overflows would be unacceptable to U.S. EPA and would not conform to the requirements

of the Clean Water Act. The Department does not believe eliminating control over the discharge of untreated sewage is in the public interest.

#### **PART IV**

##### Long Range Implications of Implementing the Rule

One of the most significant implications of implementing the provisions of this rule is the long range benefit sewage collection system owners will experience. Sewage collection systems are very important components of any community's infrastructure and assets. Failure to properly manage, operate and maintain these systems will lead to premature deterioration of the pipes and other parts of the system creating the need for expensive and extensive repair and replacement. The rules are intended to promote the development and use of tools that sewage collection system owners can employ to prevent the intrusion of excessive clear water into the sewage collection system. Implementation of a CMOM program as established by these rules will increase the service life of sewage collection systems and, in the long-term, mitigate the potentially more costly effects of sewage collection system failures later. This will reduce the overall costs to the public of providing wastewater collection and treatment.

In addition, the State of Wisconsin and the federal government have provided significant funding contributions to the building of sewage collection and treatment systems in the state. For example, as of June 30, 2010, Wisconsin's Clean Water Fund (enacted in 1987 Act 399) has invested \$3.3 billion for the construction of these systems. The implementation of the requirements established by these rules will protect this huge investment the state has helped build. Communities that received support from these funds are required to establish specific budgets for maintenance and replacement of these facilities and, therefore, should have sufficient resources to support the long-term viability of these systems.

#### **PART V**

##### Comparison with Approaches Used by Federal Government

There are no federal regulations that correspond to chapter NR 110. The revisions to chapter NR 205 will make Wisconsin's rules more compatible with current U.S. EPA regulations. Current NR 205 language applicable to "bypassing" is contained in a section of the rule that applies only to publicly owned treatment works and, therefore, does not apply to bypasses at industrial waste treatment facilities. Federal rules do not distinguish between publicly owned treatment works and industrial facilities. One amendment to NR 205 addresses this issue.

Until recently, U.S. EPA has relied upon the bypassing language of 40 CFR 122.41(m) as the primary basis for control over SSOs. More recently, U.S. EPA has suggested through various enforcement actions against a few collection system owners in Wisconsin that the "bypass" provisions are not applicable to SSOs, but apply only to overflows within the treatment facility and SSOs are prohibited without exception or without condition. Nationally, U.S. EPA has established CSOs and SSOs as enforcement priorities for that agency and U.S. EPA (Region 5) has focused enforcement action in the state primarily on SSO events reported by Wisconsin permittees.

Given these circumstances, current federal regulations are ambiguous concerning their application to SSO discharges. Inconsistency in U.S. EPA's interpretation of their regulations has created uncertainty in expectations. Therefore, revisions to ch. NR 210 will create greater specificity with respect to provisions governing SSO discharges. Other changes to NR 205 also make this rule more compatible with U.S. EPA regulations concerning bypasses within treatment facilities that are necessary for purposes of essential maintenance and operation as well as addressing some discrepancies associated with anticipated or scheduled bypasses.

There is no federal regulation mandating establishment and implementation of CMOM programs. U.S. EPA has incorporated CMOM requirements into many enforcement actions across the country.

Over the past decade, the practice of diverting sewage around biological treatment units at sewage treatment facilities under specific conditions and recombining or “blending” this diverted wastewater with fully treated effluent has been subject to several U.S. EPA proposals. This practice, when implemented, is typically used as an alternative to bypassing untreated wastewater. Among others, MMSD employs blending and has requested that the Department establish a regulatory framework for this practice. None of the proposals for allowing blending have been finalized and U.S. EPA’s application of the federal “bypass prohibition” rule to blending has been sporadic and inconsistent creating great uncertainty about the acceptability of this practice.

U.S. EPA is currently evaluating stakeholder input concerning SSOs and related topics and many of those topics have been incorporated into this rulemaking proposal. The Department believes the rule revisions address the issues raised by many interested parties and U.S. EPA and may serve as a model for federal regulatory changes.

## **PART VI**

### Comparison with Approaches Being Used by Neighboring States

All the other U.S. EPA Region 5 states (Illinois, Indiana, Michigan, Minnesota and Ohio) and the state of Iowa regulate SSOs through law, regulation or guidance in a manner similar to past interpretation of U.S. EPA’s bypass regulation. The general bypassing prohibition language and reporting requirements in these state regulations are similar to current WDNR rules and permits. Most states, over the past several years have implemented enhancements to the reporting requirements and tracking (including making such information available to the public) of SSO releases. None of the states have rules relating to blending, though it is apparent from reviewing information available that this practice is not unusual at some sewage treatment facilities. A brief summary of current state activities relating to SSOs follows:

#### **ILLINOIS**

The Illinois Environmental Protection Agency (IEPA) is in the process of developing a clearer strategy concerning SSOs because of apparent misunderstanding or misinterpretation of some aspects of current permit or regulatory requirements. SSOs are prohibited under Illinois regulations similar to the U.S. EPA bypass provisions and the reporting requirements in permits include the 24 hour verbal and 5 day written reporting provisions. The Agency believes there has been underreporting of events in the past, but this has improved in recent years. Agency responses to reported SSO events are handled on a case-by-case basis. SSOs associated with extraordinary or extreme precipitation events generally receive less enforcement attention than those which occur during moderate events. The state has the ability to restrict sewer construction if SSO events reveal a capacity issue during moderate precipitation events. In response to noncompliance, IEPA has included CMOM-like requirements in the enforcement actions, but there is no state-wide CMOM requirement in regulations. Permits are not issued to satellite sewage collection systems, though some permittees operating wastewater treatment plants exercise oversight of satellites.

#### **INDIANA**

The Indiana Department of Environmental Management (IDEM) has rules similar to the federal bypass regulation and treat SSOs as a prohibited discharge. There are no other rules concerning SSOs and IDEM relies on enforcement of the prohibition in implementing the program. SSO reporting has been inconsistent and non-reporting is considered a significant permit violation. In evaluating non-compliance, IDEM generally will pursue enforcement if there are greater than about 10 SSO events per year, though this is a case-by-case determination. Some events are disregarded if there is a significant flooding event associated with the SSO. CMOM requirements have been incorporated into enforcement actions where appropriate. The state does not issue permits to satellite sewage collection systems.

#### **IOWA**

The Iowa Department of Natural Resources (IDNR) updated rules regarding bypasses and SSOs in 2009. The IDNR rules specifically include SSO within the definition of a bypass, an expansion on the U.S. EPA

definition. All other provisions, including the “exceptions” stated in the federal bypass rule are the same. One difference from the U.S. EPA regulation in Iowa is the specific provision that IDNR cannot assess a civil penalty if the noted “exceptions” are met. IDNR requires verbal notification of the agency by the permittee when a SSO occurs within 12 hours (instead of 24-hour notice), but a written report is required to be submitted with the monthly discharge monitoring reports instead of the 5-day notification. The agency rules allow the agency to order, on a case-by-case basis, public notice, require monitoring and cleanup of discharges and temporary disinfection. Permits are not issued to satellite sewage collection systems.

#### MICHIGAN

The Michigan Department of Natural Resources and Environment (MDNRE) has developed the most complete and direct strategy for addressing SSOs, including a more aggressive enforcement position. However, the regulations under which MDNRE operates are similar to the federal rule. MDNRE uses a 25-year, 24-hour storm as the starting point when considering whether the permittee must develop a “corrective action plan” under an enforcement action for noncompliance with the bypass prohibition. Corrective action plan requirements (some of which contain CMOM-type requirements) are flexible and established on a case-by-case basis in consideration of factors including costs and economic impacts on the community. State law in Michigan contains specific reporting and notification requirements for SSO discharges, including notification of local health departments, the general public and downstream municipalities. Sampling of releases is required unless the local health authority waives this requirement. Permits are not issued for satellite sewage collection systems.

#### MINNESOTA

Regulations governing SSOs implemented by the Minnesota Pollution Control Agency (MPCA) are similar to the bypass requirements in U.S. EPA regulations. In addition, within the body of Minnesota rules, there are general prohibitions on discharge of sanitary sewage to state waters. Reporting requirements for permittees are similar to federal requirements. MPCA enforcement actions for noncompliance are based on water quality standards violations, a determination of whether the discharge was preventable or non-preventable and the design of the sewage collection system as compared to the storm event that may have caused the SSO to occur. CMOM requirements may be incorporated into consent decrees in response to noncompliance where U.S. EPA is involved in the enforcement action. Satellite sewage collection systems are not subject to MPCA permitting.

#### OHIO

The Ohio Environmental Protection Agency (OEPA) rules for SSO discharges are also similar to the U.S. EPA bypassing regulation. The agency considers any such discharges as illegal under these rules. Significant emphasis in recent years has been on enhancing permit requirements for reporting SSOs and assuring reports are submitted. Monthly reporting of SSOs is required with the monthly discharge monitoring reports and this information is used to identify permits where enforcement may be appropriate. In some instance permits contain specific requirements related to SSO issues within a permittees sewage collection system, including inclusion of provisions to implement CMOM-type requirements. Permits for satellite collection systems are not issued in Ohio.

An investigation into wet weather issues sponsored by the state of Michigan and conducted by the Center for Sustainable Systems at the University of Michigan was published in December 2009<sup>3</sup>. On the topic of SSOs, the study presents the results of a survey in which 34 agencies (U.S. EPA Regions, states) responded. The results are summarized in the report as follows:

9% of respondents (3 agencies) stated that their agency issues permits allowing SSOs. 42% of the respondents (14 agencies) exercise enforcement discretion for SSOs above a set size or level. Of the 31 agencies with SSOs, only 9% (3 agencies) do not require SSOs to be eliminated. Only

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<sup>3</sup> Center for Sustainable Systems, School of Natural Resources and Environment, University of Michigan. “Wet Weather Benchmarking Report” December 11, 2009

37% of the respondents (11 of 30 agencies) have established standards for identifying excessive inflow and infiltration (I/I). 32% of respondents (10 of 31 agencies) allow blending of treated wastewater with a mixture of storm water and untreated sewage in one or more of their wastewater treatment plant permits.

Clearly, there is a large variability in how the states across the country regulate SSO discharges and, more specifically, how enforcement of the "prohibition" included in most state regulations and permits is enforced. One of the purposes of the changes to Wisconsin rules is to eliminate the uncertainty and inconsistency associated with these events.

**ORDER OF THE STATE OF WISCONSIN  
NATURAL RESOURCES BOARD  
REPEALING, RENUMBERING, AMENDING, RECREATING AND CREATING  
RULES**

This rule is not subject to s. 227.185, Stats. The statement of scope for this rule, published in Register 549 on September 30, 2001, was sent to LRB prior to June 8, 2011.

The Wisconsin Natural Resources Board proposes an order to repeal NR 110.03 (8) and (10), 110.05 (2), (5) (c), and (7), 110.15 (2) (c), (d) and (e), 205.07 (2) (d); to renumber NR 110.03 (6m), 110.03 (31) and 210.03 (10); to renumber and amend NR 210.03 (9m); to amend NR 110.03 (17) and (28), 110.05 (3) to (4), 110.11 (1) (d) 5., 110.15 (5) (g), 110.22 (5) (b) 2. and (c) 1., 205.03 (5), 205.07 (1) (s) (title), 1., 2.a., 3. and 4., 208.06 (1), 210.01, 210.03 (intro.) and 210.08; to repeal and recreate NR 110.03 (7), (9) and (29), 110.10 (1) (h), 110.15 (5) (d) and (h), 205.07 (1) (v), 208.05 (3) (m) and 210.02; to create NR 110.03 (6m), (6s), (7e), (7m), (7s), (26m), (27e), (27m), (27s), (29d), (29h), (30p), (32g), (32r), 110.09 (11) (note), 110.10 (4), 110.11 (1) (note), 110.13 (6), 205.03 (3m), (4m), (6e), (6m), (6s), (9m), (31g), (31r), (35e), (35m), (35s), (39g), (39r) and (43m), 205.07 (1) (u), 205.08 (1) (b) 5. (note), 208.03 (1m), 210 Subchapter I (title), 210.03 (2e), (2m), (2s), (3d), (3h), (3p), (3t), (6e), (6m), (6s), (8m), (10) (11), and (13) to (15), 210 Subchapter II (title), 210.035, 210 Subchapter III (title), 210.12, 210 Subchapter IV (title), 210.19, 210.20, 210.205, and 210.21 to 210.25 relating to wastewater treatment works.

