Report From Agency

REPORT TO LEGISLATURE
NR 809, 810 & 811, Wis. Adm. Code

Board Order No. DG-19-09
Clearinghouse Rule No. 09-073

Basis and Purpose of the Proposed Rule:
Federal Rule Changes – Four Federal Rules under the Safe Drinking Water Act have been revised changing drinking water quality standards, monitoring requirements, and public notice requirements. In order for Wisconsin to retain primacy for implementing the Safe Drinking Water Act, the state rules must be as stringent as the federal rules. Retaining primacy affords the state flexibility for implementation and enforcement of the federal rules.

Safer Drinking Water – The federal rules increase the monitoring and improve the level of treatment required for drinking water systems. Disinfection of water provided by municipal systems addresses concerns raised by research indicating viruses are present in wells that were believed to be adequately protected.

Ease of Compliance – Restructuring the rules allows water system owners, operators, and designers to more easily identify the requirements that apply. Incorporating new technology provides more options for achieving compliance with the regulations.

Summary of Public Comments
The Department held five public hearings in Waukesha, Green Bay, Madison, Eau Claire and Spooner in October 2009 to receive comments on the proposed rule changes. In addition, written comments were received by the Department until November 11, 2009. We received comments from: Wisconsin Department of Commerce, Davy Laboratories, Wisconsin Rural Water Association, Village of Kewaskum, City of La Crosse, Municipal Environmental Group, Wisconsin Water Association, Manitowoc Public Utilities, League of Wisconsin Municipalities, City of Brookfield, Watertown Water Department, Marshfield Utilities, Racine Water & Wastewater Utility, Oshkosh Utilities, Madison Water Utility, Margaret Elath, Ductile Iron Pipe Research Association, Milwaukee Water Works, HydroDesigns, Town of Bristol, Barron Light & Water Department, City of Augusta, City of Merrill, City of Janesville, Wausau Water Works, U.S. Pipe and Foundry Co., Darboy Joint Sanitary District, North Shore Water Commission, Fox Point Water Utility, Wauwatosa Water Utility and Jon Standridge.

Specific public comments and summaries of public comments along with DNR responses are provided below:

NR 809
Comment: The proposed rule changes did not make this code revision any easier to understand. NR 809 continues to be a nightmare to read and interpret. The entire code needs to be revisited and changed. There is no reason why the code can't be separated into five sections. Section 1 – General Information that is not specific for any one regulated entity. Then there should be four additional sections: Section 2 – Municipal Community system (MC) Section 3 – Other than Community Systems (OTM), Section 4 – Non-transient Non-Community Systems (MC) and then Section 5 – Transient Non-Community Systems (TN). [Davy Laboratories].

Response: The department consulted with a stakeholder group and individual work groups for each code chapter throughout the revision process and was not asked to proceed in the direction suggested. Within each section of the code, the applicability is clarified as to the types of systems impacted. Dividing the code as suggested would result in significant redundancy.

Comment: The definition of a public water system, or PWS is appropriate to chapter NR 809 however the definition should be clear that it is referring to a "water system". In order to do that, Commerce recommends that the term "water system" be inserted in the definition. [Wisconsin Department of Commerce].

Response: The definition of "public water system" in ch. NR 809 is required by EPA and is adopted from the federal rule. The addition of the word water in front of system in the definition of public water system is not needed when the definition is read in its entirety.

Comment: NR 809.04 to be consistent with other chapter revisions the definition of a "water system" should be included in chapter NR 809 [*sic*]. This revision not only creates consistency between the DNR codes, but clarifies that the public water systems do not include the private water mains, water services and water distribution systems under the authority of Commerce. [Wisconsin Department of Commerce].

Response: The definition of distribution system has been added to ch. NR 809 to be consistent with other DNR codes and to help distinguish between the authorities of the DNR and the Department of Commerce.

Comment: NR 809.08(5) – How can the WDNR require a system to comply with a detected concentration below the MCL but above the MCLG? Has this been legally challenged? If I have a detected concentration below the MCL or below some action limit of the MCL but still above the MCLG, why should I have anything further to do? [Davy Laboratories].

Response: MCLs are based both on protection of public health and economic factors related to treatment whereas MCLGs take only public health into account. In s. NR 809.08(5), the system needs to take a confirmation sample if a contaminant is detected above the MCLG but below the MCL. If the contaminant is confirmed, and following a determination by the department on the need for further action, the water supplier would provide public information to its customers concerning the analytical results and the health effects of ingesting the substance at the concentration found. The department may also require that an assessment of the significance of the contamination be done by the public water system. If that assessment indicates the need for installing treatment or finding an alternate water supply, the department would require that. This section of the code is often used in cases where contamination is rising and will probably in the future exceed the MCL and the system needs to begin looking for a new source or determining if treatment is viable. This section has not been legally challenged. The department tries to work with public water systems to anticipate the need for alternate water supplies and treatment since the planning process can take years in some cases. This section is indicative of the purpose of this chapter to protect public heath.

Comment: NR 809.113(2) – Are your temperatures for other parameters correct? I believe the EPA raised the preservation temperature to 6° C. [Davy Laboratories].