WT-23-11

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**Analysis Prepared by the Department of Natural Resources**

- 1. Statutes interpreted:** Sections 281.41, 283.11, 283.31, 283.55, 283.59
- 2. Statutory authority:** Sections 227.11, 281.41, 283.11, 283.31, 283.55
- 3. Explanation of agency authority:**

Chapter 283 grants authority to the Department to establish, administer and maintain a Wisconsin Pollutant Discharge Elimination System (WPDES). More specifically, sections 283.11 and 283.31, Wis. Stats., provide authority to promulgate rules to administer the WPDES permit program consistent with federal requirements. Section 283.31, Wis. Stats., requires that the permittee at all times maintain in good working order and operate as efficiently as possible any facilities or systems of control installed by the permittee to achieve compliance with the permit. Section 283.55, Wis. Stats., establishes monitoring and reporting authority and requirements for permitted facilities. The Department has general authority to promulgate rules under s. 227.11 (2) (a), Wis. Stats., that interpret the specific statutory authority granted in Chapters 281 and 283, Wis. Stats. Finally, s. 281.41, Wis. Stats., provides authority to the Department to require plans and specifications for reviewable facilities as established in Chapter NR 110, Wis. Adm. Code.

- 4. Related statute or rule:**

These rules relate directly to regulation of wastewater discharges in the Chapter NR 200 series of the Wisconsin Administrative Code. Chapter NR 205 contains the general provisions applicable to the WPDES permit program. Chapter NR 208 is the compliance maintenance rule for sewerage systems to assist owners in maintaining system integrity. Chapter NR 210 establishes effluent limitations and other requirements for sewage treatment works, including monitoring and reporting.

#### **5. Plain language analysis:**

The primary purpose of these rule additions and amendments is to establish clear regulatory requirements associated with unpermitted and potentially hazardous discharges of untreated or partially treated sewage. These discharges have generally been included under the broad definition of “bypass” in current state and federal regulations. The changes will make Wisconsin’s rules conform more closely to the U.S. Environmental Protection Agency’s (U.S. EPA) interpretation of federal regulations, a long-standing point of concern by that agency. The rules should also address U.S. EPA’s concerns regarding existing sanitary sewer overflow (SSO) regulations. In a letter dated July 18, 2011, U.S. EPA identified 75 potential issues with Wisconsin’s statutory and regulatory authority for the WPDES permit program. Wisconsin’s regulation of SSOs was the first issue identified in that letter. U.S. EPA directed the Department to either make rule changes to address this inconsistency or obtain a statement from the Attorney General’s Office verifying that the existing rule is consistent with federal regulations. The Department believes adoption of these rule changes will address U.S. EPA’s concerns.

The rules establish provisions unique to untreated or partially treated sewage discharges and create consistency in the terminology and requirements applicable to publicly owned treatment works and privately owned facilities collecting and treating primarily sanitary sewage. Section 283.31(4)(d), Wis. Stats., requires “... the permittee shall at all times maintain in good working order and operate as efficiently as possible any facilities or systems of control installed by the permittee to achieve compliance with the terms and conditions of the permit.” This is further stated in s. NR 205.07(1)(j), Wis. Adm. Code, which states that “The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control...” Therefore, because sewage collection systems are an integral part of the pollution control facilities, maintaining and operating these systems to prevent discharges of untreated sewage has been a requirement for many years.

To interpret and implement the statutory requirement for “proper operation and maintenance”, the rules require that all owners of sewage collection systems (primarily municipalities) create a capacity, management, operation and maintenance (CMOM) program. The CMOM program is an effective management tool that owners use to help create sustainable sewage collection systems and prevent overflows. It assures sewage collection system owners proactively maintain this significant and valuable community infrastructure by optimizing planned maintenance and prioritizing rehabilitation or replacement activities. These implementation activities are and have been required under the general “proper operation and maintenance” requirements of existing rules. The rule revisions establish more detailed procedures for this requirement.

In this rule package, the term sewage means the wastewater from residences and commercial establishments including that from toilets, showers, laundry and other sources. In some cases, industrial wastewater that can be effectively treated by the sewage treatment facility may be discharged to the sewerage system. Sewerage systems are usually owned by municipalities and consist of a sewage collection system composed of building sewers that carry wastewater from buildings to the collector sewers in the street which, in turn, discharge into larger interceptor sewers that carry wastewater to the sewage treatment facility. In many instances, pumping stations are necessary at various locations in the sewage collection system to lift wastewater to a higher elevation so it may flow downstream by gravity.

In addition to municipalities that own and operate both a sewage collection system and a sewage treatment facility, these rules apply to two other types of systems. Satellite sewage collection system owners do not own and operate a sewage treatment facility. Rather, these municipalities, such as an adjacent city or a sanitary district, own and operate only the sewage collection system which discharges into another municipality's sewers for treatment and disposal. Secondly, these rules also apply to a small number of privately-owned sewerage systems in the state that collect, treat and dispose of sewage (e.g., mobile home parks) or that operate as a satellite sewage collection system. The CMOM requirement also applies to these privately-owned and satellite collection systems.

Discharges of untreated or inadequately treated sewage from any place in sewage collection systems designed to collect and transport only sanitary sewage are most commonly called sanitary sewer overflows or SSOs. Systems designed to collect and transport both sanitary sewage and storm water in the same pipes are called combined sewer systems and discharges are referred to as combined sewer overflows (CSOs). Discharges of untreated sewage are a potential hazard to human health and can have significant impacts on water quality. Typically, SSOs occur as a result of either the entry of an excessive amount of precipitation or groundwater, known as infiltration/inflow (I/I) into the sanitary sewers or because there is a mechanical, electrical or structural failure in a component of the collection system.

When a sewage collection system has insufficient capacity to transport the sewage and the I/I entering the sewers, the system will relieve itself by discharging the excess flow as a SSO in one or more ways. Sewage may back up into buildings or basements through the building sewer. Sewage may also be discharged to nearby drainage-ways, to surface waters or to the land surface from sewage collection system components such as overflowing manholes or lift station overflow pipes. In some instances, sewage may be discharged, usually into surface waters, through a gravity overflow structure or a portable or permanently installed pump. Once wastewater enters the sewage treatment facility, an overflow to the land surface and into nearby surface waters may occur if a treatment unit is too small to accommodate the quantity of flow. These rules establish specific requirements applicable to sewage collection system owners that will prevent or reduce the potential for SSOs and, thereby, prevent water quality impairment and human health hazards associated with such discharges. Effective development and implementation of a CMOM program will reduce the costs incurred by a permittee when building backups cause damage to property.

Following is a brief summary of changes to chapters NR 110, NR 205, NR 208, and NR 210, Wis. Adm. Code:

Chapter NR 110, Sewerage Systems – This chapter contains design standards and requirements applicable to sewerage systems. The most significant changes to chapter NR 110 include the following:

- New terms and definitions or amended definitions for existing terms are included to assure clarity and to make them consistent with the usage of terms in chapters NR 205 and NR 210.
- Language often referred to as the “sewer ban” provisions that are associated with SSOs are repealed from this chapter. The existing rule establishes conditions under which a municipality would not be allowed to expand its sewage collection system for new development if there are significant SSO occurrences. Although potentially an effective tool, it has been difficult for the Department to implement this provision as currently structured. The Department believes it will be more effective to incorporate the “sewer ban” concept into formal enforcement actions, where appropriate. Other conditions under which a “sewer ban” may be imposed are clarified and essentially unchanged.

- Standards are established for conducting a System Evaluation and Capacity Assurance Plan, an evaluation of the sewage collection system, which maybe required under chapter NR 210. A cross-reference to facilities plans required under the existing chapter NR 110 rule is provided to eliminate or remove the potential for duplication.
- Design requirements are established for sanitary sewer overflow structures and sewage treatment facility overflow structures.
- Several existing provisions concerning “bypasses” at sewage treatment facilities that are inconsistent with WPDES program requirements are repealed or amended.

Chapter NR 205, General Provisions – This chapter contains WPDES program definitions, general conditions applicable to WPDES permits and requirements for the issuance of WPDES general permits. Following are the significant changes to this rule:

- New terms and definitions are created. Terms and definitions correspond to those under chapters NR 110 and NR 210.
- Non-compliance reporting requirements are modified to more clearly establish reporting requirements for SSOs and sewage treatment facility overflows.
- The section on bypassing is moved to assure the provisions are inclusive for all permittees. Blending, a specifically defined type of bypassing at a sewage treatment facility, is regulated under chapter NR 210. Specific requirements are established for controlled diversions at all wastewater treatment facilities (including those treating industrial wastewater). Similar to the existing rule, other bypassing at a wastewater treatment facility is prohibited, but may be approved if specific conditions in the rule are met, such as endangerment to life, health or property or actions that are not feasible to implement.
- Reporting requirements when there is permit noncompliance are clarified, as are procedures for when scheduled or anticipated bypassing may be necessary.

Chapter NR 208, Compliance Maintenance – This chapter contains requirements for preparing and submitting compliance maintenance annual reports and requires sewerage system owners to take necessary actions to prevent non-compliance with permit requirements in the future.

- Scoring for discrete SSO occurrences is repealed. Permittees are required to provide information regarding actions taken in response to reported SSO occurrences.

Chapter NR 210, Sewage Treatment Works – This chapter contains the WPDES requirements for publicly owned treatment works (sewerage systems) and privately owned treatment works that treat primarily domestic sewage and wastewater from commercial establishments. The current rule establishes effluent limitations and monitoring/reporting requirements for sewage treatment facilities only. These provisions are the basis for WPDES terms and conditions. The revisions to this rule establish the following more specific authorities over sewage collection systems:

- New terms and definitions are created. Terms and definitions correspond to the terms used in chapters NR 110 and NR 205.

- Specific authority is clarified for the issuance of WPDES permits for satellite collection systems. The Department has been issuing permits to such systems since 1989 and has authority to do so under s. 283.31 (1), Wis. Stats.
- A specific requirement that combined sewer systems conform to the terms and conditions in the WPDES permit is established. The Department intends to include conditions in such permits that are consistent with U.S. EPA's CSO policy contained in the Clean Water Act. (33 U.S.C. 1342)
- Specific provisions are established to prohibit sanitary sewer overflows and sewage treatment facility overflows. Permittee response actions and notification requirements are established and reporting conditions for sanitary sewer and sewage treatment facility overflows are clarified. Reporting requirements are similar to those currently required in permits.
- A list of factors is established that the Department will use to determine whether a prohibited overflow has occurred and the type of enforcement action that may be taken for permit noncompliance. The specific enforcement action in response to an overflow is left to the discretion of the Department based upon a case-by-case evaluation of the information available.
- The rule creates specific provisions relating to building backups. Discrete or individual building backups are exempted from the rule requirements. However, recurring building backups caused by constraints in the downstream sewage collection system may be cause for establishing permit terms and conditions to eliminate or reduce building backups through reduction or removal of I/I or other factors causing the backups.
- The rule creates a requirement that all sewage collection system permittees establish a CMOM program to reduce or prevent the likelihood of SSOs and to ensure the long-term viability of sewage collection systems.
- The rule sets terms and conditions under which the Department may approve, through the permit issuance process, the practice of blending (diverting sewage around biological treatment units under specific conditions) at sewage treatment facilities. Blending may occur only when the WPDES permit contains a condition that allows the practice.
- The rules create a provision under which the Department may incorporate a requirement in a WPDES permit that a sewage collection system owner undertake an evaluation of the system to determine causes of the permit violations and development of a plan to address the causative factors.

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

There are no federal regulations that correspond to chapter NR 110. The Department, however, has specific authority for plan and specification reviews and authority to establish conditions on approvals of plans under s. 281.41, Wis. Stats. The revisions to chapter NR 205 will make Wisconsin's rules more consistent with current U.S. EPA regulations and will provide a consistent interpretation of the term bypass and types of bypass events. Current chapter NR 205 language applicable to "bypassing" is contained in a section of the rule that applies only to publicly owned treatment works and, therefore, does not apply to bypasses at industrial waste treatment facilities. Federal rules do not distinguish between publicly owned treatment works and industrial facilities. One amendment to chapter NR 205 addresses this issue.