Response: On March 12, 2007, EPA published "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; National Primary Drinking Water Regulations; and National Secondary Drinking Water Regulations; Analysis and Sampling Procedures; Final Rule" in which EPA did raise the preservation temperature from 4°C to 6°C. In addition, on March 26th, 2007, "Guidelines Establishing Test Procedures for the Analysis of Pollutants; Analytical Methods for Biological Pollutants in Wastewater and Sewage Sludge; Final Rule" was published in which this change to preservation temperature was made. However, a corresponding change has not been made to the preservation table in 40 CFR 141.23(k)(2) for drinking water. Therefore, we are not able to change the preservation holding temperature to 6° C in s. NR 809.113(2), since our rule can be no less stringent than the current federal rule.

Comment: NR 809.113(4) – Compositing sampling. There must be some criteria to be met before you can composite. Don't the wells have to be in the same aquifer and have the same water quality? Unclear what criteria is required to be met before one can composite. If not being done, eliminate it. [Davy Laboratories].

Response: EPA has not provided any specific criteria to determine when compositing can be used. The disinfection by-products Stage 1 portion of the rule uses wells within the same aquifer for determining the number of compliance samples required to be taken in the distribution system. When the Stage 2 compliance monitoring begins in 2012, sample frequency and numbers will be determined by population not by source water characteristics. At this point, the department has tried to maximize monitoring relief for systems using the monitoring waiver program instead of using the compositing of samples on an area basis.

Comment: NR 809.113(4)(e) – I'm not sure what the detection limit means. Is this detection limit a minimum detection limit required by the laboratory to meet [*sic*]? Why do you have different detection limit [*sic*] for different techniques? If a required detection limit is based on meeting 1/10 of the MCL, then why the differences? If the detection level is based on technique, then that is outside the scope of NR 809 and not relevant. Detection levels should only be addressed as a function of the laboratory to be below some factor of the MCL for certification. [Davy Laboratories].

Response: The detection limits in s. NR 809.113(4)(e) are the levels that EPA requires laboratories to achieve when analyzing samples to meet requirements under the safe drinking water act. This language is required under our primacy agreement with EPA.

Comment: NR 809.120(2) - Why is total trihalomethanes listed under synthetic organics? Shouldn't this be addressed under volatile organic compounds? [Davy Laboratories].

Response: The total trihalomethanes should not be in this table. They have been removed.

Comment: NR 809.120(4) - Shouldn't 524.3 be added to the list of parameter/method list? [Davy Laboratories].

Response: Yes. We have added 524.3 to the appropriate methods for the covered parameters, since we are unable to refer to methods approved by the EPA under Appendix A to Subpart C of Part 141--Alternative Testing Methods Approved for Analyses Under the Safe Drinking Water Act.

Comment: NR 809.30(1)(b) - "For a system which collects fewer than 40 samples per month, if no more than one sample, including routine and repeat samples collected during a monitoring period is total coliform-positive, the system is in compliance with the MCL for total coliforms". This states that if one sample one per month fails, I'm in compliance. Is this true? [Davy Laboratories].

Response: Yes. A system that takes less than 40 total coliform compliance samples per month must have 2 positive total coliform samples to exceed the MCL.

Comment: NR 809.30(5) - Who is doing heterotrophic bacteria? Why is it here? [Davy Laboratories].

Response: Heterotrophic bacteria plate counts are used for systems with recurring bacteria problems to help determine the severity of the problem and to try to identify the cause. It has been used most often in municipal public water systems with significant biofilm problems.

Comment: NR 809.31 (2)(a) - A system required to sample less than one sample per month is required to sample 4 sites? I thought the groundwater rule changed and required three samples with a fourth coming from the raw water source (i.e. Well)? It is not clear whether it's a distribution system or not[*sic*]. This entire section is poorly written and needs to be put into a table based on type of community. [Davy Laboratories].

Response: Under the groundwater rule, systems that take 4 repeat samples under the Total Coliform Rule (TCR) may use one repeat sample to fulfill the triggered monitoring sample if that repeat sample is taken from a source/well associated with the positive distribution system sample. Only non-municipal systems that collect one TCR sample or less per month may use this provision.

Comment: NR 809.31 (2)(f) - An additional 5 routine the next month following a violation is excessive. [Davy Laboratories].

Response: This is a requirement of the Safe Drinking Water Act. The Department can be no less stringent than the federal law.

Comment: NR 809.311 (1) - Are you serious? Standard Methods is up to the 23rd edition. Are you sure the 18th edition is still correct? [Davy Laboratories].

Response: The citation has been updated to include the 19th and 20th editions as found in 40 CFR 141.21(f)(3). The federal language only includes those three editions in the citations under the Total Coliform Rule.

Comment: NR 809.323(1)(c) - Table G Note 1. Sample should be required to be below 10°C. [Davy Laboratories].

Response: The footnote has been deleted from Table G.

Comment: NR 809.335(3) - Turbidity measurement shall be made by a party approved by the department? What does this mean? Why not just say a Certified lab? [Davy Laboratories].

Response: The federal code language allows for a number of field parameters to be done by individuals approved by the department. We have approved the water system operators to do these analyses. Since turbidity samples are subject to changes the longer they sit between collection and analysis, these samples are done in the field by the water system operators.