Until recently, U.S. EPA has relied upon the bypassing language of 40 CFR 122.41(m) as the primary basis for control over SSOs. In a June 1, 2001 letter to the Department, under the heading “State Rules Relating to Bypass and Sanitary Sewer Overflows”, U.S. EPA stated:

*While NR 205.07 includes general prohibitions on unscheduled and scheduled bypassing, the exceptions to this prohibition are more liberal than allowed under Federal law. The Federal regulation at 40 CFR 122.41(m)(4)(i) states that bypass is prohibited, and the Director may take enforcement action unless each of the following three conditions apply:*

- *The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;*
- *There were no feasible alternatives to the bypass; and*
- *The permittee submitted the required reporting.*

*...Our chief concern with NR 205.07 is the lack of a “feasible alternatives” test....In addition, the first and third criteria under NR 205.07(u) do not, in themselves, represent sufficient grounds for allowing bypasses under Federal regulations.... We recommend you proceed with rulemaking in order to correct these discrepancies between State and Federal requirements.*

In a July 18, 2011 letter from U.S. EPA identifying seventy-five potential deficiencies of Wisconsin’s WPDES permit program, U.S. EPA stated that existing state regulations regarding bypasses and diversions and reporting requirements for those events appear to be inconsistent with federal regulations (40 CFR 122.41 (m)). Also, 40 CFR 122.41 (e) requires that a permittee properly operate and maintain its sewerage system. These rules will address the inconsistency identified by U.S. EPA in that letter. More recently, U.S. EPA has suggested through various enforcement actions against a few collection system owners in Wisconsin that the “bypass” provisions are not applicable to SSOs, but solely apply only to overflows within the treatment facility and SSOs are prohibited without exception or without condition. U.S. EPA, in 2000, developed a “Compliance and Enforcement Strategy for CSOs and SSOs” (April 27, 2000) establishing CSOs and SSOs as enforcement priorities for that agency. Based on this strategy, U.S. EPA has focused their enforcement action in the state primarily on SSO events reported by Wisconsin permittees.

Given these circumstances, it seems that current federal regulations are somewhat ambiguous concerning their application to the various types of bypasses and SSOs. Certainly, inconsistency in U.S. EPA’s interpretation of their regulations has created uncertainty in expectations. Therefore, revisions to chapter NR 210 will create greater specificity and consistency with respect to provisions governing SSO discharges in the state. Other changes to chapter NR 205 also make this rule more compatible with U.S. EPA regulations concerning bypasses within treatment facilities that are necessary for purposes of essential maintenance and operation, as well as addressing some discrepancies associated with anticipated or scheduled bypasses.

There is no federal regulation mandating establishment and implementation of CMOM programs. The revisions will clarify what actions permittees must take to address their SSOs and CSOs and prevent future problems. The rules also interpret and implement the requirement in s. 283.31(4) (d), Wis. Stats. This statutory section requires “... the permittee shall at all times maintain in good working order and operate as efficiently as possible any facilities or systems of control installed by the permittee to achieve compliance with the terms and conditions of the permit.” Although there is no federal regulation, U.S. EPA has incorporated CMOM requirements into many enforcement actions across the country. Similarly, there is no specific federal rule regarding the issuance of permits to satellite sewage collection systems.

The practice of diverting sewage around biological treatment units at sewage treatment facilities under specific conditions and recombining or “blending” this diverted wastewater with fully treated effluent is

typically used as an alternative to bypassing untreated wastewater or preventing building backups. Over the past decade, U.S. EPA has proposed on several occasions to establish guidance or regulation concerning the practice of blending. None of the U.S. EPA proposals for allowing blending have been finalized and U.S. EPA's application of the federal "bypass prohibition" rule to blending has been sporadic and inconsistent, thereby creating great uncertainty about the acceptability of this practice.

U.S. EPA provided significant comments on the proposed rules and modifications to the rules have been made in response. Under the state-federal delegation agreement for the WPDES program, U.S. EPA has the opportunity for further review once the rules are promulgated. The Department believes the rule revisions address the issues raised by many interested parties and U.S. EPA and may serve as a model for federal regulatory changes.

## **7. Comparison of similar rules in adjacent states:**

All the other U.S. EPA Region 5 states (Illinois, Indiana, Michigan, Minnesota and Ohio) and the state of Iowa have a bypassing regulation essentially verbatim to that of U.S. EPA which has been the primary authority for responding to SSO occurrences. The general bypassing prohibition language, reporting and proper operations provisions in these state regulations are similar to current WDNR rules and permits. In some states, if a bypass occurs as a result of a specified high precipitation event, an exception is provided to the general prohibition on bypassing and SSOs. Only the Michigan Department of Natural Resources and Environment (MDNRE) has developed a more direct, detailed strategy for addressing SSOs, including a more aggressive enforcement position. However, the regulations under which MDNRE operates are similar to the federal rule. None of these states have rules relating to blending, though it is apparent from reviewing information available that this practice is not unusual at some sewage treatment facilities.

An investigation into wet weather issues sponsored by the state of Michigan and conducted by the Center for Sustainable Systems at the University of Michigan was published in December 2009<sup>1</sup>. On the topic of SSOs, the study presents the results of a survey in which 34 agencies (U.S. EPA Regions, states) responded. The results are summarized in the report as follows:

9% of respondents (3 agencies) stated that their agency issues permits allowing SSOs. 42% of the respondents (14 agencies) exercise enforcement discretion for SSOs above a set size or level. Of the 31 agencies with SSOs, only 9% (3 agencies) do not require SSOs to be eliminated. Only 37% of the respondents (11 of 30 agencies) have established standards for identifying excessive inflow and infiltration (I/I). 32% of respondents (10 of 31 agencies) allow blending of treated wastewater with a mixture of storm water and untreated sewage in one or more of their wastewater treatment plant permits.

None of the adjacent states have regulations that require development and implementation of CMOM programs for sewage collection systems. In some other parts of the United States, permitting agencies have placed CMOM requirements in some NPDES permits. No states adjacent to Wisconsin issue permits to satellite sewage collection systems. No other state's rules contain provisions similar to the SECAP portion of these rules, though it is likely compliance schedules in permits or enforcement actions in those states effectively implement preparation of such plans when sewage collection systems are not in compliance with permit conditions.

Additional information on regulations or programs dealing with SSOs in other states is contained in the Economic Impact Analysis accompanying this rule package.

<sup>1</sup> Center for Sustainable Systems, School of Natural Resources and Environment, University of Michigan. "Wet Weather Benchmarking Report" December 11, 2009

## 8. Summary of factual data and analytical methodologies:

Almost all municipalities in the state operate sanitary sewage collection systems and SSO occurrences are primarily driven by precipitation events. The Cities of Superior and Milwaukee and the Village of Shorewood (the latter two municipalities connected to the Milwaukee Metropolitan Sewerage District (MMSD)) are served, in part, by combined sewer systems. Overflows from combined sewers are also caused primarily precipitation-related events. Human exposure to untreated sewage discharges can cause disease and other health impacts, in addition to a variety of other water quality impairments. In the 3 years from 2008 through 2010, 1,139 SSO events were reported with a total discharge volume of 1,627 million gallons of untreated sewage. Most of these occurrences were caused by rainfall or precipitation-related events. U.S. EPA, in a 2004 Report to Congress<sup>2</sup>, estimated the annual number of SSOs nationwide is between 23,000 and 75,000.

A WDNR Report to the Natural Resources Board<sup>3</sup> in 2001 similarly noted that SSOs were a cause for concern. The report contained recommendations for action, including improved tracking and reporting systems, development of improved rules, more aggressive enforcement responses, and outreach to permittees to improve attention devoted to sewage collection systems. Additionally, there were several recommendations relating specifically to the MMSD and their satellite communities. Most of these latter recommendations have been implemented through recent MMSD facilities planning activities and enforcement actions for overflows in 2008.

In 2002, the Department established an advisory committee to assist in developing rule amendments that would address the issues identified in the 2001 report. The advisory committee consisted of representatives from municipal sewage collection system owners, consulting engineers, environmental organizations, and U.S. EPA. Several meetings with the advisory committee were held and the Department shared rule drafts with them. Comments from the advisory committee members and others who have an interest in this topic contributed significantly to this rule package.

Over the past several years, there have been many investigations and evaluations of sewage collection system issues. Many publications are listed on the U.S. EPA web site ([http://cfpub.epa.gov/npdes/home.cfm?program\\_id=4](http://cfpub.epa.gov/npdes/home.cfm?program_id=4)). The Water Environment Federation has also sponsored publication of several studies, including investigations by the Water Environment Research Foundation listed on the WEF web site ([http://wef.org/AWK/pages\\_cs.aspx?id=1063](http://wef.org/AWK/pages_cs.aspx?id=1063)).

As noted by the titles in the publication list below, most publications provide information and guidance to wastewater utilities on how best to manage sewage collection systems to reduce and prevent I/I so SSOs do not occur or are minimized. A partial listing of publications follows:

- Wisconsin CMOM – Capacity, Management, Operation and Maintenance. Wisconsin Department of Natural Resources, Publication No. PUB-WT-917-2009.
- Sanitary Sewer Overflows and Sewer System Maintenance. United States Environmental Protection Agency, Office of Water, EPA-832-R-98-002, December 1998.

<sup>2</sup> U. S. Environmental Protection Agency, Office of Water. “Report to Congress-Impacts and Control of CSOs and SSOs”, EPA 833-R-04-001, August 2004, Washington, DC.

<sup>3</sup> Wisconsin Dept. of Natural Resources. “Sewer Overflows in Wisconsin-A Report to the Natural Resources Board”, March 15, 2001.

- Prevention and Control of Sewer System Overflows. WEF Manual of Practice No. FD-17, 3<sup>rd</sup> edition. Water Environment Federation, Washington, DC. 2011.
- Sanitary Sewer Overflow Solutions Guidance Manual. Prepared By Black & Veatch Corporation for American Society of Civil Engineers Under Cooperative Agreement With U.S. Environmental Protection Agency, Office of Wastewater Management, Washington, DC (EPA Cooperative Agreement #CP-828955-01-0) April, 2004.
- Protocols for Identifying Sanitary Sewer Overflows. Prepared by Black & Veatch Corporation for American Society of Civil Engineers Under Cooperative Agreement with U.S. Environmental Protection Agency, Office of Wastewater Management, Washington, DC (EPA Cooperative Agreement #CX 826097-01-0) June 2000.
- Optimizing Operation, Maintenance, and Rehabilitation of Sanitary Sewer Collection Systems. New England Interstate Water Pollution Control Commission, Lowell, MA, December 2003.
- Optimization of Collection System Maintenance Frequencies and System Performance. Prepared by Black & Veatch, LLP for American Society of Civil Engineers Under Cooperative Agreement with U.S. Environmental Protection Agency, Office of Wastewater Management, Washington, DC (EPA Cooperative Agreement #CX 824902-01-0) February, 1999.
- White Paper on Condition Assessment of Wastewater Collection Systems. U. S. Environmental Protection Agency, Office of Research and Development, Washington, DC, EPA/600/R-09/049, May 2009.
- State of Technology Review Report on Rehabilitation of Wastewater Collection and Water Distribution Systems. Dr. Ray Sterling, Lili Wang, Robert Morrison (Contract No. EP-C-05-057 Task Order No. 58). U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH, March 2009.
- Guide to Managing Peak Wet Weather Flows in Municipal Wastewater Collection and Treatment Systems. Water Environment Federation, Alexandria, VA, 2006.
- Core Attributes of Effectively Managed Wastewater Collection Systems. American Public Works Association, American Society of Civil Engineers, National Association of Clean Water Agencies, Water Environment Federation, July 2010 (contains extensive list of references).
- Private Property Virtual Library (PPVL) Information *For* Utilities *From* Utilities. (<http://wef.org/PrivateProperty/>). Contains a library of case studies from private property-related programs at wastewater utilities.

Current state rules and federal regulations are not clear concerning the discharge of untreated or partially treated sewage from sewerage systems. The primary reason for these rule revisions is to assure consistency and certainty in permit requirements and to address the causes of SSOs and CSOs in Wisconsin. While the rules require that permits prohibit the discharge of untreated or partially treated sewage, they also recognize and require “common sense” activities that permittees should use to protect the large monetary investment they have in their sewerage systems and to avoid permit noncompliance. The CMOM program is a proactive approach to assuring the long term integrity of these systems.

**9. Analysis and supporting documentation used to determine effect on small business or in preparation of an economic impact analysis:**

Implementation of this rule will primarily occur through actions of municipal and privately operated sewage collection system owners. As stated above, most of the rule changes provide more clarity in the definition of terms such as bypasses, blending and controlled diversions. The rules establish conditions for circumstances when bypasses may be approved, and clarifies that the bypass prohibition applies to both public and privately owned sewerage systems and to industrial wastewater systems, as required under federal law. The primary change contained in the rule package is that it establishes the additional regulatory requirement that permittees develop a CMOM program, as well as the requirement to conduct a SECAP for systems with compliance problems.

Because of the small number of privately-owned sewage collection systems in the state, the direct statewide economic impact of this rule on these small businesses will be low. Costs to these private businesses to develop a CMOM will be minimal due to the relatively small size of these types of sewage collection systems. Individual private owners may experience significant costs if the collection system has not been constructed or maintained in a manner to prevent overflows and a SSO occurs. In these cases, the owner will eventually need to upgrade the private collection system. In addition, small businesses that are connected to a municipal sewage collection system may experience costs associated with collection system improvements by municipalities through their user fees and other local taxing authorities for sewage collection system maintenance and improvements. It is difficult to determine the statewide or individual system effect of small business due to the variability in requirements that may occur in each municipality.

**10. Effect on small business:**

The only new direct cost of these rules is associated with the preparation of the CMOM by private sewage collection system owners and by municipalities that have not yet developed such a program. The effect of this rule on other small businesses will be indirectly through the actions of municipal sewage collection system owners. Costs for sewage collection system maintenance and improvements are normally assessed to all users of the system, including small business owners. Such costs are determined at the local level. Because the costs to any given system owner will likely be assessed to all system users, the cost to an individual small business owner for this activity will be low.

In some instances, it may be determined through activities identified in the CMOM program that excessive I/I originates from a building sewer. If the building sewer from a small business is identified as a source of excessive I/I, the municipality may require rehabilitation of the building sewer by the property owner. Under the "proper operation and maintenance" provisions of state statutes and rules, sewage collection system maintenance activities that may be identified through the CMOM process are existing requirements and, therefore, are not specific new provisions established by these rules.

In the case of private ownership of a sewerage system (e.g., a mobile home park) identified as a source of SSO, replacement or repair of sewerage system components would be the responsibility of the owner. The number of these cases is likely to be very limited because of the small number of private sewage collection system permittees and, therefore, the statewide cost will be low.

Pursuant to ss. 283.90 and 283.91, Wis. Stats., violations of permit conditions to rule requirements may be referred to the Department of Justice for enforcement. Specific enforcement responses for violations of the SSO prohibition will depend on the individual circumstances associated with each event. Section NR 210.21 includes factors the Department will consider in an enforcement response to a SSO or an overflow at a sewage treatment facility. While it will be necessary to force action in some instances

through aggressive enforcement responses (i.e., referral to the Department of Justice pursuant to ch. 283, Wis. Stats.), the intent of these rules is to improve the overall management of our sewerage system infrastructure and avoid violations. In all cases, proactive implementation of CMOM program activities will mitigate the potentially more costly effects of sewage collection system failures later.

**11. A copy of any comments and opinion prepared by the Board of Veterans Affairs under s. 45.03 (2m), Stats., for rules proposed by the Department of Veterans Affairs:**

Not Applicable.

**11. Agency contact:**

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SECTION 1. NR 110.03 (6m) is renumbered NR 110.03 (6e).

SECTION 2. NR 110.03 (6m) and (6s) are created to read:

**NR 110.03 (6m)** “Blending” has the meaning specified under s. NR 210.03 (2e).

**Note:** Subsection NR 210.03 (2e) reads: “Blending” means the routing of untreated or partially treated wastewater around a biological treatment process, or a portion of a biological treatment process, within a sewage treatment facility. The routing of untreated or partially treated wastewater around a portion of a biological treatment process is considered to be blending only if the entire wastewater flow has not received biological treatment.

**(6s)** “Building sewer” means that part of the drain system not within or under a building which conveys its discharge to a public sewer, private interceptor main sewer, private onsite wastewater treatment system or other point of discharge or dispersal.

**Note:** This is the same definition as contained in s. SPS 381.01 (44). A building sewer may also be referred to as a building lateral.

SECTION 3. NR 110.03 (7) is repealed and recreated to read:

**NR 110.03 (7)** “Bypass” has the meaning specified in s. NR 205.03 (5).

**Note:** Subsection NR 205.03 (5) reads: “Bypass” means the intentional diversion of waste streams from any portion of a sewage treatment facility or a wastewater treatment facility. A bypass does not include a building back-up or a combined sewer overflow.

SECTION 4. NR 110.03 (7e), (7m) and (7s) are created to read:

**NR 110.03 (7e)** “Combined sewer overflow” has the meaning specified under s. NR 210.03 (3h):

**Note:** Subsection NR 210.03 (3h) reads: “Combined sewer overflow” means a release of wastewater from a combined sewer system directly into a water of the state or to the land surface.

**NR 110.03 (7m)** “Combined sewer system” has the meaning specified under s. NR 210.03 (3p).

**Note:** Subsection NR 210.03 (3p) reads: “Combined sewer system” means a wastewater collection system owned by a municipality that conveys domestic, commercial and industrial wastewater and storm water runoff through a single pipe system to a publicly owned treatment works.

**NR 110.03 (7s)** “Combined sewer treatment facility” means all the structures, pipes and other equipment that constitute the various treatment processes and treatment units employed to reduce pollutants in wastewater from combined sewer systems.

SECTION 5. NR 110.03 (8) is repealed.

SECTION 6. NR 110.03 (9) is repealed and recreated to read:

**NR 110.03 (9)** “Controlled diversion” has the meaning specified under s. NR 205.03 (9m).

**Note:** Subsection NR 205.03 (9m) and Note reads: “Controlled diversion” means the routing of untreated or partially treated wastewater around any treatment unit within a sewage or wastewater treatment facility which is then recombined with undiverted wastewater prior to the effluent sampling location and prior to effluent discharge.

**Note:** Controlled diversions at a sewage treatment facility do not include blending and may occur only in compliance with s. NR 205.07 (1) (v).

SECTION 7. NR 110.03 (10) is repealed.

SECTION 8. NR 110.03 (17) is amended to read:

**NR 110.03 (17)** “Inflow” means water other than wastewater that enters a sewerage system (including sewer service connections) from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, sump pumps, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm waters surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from, infiltration.

SECTION 9. NR 110.03 (26m), (27e), (27m) and (27s) are created to read:

**NR 110.03 (26m)** “Private interceptor main sewer” means a sewer serving two or more buildings and not part of the municipal sewer system.

**Note:** This is the same definition as contained in s. SPS 381.01 (193).

**(27e)** “Sanitary sewer overflow” has the meaning specified under s. NR 210.03 (10).

**Note:** Subsection NR 210.03 (10) reads: “Sanitary sewer overflow” means a release of wastewater from a sewage collection system or an interceptor sewer directly into a water of the state or to the land surface.

**(27m)** “Sanitary sewer overflow structure” means the physical structure, hydraulic mechanisms and piping specifically constructed to convey a sanitary sewer overflow.

**(27s)** “Satellite sewage collection system” has the meaning specified under s. NR 205.03 (31r).

**Note:** Subsection NR 205.03 (31r) reads: "Satellite sewage collection system" means a municipally owned or a privately owned sewage collection system that conveys wastewater to another satellite sewage collection system or to another sewerage system that provides wastewater treatment and discharges under a separate WPDES permit.

SECTION 10. NR 110.03 (28) is amended to read:

**NR 110.03 (28)** "Sewage collection system" means the common sanitary sewers, interceptor sewers and appurtenant equipment, such as lift stations, within a sewerage system which are primarily installed to receive wastewaters directly from facilities which convey wastewater from individual structures or from private property, and which include service connection "Y" fittings designed for connection with those facilities. The facilities which convey wastewater from individual structures, such as building sewers and private interceptor sewers, from private property to the public sanitary sewer, or its equivalent, are specifically excluded from the definition of "sewerage sewage collection system"; except that pumping units and pressurized lines for individual structures or groups of structures ~~may be~~ included as part of a "sewage collection system" when such units are cost effective and are owned and maintained by the sewerage system owner.

SECTION 11. NR 110.03 (29) is repealed and recreated to read:

**NR 110.03 (29)** "Sewage treatment facility" means all the structures, pipes and other equipment that constitute the various treatment processes and treatment units employed to reduce pollutants in sewage.

SECTION 12. NR 110.03 (29d), (29h), and (30p) are created to read:

**NR 110.03 (29d)** "Sewage treatment facility overflow" has the meaning specified under s. NR 210.03 (13).

**Note:** Subsection NR 210.03 (13) reads: "Sewage treatment facility overflow" means a release of wastewater from a location within a sewage treatment facility, other than permitted effluent outfall structures, directly to a water of the state or to the land surface. A sewage treatment facility overflow does not include blending, controlled diversions or discharges from permitted combined sewage treatment facility effluent outfall structures.

**(29h)** "Sewage treatment facility overflow structure" means the physical structure, hydraulic mechanisms and piping specifically constructed to convey a sewage treatment facility overflow.

**(30p)** "Sewer extension" means installation of a sewer or interceptor sewer, or extension thereof, to provide additional conveyance capacity and service to development within the existing or proposed tributary area of the extension. Alterations or modifications of existing sewerage systems designed to replace inadequate existing structures or installed because of inadequate hydraulic sewer capacity and that do not extend sanitary sewer service to areas previously not served are not sewer extensions.

SECTION 13. NR 110.03 (31) is renumbered NR 110.03 (29t).

SECTION 14. NR 110.03 (32g) and (32r) are created to read:

**NR 110.03 (32g)** "Treatment process" means a physical, biological or chemical action that is applied to wastewater to remove or reduce pollutants. A treatment process may consist of multiple individual treatment units. "Treatment process" includes screening, chemical treatment, sedimentation, biological treatment, filtration, disinfection and sludge digestion.

**NR 110.03 (32r)** "Treatment unit" means individual structures or equipment within a sewage or wastewater treatment facility that are part of a treatment process. Typical treatment units are screens, clarifiers, aeration tanks, filters, digesters and lagoons.

SECTION 15. NR 110.05 (2) is repealed.

SECTION 16. NR 110.05 (3) and (4) are amended to read:

**NR 110.05 (3) PERMISSIVE APPROVALS OF SEWER EXTENSION APPLICATIONS RELATED TO PERMITTED EFFLUENT LIMITATIONS.** (a) Unless an approval would be contrary to the purpose of this section, applications for sanitary sewer extensions that comply with all applicable requirements of this chapter shall be approved if the sewer will be tributary to:

~~1. A sewerage system which experiences no category 1 bypasses and overflows and~~

~~2. A sewage treatment plant facility which discharges an effluent in compliance with the monthly average effluent limitations for biochemical oxygen demand (BOD) and total suspended solids contained in ch. NR 210 or 214, or with any more stringent water quality related effluent limitations required to achieve applicable water quality standards derived from chs. NR 102 to 104, or from any federal water quality standard promulgated pursuant to section 303 of P.L. 95-217 for any waters of the state its WPDES permit.~~

(b) In the event that the WPDES permit for a sewage treatment plant facility currently discharging an effluent in accordance with ch. NR 210 establishes a compliance schedule for achievement of any more stringent water quality related effluent limitations for biochemical oxygen demand and total suspended solids applicable to such treatment plant facility, compliance with the schedule of compliance in the discharge permit will be deemed to be compliance with the applicable water quality related effluent limitations.

(c) In determining whether a discharged effluent is in compliance with the monthly average effluent limitations for biochemical oxygen demand (BOD) and total suspended solids contained in ~~ch. NR 210 or 214, or with any more stringent water quality related effluent limitations required to achieve applicable water quality standards~~ a WPDES permit, the following procedure shall apply:

1. Compliance shall be determined by staff department review of the previous 12 months of discharge monitoring data. If 12 months of data are not available, the review shall be based on the data that are available.

2. More than a total of 3 months of violations of the monthly average limitations for either BOD or total suspended solids or both in the previous 12 months (or the equivalent ratio for the number of months of data available) shall cause denial, subject to the following additional considerations:

a. Recognition of the inherent inaccuracy of the BOD and total suspended solids tests shall be given by multiplying the monthly average effluent limitations as specified in the permit by a factor of 1.3 for BOD and 1.2 for total suspended solids for purposes of determining whether monthly average effluent results are in compliance.

b. The department may grant approval if it determines that, due to a demonstrable action by the permittee, the ~~plant~~ sewage treatment facility has been in compliance for 4 four or more consecutive months, thus demonstrating a trend toward better operation.

c. The department may grant approval in those instances where the permittee demonstrates that noncompliance with the effluent limitations has been caused by algae growth in a sewage treatment facility utilizing lagoons as the principal treatment device process.

d. The department may grant approval if it determines that noncompliance with the effluent limitations has been caused by operating difficulties associated with plant startup for those sewage treatment facilities which have recently been constructed or undergone major modification or expansion. The period described as plant startup may be no longer than 12 consecutive months.