Comment: NR 809.541 (3) - Analyses for all water quality parameters should come from a certified laboratory. This information is critical for developing a corrosion control program and a demonstrated

ability to accurate[*sic*] measure these parameters should not be compromised with an "anybody can do it" mentality. [Davy Laboratories]

Response: The Department requires water quality parameters to be analyzed by the approved methods in s. NR 809.113 Table A.

Comment: NR 809.541 (5)(a)(b) - Why should the levels of lead and copper below the MDL be reported as zero (0) versus "less than" the MDL. [Davy Laboratories].

Response: EPA requires that any results for lead and copper that are below the MDL must be reported as zero (0).

Comment: NR 809.542(2)(a) - I don't think any system that has had to implement corrosion control practices has been required to routinely check their waste system to make sure that corrosion control practices are being maintained. Why not? [Davy Laboratories].

Response: The above referenced section does not pertain to checking wastewater to make sure corrosion practices are maintained. EPA uses water quality parameters to determine if corrosion control practices are maintained. The above section allows us to consider corrosion control optimized if tap samples meet the action levels at the 90th percentile for 2 consecutive 6-month monitoring periods. Lead or copper levels in wastewater are a condition of the wastewater discharge permit.

Comment: NR 809.542(4)(a-g) - What is with these treatment deadlines? Section should be either eliminated or updated. [Davy Laboratories].

Response: The dates are part of the federal regulations. Our state regulations cannot be less stringent than the federal regulations, so the dates must remain in the code.

Comment: NR 809.543(3)(c) - How often should this be done? Who is requiring this and how is it tracked? Are compliance schedules sent out with report forms? NR 809.548(5)(e) - The frequency of monitoring for water quality parameters is not being enforced at the frequency stated. I know of several communities that have not checked their water quality parameters since implementing corrosion control. Why hasn't this been enforced? [Davy Laboratories].

Response: The section above refers to water quality parameters collected as part of a corrosion control study at a large water system, or when required by the department. In this context, the samples should be collected at locations and frequencies that would demonstrate the effectiveness of the corrosion control treatment being evaluated. There are typical procedures for performing pipe loop and coupon corrosion studies. Other water quality parameters are required for large systems, and for medium or small systems that exceed a lead or copper action level. The number and frequency of these samples is specified in s. NR 809.548. The department tracks requirements and compliance with these schedules in drinking water system (DWS) database. Compliance for water quality parameters is tracked on a 6-month basis.

Comment: NR 809.543(8) - How often should this be done? Who is requiring this and how is it tracked? Are compliance schedules sent out with report forms? [Davy Laboratories].

Response: Compliance for water quality parameters is tracked on a 6-month basis. The data is reported to the department on the system’s monthly operating reports, along with other operational data.

Comment: NR 809.546(1) - Put this in the appendix as an example. Not in a good place and should be in a letter format. [Davy Laboratories].

Response: We allow the system to determine its preferred format for distributing the information. The specific language is required by EPA.

Comment: NR 809.547(1)(c) - The tier sampling site information is a joke. Few communities have neither [*sic*] actually looked at their building records nor is anyone from the department going to take the time to check the records. NO attempt to verify these records have b[*sic*] portably [*sic*] been done, [*sic]* Furthermore, when submitting data to the laboratories, the systems don't check the tier site. Additionally, the web based data entry system doesn't request this information so why is it here? If it is not being verified for compliance then eliminate this section. [Davy Laboratories].

Response: The tier structure was established to identify sites at highest risk for finding lead. It has been the department's experience in dealing with utilities that many have access to accurate building records, plumbing records, street repair records, etc, and reviewed these records when identifying their high risk sites. This initially occurred in 1991 and 1992. Since the same sites are used for lead and copper testing, it is not necessary to do this evaluation every time samples are collected. The information only needs to be updated if it is necessary to change a sample location. EPA protocol requires systems to provide tier information for each site every time samples are collected. The department was not capturing tier information after changing to the electronic data submittal format, so we developed monitoring site forms for all systems to fill out. This form captures tier information for lead and copper sample locations.

Comment: NR 809.547(4)(a) - Initial tap sampling? Eliminate. Dates are old and therefore section not needed. [Davy Laboratories].

Response: The dates are part of the federal regulations. Our state regulations cannot be less stringent than the federal regulations, so the dates must remain in the code. Water quality parameter monitoring requirements are established, and compliance is tracked in the drinking water system. Medium and small systems are required to collect water quality parameter samples only in the monitoring period during which they exceed a lead or copper action level. Large systems (serving >50,000) have been required to collect water quality parameter samples since optimizing corrosion control, and are on a reduced monitoring frequency.

Comment: The bromate monitoring reduction requirements in proposed NR 809.565(3)(b)2. do not seem to reflect the changes made in the Federal Rule on disinfection by-products. The bromate reduction should be as reflected in 40 CFR 141.132(b)(3)(ii)(B). [Margaret Elath].

Response: The change has been made to s. NR 809.565(3)(b) to allow for the old and new requirements for bromate monitoring reductions, as required by the federal law.