~~(4) DENIAL OF SEWER EXTENSION APPLICATIONS RELATED TO PERMITTED EFFLUENT LIMITATIONS. (a) Applications Taking into account the factors in subs. (3) (c), applications for sanitary sewer extensions shall be denied if the sewer will be tributary to any of the following: 1. A sewage treatment plant facility which discharges an effluent not in compliance with the monthly average effluent limitations for biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids contained in ch. NR 210 or 214 NR 206, or with any more stringent water quality related effluent limitations required to achieve applicable water quality standards derived from chs. NR 102 to 104 or from any federal water quality standard promulgated pursuant to 33 USC 1313 for any waters of the state its WPDES permit.~~

~~2. A sewerage system in which any category 1 bypasses or overflows occur:~~

~~(b) If the WPDES permit for a sewage treatment plant facility currently discharging an effluent in accordance with ch. NR 210 establishes a compliance schedule for achievement of any more stringent water quality related effluent limitations for biochemical oxygen demand and total suspended solids applicable to such treatment plant, compliance with the schedule of compliance in the discharge permit shall be deemed to be compliance with the applicable water quality related effluent limitations.~~

SECTION 17. NR 110.05 (5) (c) is repealed.

SECTION 18. NR 110.05 (7) is repealed.

SECTION 19. NR 110.09 (11) (note) is created to read:

**Note:** Facilities plans for projects subject to the requirements of this section may include results from a system evaluation and capacity assurance plan under s. NR 110.10 (4).

SECTION 20. NR 110.10 (1) (h) is repealed and recreated to read:

**NR 110.10 (1) (h) *Downstream overflows.*** A description of the number and location of sanitary sewer overflow structures and a description of the occurrence of sanitary sewer overflow events at any location within the sewerage system.

SECTION 21. NR 110.10 (4) is created to read:

**NR 110.10 (4) SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN.** A system evaluation and capacity assurance plan shall include all the following:

(a) An evaluation of those portions of the sewage collection system that may contribute to sewage treatment facility overflows or other noncompliance at a sewage treatment facility, or that are experiencing or contributing to a sanitary sewer overflow caused by excessive infiltration and inflow or a system hydraulic deficiency. The evaluation must provide estimates of peak flows, including the amount

from sanitary sewer overflows and sewage treatment facility overflows, provide estimates of the capacity of key system components, identify hydraulic deficiencies, and identify the sources (including private property sources) of infiltration and inflow that contribute to the peak flows associated with sanitary sewer overflow or sewage treatment facility overflow occurrences.

(b) An analysis to identify actions that will eliminate sanitary sewer overflows and sewage treatment facility overflows or abate their occurrence and effects on public health and the environment to the extent technically and economically feasible. The analysis shall consider alternatives such as providing improved operation and maintenance, infiltration and inflow reduction and removal from all sources, wastewater equalization or storage facilities, sewer and lift station replacement or rehabilitation, the treatment of overflows, peak flow treatment schemes at sewage treatment facilities, expansion of sewage treatment facility capacity and any other construction of new or modified sewerage system components.

**Note:** When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, the relationship between the control of storm water and the control of infiltration/inflow into the sewage collection system, costs and affordability of implementation and risks to public health, the environment and welfare of the community served by the sewage collection system.

(c) Identification of specific short and long term corrective actions. Schedules for implementation shall be established giving greatest priority to those actions that will protect public health and minimize environmental risk. The department may establish compliance schedules in WPDES permits to implement specific actions identified under this paragraph.

**Note:** Portions of a system evaluation and capacity analysis plan may include results from an infiltration/inflow analysis or a sewer system evaluation survey under s. NR 110.09 (5) or s. NR 110.09 (6), respectively.

SECTION 22. NR 110.11 (1) (d) 5. is amended to read:

**NR 110.11 (1) (d) 5. Infiltration and inflow;**

SECTION 23. NR 110.11 (I) (note) is created to read:

**Note:** Facilities plans for sewage lift stations may include results from a system evaluation and capacity assurance plan under s. NR 110.10 (4).

SECTION 24. NR 110.13 (6) is created to read:

**NR 110.13 (6) SANITARY SEWER OVERFLOW STRUCTURES.** Sanitary sewer overflows structures may be provided as measures to manage and mitigate the effects of sanitary sewer overflow discharges that may occur under extreme conditions. Sanitary sewer overflow structures shall be designed in accordance with all the following requirements:

(a) The overflow may be activated either manually or automatically. If automatically activated, a monitoring system shall be provided to detect the initiation time of the overflow and to provide an alarm signal to the sewage collection system operator or other responsible authority.

(b) The overflow structure shall be designed to discharge only those wastewater flows greater than the peak flow conveyance capacity within the sewage collection system.

(c) Equipment shall be provided to measure the flow and, if practicable, sample the wastewater discharged from the structure.

**Note:** A department approval of a sanitary sewer overflow structure does not eliminate or alleviate the requirement that prohibits sewage treatment facility overflows in s. NR 210.21.

SECTION 25. NR 110.15 (2) (c), (d) and (e) are repealed.

SECTION 26. NR 110.15 (5) (d) is repealed and recreated to read:

**NR 110.15 (5) (d) *Emergency operation.*** At least one of the following shall be provided to ensure continued operation of the sewage treatment facility in accordance with s. NR 210.08:

1. 'Emergency power generator.' An emergency power generator with sufficient generating capacity to meet the sewage treatment facility power demands to comply with s. NR 210.08.
2. 'Two independent electrical transmission sources.' An electrical system connected to two independent transmission routes that receive power from the same electrical grid network which supplies power to the sewage treatment facility service area.
3. 'Holding facilities.' Holding facilities that have a capacity to detain the maximum day design flow for a maximum period of 24 hours.

SECTION 27. NR 110.15 (5) (g) is amended to read:

**NR 110.15 (5) (g) *Unit bypasses. Controlled diversion structures and equipment.*** ~~Unit bypasses~~ Structures and equipment to enable controlled diversions shall be located and arranged to allow for proper maintenance of the sewage treatment facility ~~while complying with the provisions of sub. (2)(e).~~ In all cases, it must be possible for each treatment unit to be independently removed from service.

**Note:** Section NR 205.07 (1) (u) 2. contains specific provisions associated with the use of controlled diversion structures and equipment and requires compliance with all permit effluent limitations during times of controlled diversion.

SECTION 28. NR 110.15 (5) (h) is repealed and recreated to read:

**NR 110.15 (5) (h) *Sewage treatment facility overflow structures.*** Sewage treatment facility overflow structures may be provided at an owner's discretion as a measure to protect sewage treatment facility integrity and treatment efficiency during severe operating conditions. Sewage treatment facility overflow structures may not be installed at the headworks of aerated or stabilization pond treatment systems. Sewage treatment facility overflow structures shall be designed in accordance with all the following requirements:

1. The overflow may be activated by either manual or automatic means. If automatically activated, a monitoring system shall be provided to detect the initiation time of the overflow and to provide an alarm signal to the sewage treatment facility operator or other responsible authority.
2. The structure shall be designed to discharge only those wastewater flows above the peak flow rate that the sewage treatment facility can safely process without threatening loss of life, causing severe property damage or compromising treatment processes, including the washout of biological media in the biological treatment process.

3. Equipment shall be provided to measure the flow and sample the wastewater that is discharged from the structure.

**Note:** A department approval of a sewage treatment facility overflow structure does not eliminate or alleviate the requirement that prohibits sewage treatment facility overflows in s. NR 210.21.

SECTION 29. NR 110.22 (5) (b) 2. and (c) 1. are amended to read:

**NR 110.22 (5) (b) 2.** Multiple filters shall be provided to insure compliance with s. NR 110.15(2)(e).

**(5) (c) 1.** Multiple screening units shall be provided to insure compliance with NR 110.15 (2) (e).

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SECTION 30. NR 205.03 (3m) is created to read:

**NR 205.03 (3m)** “Blending” has the meaning specified under s. NR 210.03 (2e).

**Note:** Subsection NR 210.03 (2e) reads: “Blending” means the routing of untreated or partially treated wastewater around a biological treatment process, or a portion of a biological treatment process, within a sewage treatment facility. The routing of untreated or partially treated wastewater around a portion of a biological treatment process is considered to be blending only if the entire wastewater flow has not received biological treatment.

SECTION 31. NR 205.03 (4m) is created to read:

**NR 205.03 (4m)** “Building backup” has the meaning specified under s. NR 210.03 (2m).

**Note:** Subsection NR 210.03 (2m) reads: “Building backup” means an accumulation of sewage in any public or private building caused by blockage, failure or other hydraulic constraint in the sewage collection system or by blockage or failure of the building sewer or private interceptor main sewer.

SECTION 32. NR 205.03 (5) is amended to read:

**NR 205.03 (5)** “Bypass” means the intentional diversion of waste streams from any portion of the treatment works a sewage treatment facility or a wastewater treatment facility. A bypass does not include a building back-up or a combined sewer overflow.

SECTION 33. NR 205.03 (6e), (6m) and (6s) are created to read:

**NR 205.03 (6e)** “Combined sewer overflow” has the meaning specified under s. NR 210.03 (3h):

**Note:** Subsection NR 210.03 (3h) reads: “Combined sewer overflow” means a release of wastewater from a combined sewer system directly into a water of the state or to the land surface.

**(6m)** “Combined sewer system” has the meaning specified under s. NR 210.03 (3p):

**Note:** Subsection NR 210.03 (3p) reads: “Combined sewer system” means a wastewater collection system owned by a municipality that conveys domestic, commercial and industrial wastewater and storm water runoff through a single pipe system to a publicly owned treatment works.

**(6s)** “Combined sewer treatment facility” has the meaning specified under s. NR 110.03 (7s):

**Note:** Subsection NR 110.03 (7s) reads: “Combined sewer treatment facility” means all the structures, pipes and other equipment that constitute the various treatment processes and treatment units employed to reduce pollutants in wastewater from combined sewer systems.

SECTION 34. NR 205.03 (9m) is created to read:

**NR 205.03 (9m)** “Controlled diversion” means the routing of untreated or partially treated wastewater around any treatment unit within a sewage or wastewater treatment facility which is then recombined with undiverted wastewater prior to the effluent sampling location and prior to effluent discharge.

**Note:** Controlled diversions at a sewage treatment facility do not include blending and may occur only in compliance with s. NR 205.07 (1) (v).

SECTION 35. NR 205.03 (31g), (31r), (35e), (35m), (35s), (39g), (39r) and (43m) are created to read:

**NR 205.03 (31g)** “Sanitary sewer overflow” has the meaning specified under s. NR 210.03 (10).

**Note:** Subsection NR 210.03 (10) reads: “Sanitary sewer overflow” means a release of wastewater from a sewage collection system or an interceptor sewer directly into a water of the state or to the land surface.

**(31r)** “Satellite sewage collection system” means a municipally owned or a privately owned sewage collection system that conveys wastewater to another satellite sewage collection system or to another sewerage system that provides wastewater treatment and discharges under a separate WPDES permit.

**(35e)** “Sewage treatment facility” has the meaning specified under s. NR 110.03 (29).

**Note:** Subsection NR 110.03 (29) reads: “Sewage treatment facility” means all the structures, pipes and other equipment that constitute the various treatment processes and treatment units employed to reduce pollutants in sewage.

**(35m)** “Sewage treatment facility overflow” has the meaning specified under s. NR 210.03 (13).

**Note:** Subsection NR 210.03 (13) “Sewage treatment facility overflow” means a release of wastewater from a location within a sewage treatment facility, other than permitted effluent outfall structures, directly to a water of the state or to the land surface. A sewage treatment facility overflow does not include blending, controlled diversions or discharges from permitted combined sewage treatment facility effluent outfall structures.

**(35s)** “Sewerage System” has the meaning specified under s. NR 110.03 (30).

**Note:** Subsection NR 110.03 (30) reads: “Sewerage system” means all structures, conduits and pipes, by which sewage is collected, treated, and disposed of, except plumbing inside and in connection with buildings served, and service pipes, from building to street main.