NR 810

Comment: It was requested that the definitions of "distribution system" in s. NR 810.02(18) **[now s. NR 810.02(17)]** and "Waterworks" or "water system" in s. NR 810.02(46) be modified to include the terminology "water distribution systems" as defined in ch. Comm 81 instead of "piping and fixtures inside buildings served". [Wisconsin Department of Commerce].

Response: The intent of the commenter was to clarify jurisdiction issues between DNR and Commerce. However, we feel that using the term "water distribution system as defined in ch. Comm

81" within a definition for "distribution system" or "water system" would only lead to confusion by the general public. Minor modifications have been made to both definitions for clarity and consistency.

Comment: It was requested that the definition of a non-community water system in s. NR 810.02(28) **[now s. NR 810.02(29)]** include examples. [Davy Laboratories].

Response: The definitions for the two subcategories of non-community water systems, transient and non-transient, already include examples of each type of system. A sentence has been added to the definition that refers to the two types of non-community water systems.

Comment: It was requested that language be added to s. NR 810.04 that only certified operators be allowed to take water samples at other than municipal community systems and non-transient non-community water systems. [Davy Laboratories].

Response: Water system owners are the ones ultimately responsible for collecting water samples from their systems. The requested language would preclude owners from taking samples at their own system, which the Department cannot do.

Comment: It was requested that s. NR 810.08 be modified so that drinking water standards only apply to finished "drinking" water supplied to consumers. The reasoning being that in the future, public water systems may supply water that is not for human consumption. [Wisconsin Department of Commerce].

Response: The phrase "by public water supply systems" was inserted as clarification. By definition the water supplied by public water systems is for human consumption.

Comment: Several comments were received on s. NR 810.09, which will require all municipal water systems using groundwater to continuously disinfect the water prior to the water entering the distribution system. Some commenters concurred with the public health benefits of mandatory disinfection and stated that viruses have been found even in wells drawing from deep confined aquifers. A few commenters were opposed to mandatory disinfection due to costs to small systems or questioned the need, identified taste and environmental concerns and felt that it should be a local decision. [Jon Standridge, Wisconsin Rural Water Association, Village of Kewaskum, League of Wisconsin Municipalities, Madison Water Utility and Barron Light & Water Department].

Response: The requirement for mandatory disinfection will remain. Approximately 12% of the 614 municipal water systems in the state do not supply water that has been disinfected. A recent study led by Dr. Mark Borchardt of the Marshfield Clinic Research Foundation shows that illness attributable to viruses is occurring at municipal systems served by groundwater and has connected the detection of viruses in the drinking water to illness from consuming the drinking water. During some periods of the study, illness rates associated with drinking water were as high as 44/100 in children and 24/100 in adults. The target illness rate identified by USEPA for microbial risk is 1/10000. The study found that disinfection reduces the rate of illness attributable to viruses at municipal water systems served by groundwater.

The 71 municipal systems not supplying water that has received disinfection are subject to the current administrative rule requirement that systems have the equipment in place to disinfect. For these systems, the only additional cost will be for chemicals and monitoring and are expected to be $2000 annually. For systems without equipment, and with no pre-existing unaddressed water quality concerns, the one-time cost is expected to be $10,000 per well. In order to allow systems additional time for planning and to secure financing, the rule has been modified to allow a delayed effective

date for this requirement of 3 years after the effective date for the remainder of the rule. The original delayed effective date was proposed to be 1 year after the effective date for the remainder of the rule.

Comment: It was requested that a note be added to s. NR 810.09(1)(c) that states the Department of Commerce requires plan submittal and approval of all treatment systems installed to service private and non-community water systems that are designed to reduce health-related contaminants. [Wisconsin Department of Commerce].

Response: The note has been added.

Comment: It was stated that s. NR 810.09(2)(b) references additional requirements in s. NR 809.705(2) and that this section does not exist. [City of La Crosse].

Response: The reference has been corrected to read s. NR 809.74(2).

Comment: It was requested that s. NR 810.13 include language which would allow a water system owner to receive permission from the Department for an alternative schedule for valve and hydrant exercising. [Milwaukee Water Works].

Response: The change has been made.

Comment: Two comments were received that s. NR 810.14 should include a provision that would allow a water system to receive permission from the Department for an alternate schedule for draining down their water storage tanks every 10 years for inspection. [City of La Crosse & North Shore Water Commission].

Response: Language has been added that will allow alternative schedules to be approved by the Department.

Comment: Many comments were received on s. NR 810.15 regarding cross connection control programs. [Darboy Sanitary District, Wisconsin Department of Commerce, City of Brookfield, Manitowoc Public Utilities, Watertown Water Department, Wisconsin Water Association, Marshfield Utilities, Municipal Environmental Group, Oshkosh Water Utility, Madison Water Utility, Milwaukee Water Works, HydroDesigns, Town of Bristol, City of Barron, City of Augusta, City of Merrill, City of Janesville, Wausau Water Works, Village of Fox Point & Wauwatosa Water Utility].

The comments fall into four general categories:
1. Opposition to the language requiring protection from cross connections “to the last flowing tap or end-use device.” The concern is that the language increases the liability of a public utility. A commenter felt that a utility should not be responsible for inspecting a property owners’ internal plumbing when that plumbing does not result in a significant risk to the public water system.

2. Concerns about intrusion into the private areas of customers’ homes during residential inspections and the time and costs associated with doing such inspections. Many comments were received which opposed inspecting bathrooms and kitchens with normal fixtures as these are low hazard areas for cross connections and these pose a low risk to the public water system. Furthermore, it was felt that inspecting these areas is an unwise use of utility time and money and is intrusive to the privacy of the utility customer. The comments did endorse regular inspections of high hazard residential situations such as laundry tubs and outside hose faucets.

3. Opposition to conducting surveys at all commercial properties every two years due to manpower requirements and the resulting costs. Many commenters requested that the frequency for surveys at commercial properties be based on level of risk and not on classification. Most of the comments requested a more targeted approach to commercial properties as many commercial properties contain nothing more than a simple restroom and are of similar or lesser risk than residential properties.

4. Several comments were received on licensing and certification requirements for those conducting cross connection inspections.

Response: Several changes were made to address the concerns of the commenters and to provide clarity. Responding to the four general comments:

1. The language requiring protection from cross connections "to the last flowing tap or end-use device" was retained. This same concern was raised during the work group process. The language "In order to protect the public water system" was inserted as a preface to the requirement, which satisfied the work group. This makes it clear that the intent of the proposed requirement is to protect the public water system from potential cross connections within the buildings being served.

2. DNR now includes language that allows a utility to provide educational materials to its customers in lieu of doing inspections of the low hazard portions of residential buildings. Low hazard areas include normal kitchen and bathroom fixtures. The educational materials would need to be distributed every 3 years and with every cross connection inspection and should provide basic information identifying and eliminating commonly found cross connections. The Wisconsin Water Association, Wisconsin Rural Water Association and the Municipal Environmental Group-Water Division have offered to help develop the educational materials.

3. DNR now includes language that allows commercial properties of similar or lesser risk to residential properties to follow the same inspection frequency as residential properties. This calls for an inspection every 10 years or on a schedule matching meter replacement. The language that will allow distributing educational materials to customers in lieu of doing inspections of the low hazard portions of residential buildings will also apply to the low hazard portions of commercial buildings.

4. The proposed rule contains no requirements for certification or licensing. The Department of Commerce is in the process of developing licensing requirements for industrial and commercial properties but would not require licensing for residential inspectors.

Comment: It was suggested that a minor modification be made to the language in s. NR 810.17 to avoid any confusion over the use of the term "service." [Wisconsin Department of Commerce].

Response: The change has been made as proposed.

Comment: It was requested that the last sentence in s. NR 810.19 be removed, as it seemed inconsistent with provisions in the WPDES General Permit, which this section refers to. [Municipal Environmental Group]

Response: The sentence has been deleted as requested.

Comment: It was requested that the reference to ch. NR 809 in s. NR 810.26(6) for required sampling plans have more detail or list examples. [Davy Laboratories].

Response: The ch. NR 809 code citation for each required sampling or monitoring plan has been included.

NR 811

Comment: It was requested that changes be made to the wording in s. NR 811.06, modifying the existing language from prohibiting cross-connections to more correctly prohibiting unprotected cross-connections, since cross-connections are sometimes necessary. [Wisconsin Department of Commerce].

Response: Department staff worked with the commenter and the section language was modified to reflect mutually agreed upon language. This included inserting replacement language stating that "unprotected cross-connections are prohibited."

Comment: It was requested that changes be made to the wording in s. NR 811.25 (1)(h)1 and 2 which would delete department language on building floor drain requirements and in its place refer to s. Comm. 82.38. [Wisconsin Department of Commerce].

Response: Department staff worked with the commenter and the section language was left in place with only a few format changes. The Department of Natural Resources has design criteria in ch. NR 811 that currently go beyond the design criteria provided in Department of Commerce codes for the purpose of providing enhanced well head and water supply protection. It was agreed that if the Department of Commerce modifies its code language in the future to incorporate the Department of Natural Resources' design criteria that the language in ch. NR 811 would then be changed to refer to the ch. Comm. requirements.

Comment: It was requested that changes be made to the wording in s. NR 811.25 (1) (h) 2. d. that would delete the prohibition on building drain piping discharging to a French drain and replace it with language referring to the Clearwater infiltration requirements listed in Chapters Comm. 81 to 87. [Wisconsin Department of Commerce].

Response: Department staff worked with the commenter and the section language was left in place and revised for clarity. The Department of Natural Resources has design criteria in ch. NR 811 that currently go beyond the design criteria provided in Department of Commerce codes for the purpose of providing enhanced well head and water supply protection.

Comment: It was requested that changes be made to the wording in s. NR 811.25 (1)(h)3 and 4 that would delete some department language on building trench drains and building floor drain piping requirements and in its place refer to Chapters Comm. 81-87. [Wisconsin Department of Commerce].