**(39g)** “Treatment process” has the meaning specified under s. NR 110.03 (32g).

**Note:** Subsection NR 110.03 (32g) “Treatment process” means a physical, biological or chemical action that is applied to wastewater to remove or reduce pollutants. A treatment process may consist of multiple individual treatment units. “Treatment process” includes screening, chemical treatment, sedimentation, biological treatment, filtration, disinfection and sludge digestion.

**(39r)** "Treatment unit" has the meaning specified under s. NR 110.03 (32r).

**Note:** Subsection NR 110.03 (32r) reads: "Treatment unit" means individual structures or equipment within a sewage or wastewater treatment facility that are part of a treatment process. Typical treatment units are screens, clarifiers, aeration tanks, filters, digesters and lagoons.

**(43m)** "Wastewater treatment facility" means all the structures, pipes and other equipment that constitute the various treatment processes and treatment units employed to reduce pollutants in wastewater.

SECTION 36. NR 205.07 (1) (s) (title), 1., 2.a., 3 and 4. are amended to read:

**NR 205.07 (1) (s) Noncompliance — 24-hour reporting and other reporting.** 1. ~~The permittee~~ Sanitary sewer overflows and sewage treatment facility overflows shall be reported in accordance with s. NR 210.21 (4). Permittees shall report any all other noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2. The following are examples of noncompliance incidents that shall be reported within 24 hours in accordance with the requirements in subd. 1.:

a. ~~Any unanticipated~~ Except for a scheduled bypass approved pursuant to s. NR 205.07 (1) (u) 2., any bypass which exceeds any effluent limitation in the permit.

3. The department may waive the written report requirement on a case-by-case basis for reports specified in subd. ~~2~~ 1. if the oral report has been received within 24 hours.

4. The permittee shall report ~~all~~ other instances of noncompliance not reported under ~~par. (r) or subds 1. to 3.~~ subd. 1. at the time discharge monitoring reports are submitted either on the report itself or as an attachment to the report. The reports shall contain the information specified in ~~subds. 1. to 3.~~ subd. 1. and shall be submitted to the department at the intervals specified in the permit.

SECTION 37. NR 205.07 (1) (u) is created to read:

**NR 205.07 (1) (u) Bypassing.** Except for a controlled diversion as provided in par. (v), any bypass is prohibited. The Department may approve the following:

1. 'Blending.' The bypass event is blending at a sewage treatment facility and complies with the requirements of s. NR 210.12.

2. 'Scheduled bypass.' The bypass event is scheduled or anticipated in advance by the permittee and the permittee received prior written approval from the department for the scheduled bypass. A permittee's written request for department approval of a scheduled bypass shall demonstrate that the conditions in subd. 3 are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused

by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action.

**Note:** If the department determines there is significant public interest in the proposed action, the department may schedule a public hearing or notice regarding the proposal for a scheduled bypass.

3. 'Other bypass.' The permittee demonstrates that all of the following apply:

a. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.

**Note:** When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served.

c. The bypass was reported in accordance with par. (s) or the permittee reported in accordance with s. NR 210.21 (4).

**Note:** Pursuant to ss. 283.89 and 283.91, Stats., violations of permit conditions or rule requirements are referred to the department of justice for enforcement.

SECTION 38. NR 205.07 (1) (v) is repealed and recreated to read:

**NR 205.07 (1) (v) *Controlled diversion.*** Controlled diversions are allowed provided the following requirements are met:

1. Effluent from the sewage treatment facility or wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge.

2. A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics.

3. A controlled diversion may occur only when necessary for essential maintenance to assure efficient operation.

**Note:** Sewage treatment facilities that have multiple treatment units to treat variable or seasonal loading conditions may shut down redundant treatment units when necessary for efficient operation.

4. A controlled diversion may not result in a sewage treatment facility or wastewater treatment facility overflow.

5. All instances of controlled diversions shall be documented in sewage treatment facility or wastewater treatment facility records and such records shall be available to the department on request.

SECTION 39. NR 205.07 (2) (d) is repealed.

SECTION 40. NR 205.08 (1) (b) 5. (note) is created to read:

**Note:** Section NR 210.20 requires permit authorization for all satellite sewage collection systems.

SECTION 41. NR 208.03 (1m) is created to read:

**NR 208.03 (1m)** “CMOM” has the meaning specified under NR 210.03 (3d).

**Note:** Subsection NR 210.03 (3d) reads: “CMOM” means a capacity, management, operation and maintenance program under s. NR 210.23.

SECTION 42. NR 208.05 (3) (m) is repealed and recreated to read:

**NR 208.05 (3) (m)** *Sewage collection systems.* 1. Point assignments shall be as follows:

| Criteria   | Points |
|--|--------|
| After the effective date specified in s. NR 210.23 (2), did not have a CMOM program that meets the requirements of s. NR 210.23. <b>OR</b><br>Prior to the effective date specified in s. NR 210.23(2), did not have a documented operation and maintenance or CMOM program. | 30     |

2. Owners of sewage collection systems shall record and maintain information about the operation and maintenance of their sewage collection system, which may include the following: cleaning, root removal, flow monitoring, smoke testing, sewer line televising, manhole inspections, lift station servicing, manhole rehabilitation, mainline rehabilitation, private sewer inspections, private sewer infiltration/inflow (I/I) removal, precipitation, sanitary sewer overflows, building or basement backups, lift station failures, sewer pipe failures, complaints and any other collection system information deemed important by the owner.

**Note:** Sanitary sewer overflow occurrences and sewage treatment facility overflow occurrences are reported under s. NR 210.21 (4). Additional reporting requirements under this chapter are required under s. NR 208.06 (1) (b). The department may initiate enforcement action under s. 283.89, Stats., for any sanitary sewer overflow or sewage treatment facility overflow.

SECTION 43. NR 208.06 (1) is amended to read:

**NR 208.06 (1) OWNER REVIEW.** (a) The owner of the wastewater treatment works shall review and complete all applicable CMAR sections. The owner submitting a CMAR under this chapter shall provide a response for individual CMAR sections when required pursuant to table 1 and this section.

(b) Sanitary sewer collection system owners shall review the total number of sanitary sewer overflow occurrences and sewage treatment facility overflow occurrences for the year as reported under s. NR 210.21 (4) and, if overflows are reported, provide a response of actions taken or underway to reduce or eliminate such occurrences in the future.

SECTION 44. NR 210 Subchapter I (title) to precede NR 210.01 is created to read:

SUBCHAPTER I - GENERAL

SECTION 45. NR 210.01 is amended to read:

**NR 210.01 Purpose.** The purpose of this chapter is to establish effluent limitations, performance requirements and monitoring provisions to be used in permits for discharges from publicly owned treatment works and privately owned domestic sewage treatment works. ~~under s. 283.13 (4) and (5) and 283.55 (1) Stats.~~

SECTION 46. NR 210.02 is repealed and recreated to read:

**NR 210.02 Applicability.** This chapter applies to all publicly owned treatment works and privately owned domestic sewage treatment works.

SECTION 47. NR 210.03 (intro.) is amended to read:

**NR 210.03 Definitions.** The definitions of terms and meanings of abbreviations used in this chapter are set forth in ~~s. 283.62~~ s. 283.01, Stats., chs. NR 205 and NR 218 and as follows:

SECTION 48. NR 210.03 (2e), (2m), and (2s) are created to read:

**NR 210.03 (2e)** “Blending” means the routing of untreated or partially treated wastewater around a biological treatment process, or a portion of a biological treatment process, within a sewage treatment facility. The routing of untreated or partially treated wastewater around a portion of a biological treatment process is considered to be blending only if the entire wastewater flow has not received biological treatment.

**(2m)** “Building backup” means an accumulation of sewage in any public or private building caused by blockage, failure or other hydraulic constraint in the sewage collection system or by blockage or failure of the building sewer or private interceptor main sewer.

**Note:** The discharge from a building sewer or private interceptor main sewer directly to a water of the state may be a sanitary sewer overflow and may be subject to the WPDES permit requirements of ch. 283, Stats.

**(2s)** “Building sewer” has the meaning specified under s. NR 110.03 (6s).

**Note:** Subsection NR 110.03 (6s) reads: “Building sewer” means that part of the drain system not within or under a building which conveys its discharge to a public sewer, private interceptor main sewer, private onsite wastewater treatment system or other point of discharge or dispersal.

SECTION 49. NR 210.03 (3d), (3h), (3p), (3t), (6e), (6m), (6s) and (8m) are created to read:

**NR 210.03 (3d)** “CMOM” means a capacity, management, operation and maintenance program under s. NR 210.23.

**(3h)** “Combined sewer overflow” means a release of wastewater from a combined sewer system directly into a water of the state or to the land surface.

**(3p)** “Combined sewer system” means a wastewater collection system owned by a municipality that conveys domestic, commercial and industrial wastewater and storm water runoff through a single pipe system to a publicly owned treatment works.

**(3t)** “Combined sewer treatment facility” has the meaning specified under s. NR 110.03 (7s):

**Note:** Subsection NR 110.03 (7s) reads: “Combined sewer treatment facility” means all the structures, pipes and other equipment that constitute the various treatment processes and treatment units employed to reduce pollutants in wastewater from combined sewer systems.

**(6e)** “Hydraulic constraint” means the structural collapse of a sewer, an accumulation of material in a sewer or an insufficiently-sized sewer such that sewage flow is impeded or stopped from flowing downstream.

**(6m)** “Infiltration” has the meaning specified under s. NR 110.03 (16).

**Note:** Subsection NR 110.03 (16) reads: “Infiltration” means water other than wastewater that enters a sewerage system (including sewer service connections) from the ground through such sources as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

**(6s)** “Inflow” has the meaning specified under s. NR 110.03 (17).

**Note:** Subsection NR 110.03 (17) reads: “Inflow” means water other than wastewater that enters a sewerage system (including sewer service connections) from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, sump pumps, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from, infiltration.

**(8m)** “Private interceptor main sewer” has the meaning specified under s. NR 110.03 (26m).

**Note:** Subsection NR 110.03 (26m) reads: “Private interceptor main sewer” means a sewer serving two or more buildings and not part of the municipal sewer system.

SECTION 50. NR 210.03 (9m) is renumbered NR 210.03 (12) and is amended to read:

**NR 210.03 (12)** “Sewage treatment ~~facilities~~facility” has the meaning specified under s. NR 110.03 (29).

**Note:** Subsection NR 110.03 (29) reads: “Sewage treatment facility” means all the structures, pipes and other equipment that constitute the various treatment processes and treatment units employed to reduce pollutants in sewage.

SECTION 51. NR 210.03 (10) is renumbered NR 210.03 (16).

SECTION 52. NR 210.03 (10) and (11) are created to read:

**NR 210.03 (10)** “Sanitary sewer overflow” means a release of wastewater from a sewage collection system or an interceptor sewer directly into a water of the state or to the land surface.

**NR 210.03 (11)** “Sewage collection system” has the meaning specified under s. NR 110.03 (28).

**Note:** Subsection NR 110.03 (28) reads: “Sewage collection system” means the common sanitary sewers, interceptor sewers and appurtenant equipment, such as lift stations, within a sewerage system which are primarily

installed to receive wastewaters directly from facilities which convey wastewater from individual structures or from private property, and which include service connection "Y" fittings designed for connection with those facilities. The facilities which convey wastewater from individual structures such as building sewers and private interceptor sewers, from private property to the public sanitary sewer, or its equivalent, are specifically excluded from the definition of "sewage collection system"; except that pumping units and pressurized lines for individual structures or groups of structures are included as part of a "sewage collection system" when such units are cost effective and are owned and maintained by the sewerage system owner.

SECTION 53. NR 210.03 (13) to (15) are created to read:

**NR 210.03 (13)** "Sewage treatment facility overflow" means a release of wastewater from a location within a sewage treatment facility, other than permitted effluent outfall structures, directly to a water of the state or to the land surface. A sewage treatment facility overflow does not include blending, controlled diversions or discharges from permitted combined sewage treatment facility effluent outfall structures.

**NR 210.03 (14)** "Sewer extension" has the meaning specified under s. NR 110.03 (30p).

**Note:** Subsection NR 110.03 (30p) reads: "Sewer extension" means installation of a sewer or interceptor sewer, or extension thereof, to provide additional conveyance capacity and service to development within the existing or proposed tributary area of the extension. Alterations or modifications of existing sewerage systems designed to replace inadequate existing structures or installed because of inadequate hydraulic sewer capacity and that do not extend sanitary sewer service to areas previously not served are not sewer extensions.

**NR 210.03 (15)** "Sewerage System" has the meaning specified under s. NR 110.03 (30).

**Note:** Subsection NR 110.03 (30) reads: "Sewerage system" means all structures, conduits and pipes, by which sewage is collected, treated, and disposed of, except plumbing inside and in connection with buildings served, and service pipes, from building to street main.

SECTION 54. NR 210 Subchapter II (title), to follow s. NR 210.03, is created to read:

#### SUBCHAPTER II – MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS

SECTION 55. NR 210.035 is created to read:

**NR 210.035 Applicability.** This subchapter applies to publicly owned treatment works and privately owned domestic sewage treatment works that discharge to surface waters.

SECTION 56. NR 210, Subchapter III (title), to follow s. NR 210.07, is created to read:

#### SUBCHAPTER III – OPERATIONS, ANALYSES AND REPORTS

SECTION 57. NR 210.08 is amended to read:

**NR 210.08 Emergency Operation.** ~~(1) All sewage treatment works which facilities that are~~ subject to the provisions of this chapter shall be equipped for emergency operation. Emergency power shall be provided in accordance with s. NR 110.15 (5) (d). Sufficient emergency power shall be provided ~~so that~~ such that all the following conditions are met:

(1) All sewage treatment facilities shall, ~~at a minimum, be able to maintain~~ at least the equivalent of primary settling and effluent disinfection under all design conditions.

(2) All sewage treatment facilities discharging to class I, II, or III trout streams, or other critical stream segments as determined by the department, shall be able to operate all units critical to meeting the effluent limits as set forth in the WPDES permit for a minimum emergency period of 24 hours under all design flow conditions.

~~(2) Lift stations shall be provided with emergency operation in accordance with s. NR 110.14 (12).~~

SECTION 58. NR 210.12 is created to read:

**NR 210.12 Blending. (1) FINDINGS.** When issuing a permit, the department may, following review of the permit application and other information provided by the permittee, find that all the following conditions are met:

(a) Excessive flow received at a sewage treatment facility will cause severe property damage if blending is not approved, including damage to the sewage treatment facility which will cause the facility or portions thereof to become inoperable;

(b) The permittee demonstrates, as required by this section, that there are no feasible alternatives to blending such as the use of auxiliary treatment facilities, retention of untreated sewage or the provision of other treatment and operational alternatives, and;

(c) The permittee is required to notify the department of each blending occurrence as provided in subs. (6).

(2) **BLENDING APPROVALS.** Blending is prohibited, but may be approved by the department and included as a specific condition in a permit. Blending may only be approved and included as a condition in a permit when all the following conditions are met:

**Note:** The department may initiate enforcement action under s. 283.89, Stats., for any blending not specifically included as a condition in a permit.

(a) The department determines that blending may be necessary during wet weather and other high flow conditions to avoid severe property damage to the sewage treatment facility. Severe property damage occurs when the facility becomes inoperable due to loss of treatment efficiency from washout of biological media.

(b) The department determines the permittee is effectively implementing a CMOM program designed to reduce, to the maximum extent practicable, the entry of infiltration and inflow into the system, as required in s. NR 210.23.

(c) The department determines at each permit reissuance or permit modification related to the practice of blending that there are no feasible alternatives to the use of the blending, such as the use of auxiliary treatment or storage facilities, retention of untreated wastewater, reduction of excessive flow, use of adequate backup equipment, or an increase in the capacity of the sewage collection system or interceptor system.

**Note:** When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, the relationship between the control of storm water and the control of infiltration and inflow into the

sewage collection system, costs and affordability of implementation and risks to public health, the environment and welfare of the community served by the sewage collection system.

(d) The design of the sewage treatment facility is approved by the department to operate with blending.

(3) CONDITIONS FOR BLENDING. The following requirements shall be met whenever blending is included as a condition in a permit:

(a) Blending may occur temporarily only during wet weather or other high flow conditions when peak wastewater flow to the sewage treatment facility exceeds the maximum design and operating capacity of the biological treatment processes and when necessary to avoid severe property damage to the sewage treatment facility as determined under sub. (2) (a).

(b) Untreated, or partially treated wastewater that is routed around a biological treatment process, or a portion of a biological treatment process shall be recombined with the biologically treated wastewater and the combined flow shall be disinfected, if required by the WPDES permit, prior to discharge.

(c) Effluent from the sewage treatment facility shall be monitored to include all wastewater that is discharged from the facility, including those wastewaters that are diverted around the biological treatment process and shall meet the effluent limitations established in the permit including, at minimum, those limitations specified in s. NR 210.05 (1) (a) to (d).

(4) BLENDING APPROVALS. The department may approve and include a condition in a permit for blending if the permittee operates sewage treatment facilities approved by the department that provide a separate sewage treatment process or processes solely for excess flow or that provide a sewage treatment process as an alternative to a biological treatment process and complies with all other requirements of this section.

(5) PERMIT APPLICATIONS. A permittee may only apply for a department approval to include blending as a permit condition at the time of application for permit reissuance or permit modification. A permittee may use information in a facilities plan approved under ch. NR 110 in its permit application under this subsection. At the time of permit application, a permittee may demonstrate that the relevant information in a previously approved facilities plan is current. If the relevant information in the approved facilities plan is not reflective of current operations, the permittee shall submit new information or may update the facilities plan with new information that demonstrates there are no feasible alternatives to the use of blending.

(6) REPORTING. Any blending under this section shall be reported to the department by telephone, fax or email no later than 24 hours from the time each blending operation ceases at the sewage treatment facility, including operation of an alternative treatment process as provided in sub. (4). Permittees shall also report the time, duration and volume of wastewater routed around the biological treatment process, or routed through an alternative treatment process as provided in sub. (4), on the wastewater discharge monitoring report form required by the permit. These reporting requirements shall apply whether blending was or was not included as a condition in the permit.

SECTION 59. NR 210 Subchapter IV (title), to follow NR 210.13, is created to read:

SUBCHAPTER 1V – OVERFLOWS AND SEWAGE COLLECTION SYSTEMS

SECTION 60. NR 210.19, 210.20, 210.205, 210.21, 210.22, 210.23, 210.24 and 210.25 are created to read:

**NR 210.19 Applicability.** This subchapter applies to all publicly owned treatment works and privately owned domestic treatment works that own and operate a sewage collection system, including satellite sewage collection systems

**Note:** Chapter NR 114 may require the certification of operators for sewage collection systems subject to the requirements of this subchapter.

**NR 210.20. Permits for satellite sewage collection systems.** All municipally owned satellite sewage collection systems shall be operated under the authorization of a general permit or an individual permit issued by the department. The department may require privately owned satellite sewage collection systems to be operated under the authorization of a general permit or an individual permit issued by the department if the department determines a permit is necessary to assure compliance with the requirements of this subchapter. General permits shall be issued following the procedures in s. NR 205.08 and shall require compliance with all applicable provisions of this subchapter. The department may issue an individual permit, including a compliance schedule for sewage collection system investigations and sewage collection system modifications, when necessary to assure compliance with the requirements of chapter.

**NR 210.205. Combined sewer systems and overflows.** Permittees that own and operate combined sewer systems, including combined sewage treatment facilities, shall comply with the specific requirements contained in the WPDES permit. Permittees that operate a combined sewer system shall be subject to the requirements of ss. NR 210.23 and NR 210.24. Discharges from combined sewer systems and overflows from combined sewage treatment facilities shall be reported to the department as required in the WPDES permit and the public shall be notified of such discharges in accordance with the emergency response plan required under s. NR 210.23 (4) (f). The department may require the permittee to notify the owner of a drinking water intake located in a surface water receiving any discharges from combined sewer systems. **CORRECTED**

**Note:** The department may consult with the requirements of 33 U.S.C. 1342 and U. S. environmental protection agency guidance when establishing permit conditions for combined sewer systems.

**NR 210.21. Sanitary sewer overflows and sewage treatment facility overflows. (1)** PROHIBITED OVERFLOWS. Sanitary sewer overflows and sewage treatment facility overflows are prohibited and may not be approved by the department nor authorized in a permit issued by the department. If applicable to an overflow event, permittees shall provide information that will enable the department to determine whether any of the following conditions exist:

**Note:** When used without qualification in this chapter, the word overflow includes both sanitary sewer overflow and sewage treatment facility overflow.

(a) The sanitary sewer overflow or sewage treatment facility overflow was unavoidable to prevent loss of life, personal injury or severe property damage.

(b) There were no feasible alternatives to the sanitary sewer overflow or sewage treatment facility overflow such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or preventative maintenance activities.

**Note:** When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, the relationship between the control of storm water and the control of infiltration and inflow into the

sewage collection system, costs and affordability of implementation and risks to public health, the environment and welfare of the community served by the sewage collection system.

(c) The sanitary sewer overflow or the sewage treatment facility overflow was caused by unusual or severe weather related conditions such as large or successive precipitation events, snowmelt, saturated soil conditions, or severe weather occurring in the area served by the sewage collection system or sewage treatment facility.

(d) The sanitary sewer overflow or the sewage treatment facility overflow was unintentional, temporary, and caused by an accident or other factors beyond the reasonable control of the permittee.

**(2) DEPARTMENT RESPONSE.** If a prohibited sanitary sewer overflow or sewage treatment facility overflow occurs, the department may, in addition to the factors provided in sub. (1), also consider the following factors in any enforcement action or response:

(a) The permittee's activities in implementing a capacity, management, operation and maintenance (CMOM) program, or a functionally equivalent program, that meets the requirements in s. NR 210.23.

(b) The status of preparation of a system evaluation and capacity assurance plan, or a functionally equivalent plan that meets the requirements of s. NR 110.10 (4), that may be required under s. NR 210.24.

(c) The status of implementation of an approved system evaluation and capacity assurance plan, or a functionally equivalent plan that meets the requirements of s. NR 110.10 (4), that may be required under s. NR 210.24.

(d) The status of planning or implementation of specific actions that conform to an approved facilities plan under s. NR 110.08, s. NR 110.09 and s. NR 110.10 and that meet the requirements of this chapter and s. NR 205.07 (1) (u).

(e) The status of planning or implementation of specific actions required by a WPDES permit, or other legally binding document, to construct or implement projects that will address the cause of the sanitary sewer overflow or sewage treatment facility overflow.

**Note:** The department may initiate enforcement action under s. 283.89, Stats., for any sanitary sewer overflow or sewage treatment facility overflow.

**(3) PERMITTEE RESPONSE TO OVERFLOWS.** Whenever a sanitary sewer overflow or sewage treatment facility overflow occurs, the permittee shall take all feasible steps to control or limit the volume of untreated or partially treated wastewater discharged, and terminate the discharge as soon as practicable. Remedial actions shall be implemented consistent with an emergency response plan developed under s. NR 210.23 (4) (f). Remedial actions may include the following:

(a) Interception and rerouting of untreated or partially treated wastewater around the point of failure, if that failure is in the sewage collection system.

(b) Use of vacuum trucks or other appropriate mechanisms to recover as much of the wastewater discharged as possible and properly dispose of such wastewater and wash down water.

(c) Cleanup of debris at the overflow site.

(d) Adequate sampling to determine the amount, characteristics and impact of the overflow.

(4) PERMITTEE REPORTING. Permittees shall report all sanitary sewer overflows and sewage treatment overflows as follows:

(a) The permittee shall notify the department by telephone, fax or email as soon as practicable, but no later than 24 hours from the time the permittee becomes aware of the overflow.

(b) The permittee shall, no later than five days from the time the permittee becomes aware of the overflow, provide to the department the information identified in this paragraph using department form number 3400-184. If an overflow lasts for more than five days, an initial report shall be submitted within 5 days as required in this paragraph and an updated report submitted following cessation of the overflow. At a minimum, the following information shall be included in the report:

1. The date and location of the overflow.
2. The surface water to which the discharge occurred, if any.
3. The duration of the overflow and an estimate of the volume of the overflow.
4. A description of the sewer system or treatment facility component from which the discharge occurred such as manhole, lift station, constructed overflow pipe, or crack or other opening in a pipe.
5. The estimated date and time when the overflow began and stopped or will be stopped.
6. The cause or suspected cause of the overflow including, if appropriate, precipitation, runoff conditions, areas of flooding, soil moisture and other relevant information.
7. Steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps.
8. A description of the actual or potential for human exposure and contact with the wastewater from the overflow.
9. Steps taken or planned to mitigate the impacts of the overflow and a schedule of major milestones for those steps.
10. To the extent known at the time of reporting, the number and location of building backups caused by excessive flow or other hydraulic constraints in the sewage collection system that occurred concurrently with the sanitary sewer overflow and that were within the same area of the sewage collection system as the sanitary sewer overflow.
11. The reason the overflow occurred or explanation of other contributing circumstances that resulted in the overflow event. This includes any information available under sub. (1), including whether the overflow was unavoidable to prevent loss of life, personal injury, or severe property damage and whether there were feasible alternatives to the overflow

**Note:** A copy of form 3400-184 for reporting sanitary sewer overflows and sewage treatment facility overflows may be obtained from the department or accessed on the department's web site at <http://www.dnr.wi.gov/org/water/wm/ww/form3400184.htm>. As indicated on the form, additional information may be submitted to supplement the information required by the form.