Response: Department staff worked with the commenter and the section language was left in place with only one format change. The Department of Natural Resources has design criteria in ch. NR 811 that currently go beyond the design criteria provided in Department of Commerce codes for the purpose of providing enhanced well head and water supply protection. In addition, s. NR 811.25 (8) was revised to include a requirement that all plumbing, including fixtures, backflow protection, floor drains, hub drains, piping and their installation, testing, and maintenance shall conform to the applicable ch. Comm. requirements. It was agreed that if the Department of Commerce modifies its code language in the future to incorporate the Department of Natural Resources' design criteria, that the language in ch. NR 811 would then be changed to refer to the ch. Comm. requirements.

Comment: It was suggested that a portion of the existing language in s. NR 811.25 (8) be deleted and that references to Department of Commerce plumbing requirements for water system buildings be moved from a note to a requirement in the body of the section language. [Wisconsin Department of Commerce].

Response: The suggested revisions were accepted.

Comment: It was requested that the requirement given in s. NR 811.39 (2) (c), for peristaltic chemical feed pumps to be operated at a minimum of 10 per cent of the maximum feeder output be modified to take into consideration the feed tube diameter for meeting the minimum 10 percent requirement. [Racine Water Utility].

Response: The change has been made.

Comment: It was questioned whether a reference in s. NR 811.42 (5) to s. NR 809.705 was valid. [City of La Crosse].

Response: The incorrect code reference was deleted and replaced with the correct reference to s. NR 809.74 (2).

Comment: It was requested that a note be added to s. NR 811.44 that plan review and inspection by the Department of Commerce may be required for water treatment pilot plant testing installations. [Wisconsin Department of Commerce].

Response: This comment was not accepted by the department. Normally, these installations are temporary, do not serve water to the public, and go through the department plan review and approval process. The department contacts the Department of Commerce as necessary if any cross-connection or backflow issues arise that need clarification.

Comment: It was requested that the requirement found in s. NR 811.66 (1) (b) to take corrective action when pressures exceed 100 psi be tied to documented problems such as excessive water main and service line leaks or breaks. [City of La Crosse].

Response: The change has been made. Identical revised language was included in s. NR 810.10.

Comment: It was requested that the "C" value (the coefficient of friction) assigned to cement lined ductile iron pipe in s. NR 811.70 (10) be increased from 120 to 140. [US Pipe and Foundry Company Ductile Iron Pipe Research Association].

Response: The change has been made. Additional language modifications were made to clarify that the "C" values assigned in ch. NR 811 are the maximum values to be used in the design of new water mains (unless other "C" values are justified) and that in addition to other considerations currently listed in the code, "C" values for existing water mains with a diameter of 12 inches or less may be less than the maximum "C" value for new pipe.

Comment: It was requested that the language in s. NR 811.71 (8) be modified to allow distribution system sampling faucets that are not specifically designated as sampling locations to be used for water sample collection as necessary. [Milwaukee Water Works].

Response: The word "dedicated" was removed.

Comment: It was requested that properly restrained ductile iron pipe be allowed in pipe bursting installations in addition to the plastic water main pipe currently allowed in s. NR 811.73 (3) (c). [Ductile Iron Pipe Research Association].

Response: Language to allow properly restrained ductile iron pipe has been added.

Modifications Made Based on Public Comments

NR 809.04. Added a definition for distribution system.

NR 809.120(2). Removed total trihalomethanes from the table.

NR 809.120(4). Added 524.3 to the list of parameter methods.

NR 809.323(1)(c). Deleted footnote from table G.

NR 809.565(3)(b). Revised to allow both old and new methods for bromate monitoring reductions as allowed by federal law.

NR 810.02(28). Added a sentence referring to the two types of non-community water systems.

NR 810.08. Added the phrase "by public water systems".

NR 810.09. Revised the delayed effective date from 1 year to 36 months.

NR 810.09(1)(c). Added a note referring to Department of Commerce plan approval.

NR 810.09(2)(b). Corrected the reference to read s. NR809.74(2).

NR 810.14. Revised to allow for an alternate schedule for draining tanks for inspection with department approval.

NR 810.15. Revised to allow a utility to provide public education materials in lieu of inspections of low hazard portions of residential buildings.

NR 810.15. Revised to allow commercial properties of similar risk to residential properties to be inspected at the same frequency as residential buildings.

NR 810.17. Modified to clarify use of the term "service".

NR 810.19. Deleted the last sentence.

NR 810.26(6). Modified to include references to required monitoring plans.

NR 811.06. Revised to reflect "Unprotected cross-connections are prohibited"

NR 811.25(8). Modified to include references to the Department of Commerce plumbing requirements.

NR 811.39(2)(c). Revised to take into consideration feed tube diameter.

NR 811.42(5). Revised to reflect correct reference of s. NR 809.74(2).

NR 811.66(1)(b). Revised to link the corrective action requirement to documented problems.

NR 811.70(10). Revised to increase "C value" for ductile iron pipe to 140.

NR 811.71(8). Modified by deleting the word "dedicated".

NR 811.73(3)(c). Revised to allow the use of properly restrained ductile iron pipe.

Appearances at the Public Hearings

10/14/09
Keith Haas, General Manager, Racine Water utility
Robert Kaplan, Inspector, Racine Water Utility
Eric Kiefer, Plant Manager, North Shore Water Commission
Paul Haugen, Water Foreman, Fox Point Water
Jim Wojcehowicz, Water Superintendent, Wauwatosa Water Utility

10/21/09
Lisa Roskom, Green Bay, WDATCP-DFS Lab Evaluation Officer
Russ Hardwick, Green Bay Water Utility
Nilaksh Kothari, Manitowoc Public Utilities

10/22/09
Jon Standridge, Madison
Theresa Peters, Madison Water Utility Cross Connection Inspector
Mark Mayes, Madison – student UW Madison Nelson institute and CHANGE-IGERT Program at the Center for Sustainability and the Global Environment (SAGE).
Edwin Ganser, City of Beloit
Steve Plachinski, Madison

10/27/09
Mike Stoffel, Eau Claire, Ayres Associates, Inc
Casey Werner, Eau Claire, Ayres Associates, Inc

10/28/10
Susan Wojtkiewicz, Rice Lake

Changes to Rule Analysis and Fiscal Estimate

See previous section and section on Legislative Council comments below.
No changes to Fiscal Estimate.

Response to Legislative Council Rules Clearinghouse Report

All of the Clearinghouse comments were incorporated except for the following:

2. Form, Style and Placement in Administrative Code

k. In s. NR 809.115 (1)(b), and in other places in the rule, the phrase "herein called the sampling

point" is used. The term "sampling point" should be defined in s. NR 809.04.

Response: "Sampling point" has been removed from ch. NR 809 and replaced by references to specific sampling locations.

dd. The rule makes excessive use of acronyms, generally without sufficient definition. Note that using a term in the text of a rule and following it with a parenthetical indication of the acronym for the term does not constitute a definition of the acronym. In some subchapters, an appendix listing acronyms is provided, which is helpful but, too, does not constitute definition of the terms.

Response: The acronyms are used as shorthand. Terms are defined as necessary. The appendix listing acronyms is a requirement of EPA and is not meant to define terms.

ee. Test methods and other technical procedures referenced in the rule must be incorporated into the rule by reference, with the permission of the Attorney General. [See s. 2.08, Manual]. Each reference to the method should include information on how and where to find documentation on the method, or a cross- reference to this information. For one model of how to do this, see ch. NR 484.

Response: The reference in the rule to methods approved by the EPA under Appendix A to Subpart C of Part 141--Alternative Testing Methods Approved for Analyses Under the Safe Drinking Water Act has been removed. The department will follow the ch. NR 484 model in the future.

kkk. In s. NR 811.35 (4) (c), the first occurrence of the term "per" should be replaced by the word "under". The second occurrence of the term should be replaced by the phrase "as required under."

Response: The first change was made. In the second occurrence, the word "per" was replaced with the phrase "as allowed under" because metal pipe is normally required by the department when the piping is exposed inside buildings but PVC pipe is sometimes "allowed" if the situation meets the requirements of s. NR 811.28 (5) (b).

4. Adequacy of References to Related Statutes, Rules and Forms

f. In. s. NR 811.25 (3) note, it would be helpful if the rule provided specific citations to state codes that may apply. This problem also occurs in subs. (4) and (5).

Response: The references to other codes were removed from s. NR 811.25 (3) and (4). The reference in s. NR 811.25 (5) was changed from "applicable local and state codes" to "applicable building codes". A similar note was also removed from s. NR 811.49 (1) (d) 14.

h. The department should review the entire rule to ensure that references to requirements in other rules, statutes, or technical standards are specific as possible. Examples of vague references in the rule include the references to the following:

> **(5)** Storage structure construction requirements including applicable portions of ch. Comm. 32 and safety requirements in federal OSHA codes in s. NR 811.64 (11) (e).
>
> **Response:** This was reviewed. Many sections of ch. Comm. 32 could apply so the reference in ch. NR 811 was left as is.

(6) Pipes, joints, fittings, valves, and fire hydrants manufactured in conformity with the latest standards issued by the AWWA in s. NR 811.69 (2).

Response: This was reviewed. Due to the voluminous number of AWWA standard numbers that would have to be inserted into ch. NR 811, the ch. NR 811 language was left as is.

(9) Installation of mains in accordance with AWWA standards in s. NR 811.73 (1).

Response: This was reviewed. Due to the voluminous number of AWWA standard numbers that would have to be inserted into ch. NR 811, the ch. NR 811 language was left as is.

(10) Testing of installed water mains to meet at a minimum the applicable pressure and leakage testing requirements as specified in s. NR 811.73 (3) (b).

Response: This was reviewed. Due to the voluminous number of AWWA standard numbers that would have to be inserted into ch. NR 811, the ch. NR 811 language was left as is.

(11) Monitoring well construction requirements in ch. NR 141, as specified in s. NR 811.89 (3).

Response: This was reviewed. Due to the voluminous number of applicable ch. NR 141 code sections that would have to be inserted into ch. NR 811, the ch. NR 811 language was left as is.

5. Clarity, Grammar, Punctuation and Use of Plain Language

l. In s. NR 809.566 (3) (b) 1. what constitutes an "acute" violation?