(c) The permittee shall identify each specific location and each day on which a sanitary sewer overflow or sewage treatment facility overflow occurs as a discrete sanitary sewer overflow or sewage treatment facility overflow occurrence. An occurrence may be more than one day if the circumstances causing the sanitary sewer overflow or sewage treatment facility overflow results in a discharge duration of greater than 24 hours. If there is a stop and restart of the overflow at the same location within 24 hours and the overflow is caused by the same circumstance, it may be reported as one occurrence. Sanitary sewer overflow occurrences at a specific location that are separated by more than 24 hours shall be reported as separate occurrences.

(d) A permittee that is required to submit wastewater discharge monitoring reports under NR 205.07 (1) (r) shall also report all sanitary sewer overflows and sewage treatment facility overflows on that report.

(e) Satellite sewage collection system permittees shall submit reports required under this subsection to all owners of sewerage systems which receive wastewater from the satellite sewage collection system.

(5) PUBLIC NOTIFICATION. A permittee shall notify the public of any sanitary sewer and sewage treatment facility overflows consistent with its emergency response plan required under s. NR 210.23 (4) (f). Such public notification shall occur promptly following any overflow event using the most effective and efficient communications available in the community. At minimum, a daily newspaper of general circulation in the county(s) and municipality whose waters may be affected by the overflow shall be notified by written or electronic communication.

(6) NOTIFICATION OF DRINKING WATER SYSTEM OWNERS. The department may require the permittee to notify the owner of a drinking water intake located in a surface water receiving any sanitary sewer overflows and sewage treatment facility overflows. Such conditions shall be included in the WPDES permit.

**NR 210.22 Building Backups.** (1) Except for the reporting requirement established in s. NR 210.21 (4) (b) 10., building backups shall be subject only to requirements of this section.

(2) A building backup caused by the blockage or failure of the building sewer or any other component of a plumbing system as defined in s. SPS 381.01 (179), and discrete or individual building backups caused, or primarily caused, by excessive flow or hydraulic constraints within the sewage collection system shall not be subject to the requirements of s. NR 210.21 (1).

**Note:** Subsection SPS 381.01 (179) reads: "Plumbing system" includes the water supply system, the drain system, the vent system, plumbing fixtures, plumbing appliances and plumbing appurtenances that serve a building, structure or premises.

(3) Whenever there are recurring building backups caused, or primarily caused, by excessive flow or hydraulic constraints within a sewage collection system, the department may reissue or modify a WPDES permit to require actions by the permittee, including preparation and implementation of a system evaluation and capacity assurance plan as provided in s. NR 210.24, to reduce or eliminate such recurring building backups.

(4) Whenever there are building backups caused, or primarily caused, by excessive flow or hydraulic constraints within the sewage collection system and there are no sanitary sewer overflows

within the same part of the sewage collection system, the building backups shall be reported in accordance with the requirements of ch. NR 208.

**NR 210.23 Capacity, Management, Operation and Maintenance Programs. (1) CMOM PROGRAM REQUIRED.** All permittees subject to this chapter, including the owners of satellite sewage collection systems and combined sewer systems, shall implement a capacity, management, operation and maintenance program.

(2) **IMPLEMENTATION DEADLINE.** The holder of a WPDES permit shall implement a capacity, management, operation and maintenance program under this section no later than the first day of the 36<sup>th</sup> month beginning after the effective date of this subsection [Legislative Reference Bureau inserts date] or no later than an earlier date specified in the permit.

(3) **GENERAL STANDARDS.** A CMOM program shall ensure the following general standards are met:

(a) The sewage collection system is properly managed, operated and maintained at all times.

(b) The sewage collection system provides adequate capacity to convey all peak design flows.

(c) All feasible steps are taken to eliminate excessive infiltration and inflow as defined in s. NR 110.03 (14), cease sanitary sewer overflows and sewage treatment facility overflows and mitigate the impact of such overflows on waters of the state, the environment and public health.

**Note:** When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, the relationship between the control of storm water and the control of infiltration/inflow into the sewage collection system, costs and affordability of implementation and risks to public health, the environment and welfare of the community served by the sewage collection system.

(d) A process is in place to notify the public and other directly affected parties of any incidents of overflows from the sewerage system.

(e) Annual reports are submitted in accordance with the provisions of ch. NR 208.

(4) **COMPONENTS OF CMOM PROGRAM.**

(a) *Goals.* Major goals of the CMOM program shall be consistent with the general standards identified in sub. (3).

(b) *Organization.* Persons who are responsible for implementing the CMOM program shall be identified including administration, management and maintenance personnel or positions, lines of authority of such personnel or positions, internal and external communication responsibilities and the person or persons who shall report all overflow events to the department and to the public according to s. NR 210.21 (3) to (6).

(c) *Legal authority.* Legally binding authorities, such as sewer use ordinances and service agreements, shall ensure the following:

1. Infiltration and inflow sources, including infiltration and inflow into building sewers, private interceptor sewers or other such sources on private property, are subject to oversight and control, as necessary.

2. New sewers and connections, including building sewers and private interceptor sewers are designed, constructed, installed, tested and inspected to meet all applicable current engineering and construction standards.

3. New and rehabilitated sewers, lift stations and other collection system components or appurtenances are installed, tested and inspected to meet all applicable current standards.

4. If applicable, sewage flows from municipal satellite or other privately owned sewage collection systems are, as necessary, monitored and controlled. Notwithstanding all other provisions of this chapter, any publicly owned treatment works may establish specific requirements to regulate sewage flows from satellite sewage collection systems.

5. Solid or viscous pollutants, such as fats, oils and greases, are not discharged into the sewage collection system in amounts that will cause or contribute to obstruction to the flow in the sewer.

**Note:** This provision is similar to that contained in s. NR 211.20 (2) (c).

6. Procedures are in place to implement enforcement actions for non-compliance with established legal authorities.

(d) *Operation and maintenance.* Operation and maintenance equipment, activities and protocols, including identification of personnel or positions responsible, shall, as appropriate and applicable to the system, include the following:

1. Adequate maintenance facilities and equipment including equipment and replacement parts inventories, especially critical replacement parts.

2. A map of the sewage collection system.

**Note:** A geographic information system-based map of the sewage collection system meets this requirement.

3. A management system for the collection and use of information to identify and prioritize appropriate operation and maintenance activities, including identification of structural deficiencies and implementation actions to address such deficiencies.

4. A description of routine preventive operation and maintenance activities such as inspections, televising, cleaning, flow monitoring, root removal, and rehabilitation.

**Note:** Protocols for cleaning sewers should include methods for disposal of sand, grit and other solids in a manner that will not contaminate surface water or groundwater or create a risk to public health. Proper disposal of such material includes, but is not limited to, placement in a licensed solid waste landfill, return of the material to the headworks of the sewage treatment facility or placing the material in a properly designed and operated treatment unit.

5. A program to periodically assess the capacity of the sewage collection system and treatment facilities.

6. The identification of activities to prevent and correct frequent and recurring building backups caused by sewage collection system hydraulic constraints.

7. Appropriate training on a regular basis.

(e) *Design and performance standards.* The following standards and procedures shall be established or adopted to maintain control over the design, construction and inspection of the sewage collection system, including building sewers and private interceptor sewers on private property:

1. Standards and specifications for the design and installation of new sewers, lift stations and other appurtenances; and rehabilitation and repair projects.

**Note:** Chapter NR 110 must be followed when designing and constructing sewage collection systems. Chapter SPS 382 must be followed when designing and constructing plumbing. Permittees may have supplemental standards and requirements specific to community needs.

2. Procedures and requirements for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

(f) *Overflow emergency response plan.* An overflow emergency response plan shall identify measures to protect public health and the environment from sanitary sewer overflows and sewage treatment facility overflows and building backups caused by excessive flow or other hydraulic constraints in the sewage collection system and shall include protocols to ensure the following:

1. Responsible personnel are made aware of all overflows.

2. There is a prompt and appropriate response to and investigation of all overflows to protect, to the extent possible, water quality, the environment and public health.

3. There is appropriate reporting and notification as required under s. NR 210.21 (4) to (6). The overflow emergency response plan shall identify the public health and other officials who will receive notification and identify the protocols and procedures for notification of the public who may be affected by an overflow. Whenever there is a significant or potentially significant risk to public health, public notification shall include personal contacts with persons who may be at risk from the affects of the overflow.

**Note:** To the extent practicable, local public health and other responsible officials should be consulted in developing those portions of the overflow emergency response plan that involve reporting and notification of those officials. Permittees should consider use of the following communication methods when establishing public notification protocols: electronic mail or other electronic communication, posting on internet web sites, notification of local print and media (television, radio) outlets, posting notices on public buildings, personal notification, etc.

4. Appropriate personnel are aware of and follow the plan and are appropriately trained.

5. Emergency operations appropriate to the event are implemented.

(5) **CMOM PROGRAM DOCUMENTATION AND AUDIT.** All permittees subject to the requirements of this section shall do all of the following:

(a) Develop and maintain written documentation of the CMOM program components. Such documentation shall be available for department review on request. The department may request a permittee to provide this documentation or prepare a summary of the permittee's CMOM program at the time of application for reissuance of a WPDES permit.

**Note:** Annual verification of CMOM program documentation is required under ch. NR 208.

(b) At least annually conduct a self-audit of activities conducted under the permittee's CMOM program to ensure CMOM components are being implemented as necessary to meet the standards in sub. (3).

(6) **EXCEPTIONS.** If the owner of a sewage collection system believes any component part or parts of the CMOM program requirements in this section are not appropriate or applicable for a specific sewage collection system, the CMOM program documentation required under sub. (5) shall fully explain why that component part is not applicable.

(7) **COMPLIANCE.** Whenever a permittee's CMOM program does not meet the conditions established under this section, including the identification of and explanation for exceptions identified in subs. (6), the department may require specific actions to establish and implement a CMOM program or component parts of a CMOM program. The specific requirements may be included as conditions in a permit.

**NR 210.24 System Evaluation and Capacity Assurance Plan.** (1) The department may require permittees that own and operate a sewerage system to prepare and implement a system evaluation and capacity assurance plan that meets the requirements in NR 110.10 (4) whenever the department determines that one or more of the following conditions exists:

(a) Noncompliance with the prohibitions in s. NR 210.21 (1).

(b) Noncompliance with effluent limitations at the sewage treatment facility caused by excessive flow.

(c) Implementation of the CMOM program requirements in s. NR 210.23 is not sufficient to attain the requirements of s. NR 210.21 (1).

(d) Frequent or recurring building backups caused by excessive flow or other hydraulic constraints in the sewerage system.

(e) A system evaluation and capacity assurance plan is necessary to determine if the conditions of NR 210.21 (1) (a) to (d) exist.

(2) The system evaluation and capacity assurance plan is subject to review and approval under s. 281.41, Stats.

(3) The department may include in a permit compliance schedules that require implementation of actions contained in an approved system evaluation and capacity assurance plan and that are determined necessary to meet the requirements of this chapter.

(4) Permittees that are implementing actions to conform with an approved facilities plan under s. NR 110.08, s. NR 110.09 and s. NR 110.10 and that, when such facilities plan is implemented, will meet the requirements of this chapter and s. NR 205.07 (1) (u) shall not be subject to the requirements of this section.

**NR 210.25 Emergency Operation – Lift Stations.** All lift stations that are a component of a sewage collection system shall be equipped for emergency operation in accordance with NR 110.14 (12).

November 2, 2012

SECTION 61. 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 62. BOARD ADOPTION. The forgoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on \_\_\_\_\_.

Dated at Madison, Wisconsin \_\_\_\_\_

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Cathy Stepp, Secretary