Response: This is language required by EPA. What constitutes an acute violation is explained in the sentence. The standard definition of acute as an adjective also explains that this is a critical violation that may have a severe health risk. By comparison, s. NR 809.566(3)(b)2 contains a corresponding explanation of a non-acute violation.

o. The table following s. NR 809.70 (1) lacks a standard for methylene-blue active substances. If this is intended as a heading, rather than a table entry, this needs to be made clear and headings for the other substances in the table should be provided.

Response: The term "methylene-blue active substances" has been removed from the table, since in the federal rule there is no reference to this type of foaming agent. The table headings have been clarified.

r. In s. NR 810.02 (7), the definition of "community water system" makes a distinction between a public water system that "serves" and one that "regularly serves." If there is a difference in meaning between these two terms, the department should clarify this in the rule. In sub. (33) 20(intro), the meaning of "regularly serves" is also unclear. In sub. (33) (a), "Include" should be changed to "Includes."

Response: The wording of the definition is the exact federal wording from US EPA. Changing it would create a difference between state and federal language and could cause primacy issues and confusion.

x. In s. NR 810.16 (1), "currently used" should be deleted and replaced with "in use as of the effective date of the section …. **[LRB inserts date]."** A similar problem also occurs in s. NR 811.12 (15) (a).

Response: The term "currently used" has been replaced with "routinely used." The requirement needs to apply to all wells, including those that are currently used and may become inactive at some time after the effective date of the rule.In s. NR 811.12 (15)(a) the term "currently used" has been replaced with, "in effect at the time of well construction." Similar wording changes were made in ss. NR 811.64 (1) (b), (15) (b) and (17) (a), and NR 811.73 (1) and (2) (c) and (d). The effective dates of AWWA standards routinely change over time as the standards are revised and updated.

y. In s. NR 810.21 (intro.), the term "water treatment plant" is used but is not defined. This term should be defined in the rule.

Response: The last sentence of the introduction preceding the requirements of the section reads "Unattended plants treating for acute contaminants shall be provided with:" which in itself defines water treatment plant for this section. Any further definition would be redundant.

z. In s. NR 810.22 (intro.), the meaning of the phrases "routinely used" and "normally unused" are unclear and should be clarified if possible.

Response: It is very difficult to provide any more clarity to these terms as individual cases can be somewhat variable. The ch. NR 810 workgroup concurred with the wording.

jj. In s. NR 810.45 (1) (d), it is not clear why "1x" is included in the formula. It seems that multiplying the other two items by one will have no effect.

Response: The formula is federal language from US EPA and is denoted in scientific notation and is consistent with other formulas.

qq. In s. NR 811.09 (1) (b) 2. , is it possible to clarify what significant drawdown means? In sub. (3), the material in the note appears to be substantive and should be moved to the text of the rule.

Response: Significant drawdown is determined on a case-by-case basis. Therefore, it is not possible to clarify it further in the code. In s. NR 811.09(3) the note on energy efficiency and any analysis thereof are not meant to be regulated in ch. NR 811 and therefore it is appropriate to keep it as a recommendation in the note.

tt. The department should review the entire rule to ensure that all abbreviations are defined. Examples of abbreviations that are not defined include:

(1) "SCADA" in s. NR 811.39 (4) (e).

Response: A definition for SCADA was inserted into s. NR 811.02.

(2) "TFE" in s. NR 811.48 (5) (g).

Response: Use of the term TFE was deleted.

(3) "NTUs" in s. NR 811.49(1) (j) 5 and (2) (a).

Response: A definition for Nephelometric turbidity units or NTUs was inserted into s. NR 811.02.

(4) "SPADNS" in s. NR 811.51 (7).

Response: Use of the term SPADNS was deleted.

uu. The department should review the following undefined terms and, as appropriate, define them to improve the clarity and ensure the consistent application of the rule:

(1) "Jar testing" in s. NR 811.47 (7) (b) 1.

Response: It is unnecessary to define jar testing as the term is well-known in the regulated community.

vv. The department should review the following ambiguous or unclear phrases and modify them, as appropriate, to improve the clarity and ensure consistent application of the rule:

(3) "…resistant to the aggressiveness of the water and dissolved gasses" in s. NR 811.45 (1) (f) and (2) (f).

Response: The intent and meaning of the existing language is adequate.

(4) "Generators shall be sized to have sufficient reserve capacity so that the system does not operate at peak capacity for extended periods of time" in s. NR 811.54 (3). What is an extended period of time in this context?

Response: The intent and meaning of the existing language is adequate. Also, the language is identical to the language in the Ten States Standards. Ten States Standards are recommended standards for water works construction set by a group of ten states, including Wisconsin, along with the province of Ontario. The group meets once a year and periodically revises and updates the standards. Some states use the standards in their entirety as their administrative code. Chapter NR 811 is in part based upon the standards.

Final Regulatory Flexibility Analysis:

Typically, the Department has little flexibility with drinking water regulations since state rules can be no less stringent than the federal regulation. Flexibility in the rule will be used to reduce monitoring costs and complexity wherever possible. These rules should not have a significant impact on small business since the water systems operated by small businesses such as taverns and restaurants are already subject to the inspection and deficiency correction requirements included in the rule modifications. Therefore, under s. 227.19(3m), Stats., a final regulatory analysis is not required.