

The statement of scope for this rule, SS 056-22, was approved by the Governor on June 30, 2022, published in Register No. 799A1 on July 5, 2022, and approved by the Natural Resources Board on September 28, 2022. This rule was approved by the Governor on June 15, 2023.

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES AMENDING RULES

The Wisconsin Natural Resources Board adopts an order to **amend** NR 812.11 (15) (b), (d) and (e) relating to the use of new cement formulations for the construction of water wells and affecting small business.

DG-08-22

Analysis Prepared by the Department of Natural Resources

1. Statute Interpreted:

Sections 280.11 and 281.34, Wis. Stats.

2. Statutory Authority:

Chapters 280 and 281, Wis. Stats.

3. Explanation of Agency Authority:

Chapter 280, Wis. Stats., establishes the statutory authority and framework for regulation of well drilling, heat exchange drilling and pump installation.

Section 280.11, Wis. Stats., specifically directs the department to prescribe, publish and enforce minimum reasonable standards and rules for methods to be pursued to obtain pure drinking water for human consumption, and to establish safeguards deemed necessary in protecting the public health against the hazards of polluted sources of impure water supplies intended or used for human consumption. This statute gives the department general supervision and control over all methods of obtaining groundwater for human consumption including the construction or reconstruction of wells, authority to prescribe, amend, modify or repeal any applicable rule, and to perform any act deemed necessary for the safeguarding of public health.

Section 280.13, Wis. Stats., gives the department the authority to promulgate such rules as are reasonably necessary to carry out and enforce the provisions of ch. 280, Wis. Stats.

Chapter 281, Wis. Stats., gives the department authority to regulate groundwater withdrawals, and includes enforcement authority. Section 281.11, Wis. Stats., names the department as the central state government entity to protect, maintain and improve the quality and management of the waters of the state, ground and surface, public and private. Section 281.19(1), Wis. Stats., gives the department authority to adopt rules applicable throughout the state for the construction, installation, use and operation of practicable and available systems, methods and means for preventing and abating pollution of the waters of the state. Section 281.35, Wis. Stats., gives the department authority to regulate groundwater withdrawals, and section 281.17(8)(1), Wis. Stats., authorizes the department to establish, administer and maintain a safe drinking water program no less stringent than the requirements of the federal safe drinking water act. Subchapter VIII of chapter 281, Wis. Stats., includes enforcement authority and penalties for violations.

4. Related Statutes or Rules:

Chapter NR 146, Wis. Adm. Code, implements the licensing and registration requirements of ch. 280, Wis. Stats., for water well drillers, heat exchange drillers, pump installers and rig operators.

Chapter NR 809, Wis. Adm. Code, establishes minimum standards and procedures for the protection of the public health, safety and welfare in the obtaining of safe drinking water.

5. Plain Language Analysis:

Companies that manufacture cement for sale and distribution in Wisconsin and surrounding states have switched from producing Type I Portland cement and are now only producing Type IL cement, which does not meet ASTM C150 or API-10A standards. Type IL cement meets ASTM C595 standards and performs similarly to Type I cement. Individual manufacturers made the change to reduce the carbon footprint of their product. This was not prompted by a change in regulations. Some manufacturers completely switched over to producing and selling Type IL cement in 2021, but many end users of cement, including well drillers and pump installers, were not notified until April of 2022. It is currently difficult or impossible to find Type I cement, which is needed for grouting or sealing of water wells or drillholes with neat cement as required by ch. NR 812, Wis. Adm. Code. It is paramount that well drillers have access to code-compliant materials they need to seal an annular space on a new well, or fill and seal an unused well or drillhole. Properly grouting, sealing, and filling water wells and drillholes is necessary to ensure safe drinking water and to prevent contamination of the State's groundwater.

6. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations:

Federal law does not directly regulate the construction of wells or heat exchange drillholes, and does not regulate the installation of pumps. For public drinking water systems, Wisconsin is a primacy state, with the primary responsibility to enforce state drinking water regulations consistent with the federal Safe Drinking Water Act. One federal requirement of Wisconsin's primacy role, 40 CFR § 142.10(b)(5), is that the state assures that the design and construction of new or substantially modified public water system facilities will be capable of compliance with the state primary drinking water regulations. For non-community public drinking water systems, ch. NR 812, Wis. Adm. Code, provides the design and construction standards to meet this federal requirement.

7. If Held, Summary of Comments Received During Preliminary Comment Period and at Public Hearing on the Statement of Scope:

A preliminary public hearing on the statement of scope was held on August 18, 2022. One person testified on behalf of the Wisconsin Water Well Association in favor of the proposed rule.

8. Comparison with Similar Rules in Adjacent States:

This is an emerging industry-wide issue, and all neighboring states have completed, or are in the process of making similar regulatory changes. Michigan, in particular is closely following the rule revision process in Wisconsin to inform its own regulatory changes related to this issue.

9. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen:

The department was briefed on this issue by an industry representative at the April 26, 2022 Private Water Advisory Council meeting. The department had numerous contacts with well drillers throughout the state to develop its understanding of the problem and the regulatory solution.

10. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report:

Since the rule is intended to maintain the current supply of materials, there is no anticipated economic impact of the rule. The rule will prevent a disruption to small businesses by allowing them to use materials that are readily available for a similar cost to the previously available materials.

11. Effect on Small Business (initial regulatory flexibility analysis):

The majority of businesses impacted by the rule are small businesses. The total economic impact of the proposed rule revision is estimated to be \$ 0.

12. Agency Contact Person:

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13. Place where comments are to be submitted and deadline for submission:

A public comment period on the draft rule occurred from February 6, 2023 to March 29, 2023, with a public hearing on March 22, 2023.

RULE TEXT

SECTION 1. NR 812.11 (15) (b), (d) and (e) are amended to read:

NR 812.11 (15) (b) *Neat cement*. Neat cement grout shall consist of a mixture of cement and water in the following proportion: one 94-pound bag of Portland cement, labeled as meeting ASTM C 150, Type I or API-10A, Class A or ASTM C595, Type II; and 5 to 6 gallons of water. Ingredients to increase fluidity, or control shrinkage or time of set may be used only with a variance. Neat cement shall have a density of 15.0 to 15.8 pounds per gallon. Neat cement shall have a uniform consistency with no lumps and any commercially prepared grout shall be screened by the well driller or well constructor prior to pumping. Grout densities for neat cement mixes are provided in Table C.

(d) *Sand-cement*. Sand-cement grout shall consist of a mixture of cement, sand, and water in the proportion of one 94-pound bag of Portland cement, labeled as meeting ASTM C 150, Type I or API-10A, Class A or ASTM C595, Type II; a cubic foot of dry sand; and 5 to 6 gallons of water. The sand shall meet the specifications for use in Portland cement concrete.

(e) *Concrete*. Concrete shall consist of a mixture of cement, water, sand, and gravel in the following proportion: one 94-pound bag of Portland cement, labeled as meeting ASTM C 150, Type I or API-10A, Class A or ASTM C595, Type II; an equal measure of sand and an equal measure of gravel, by weight or by volume; and not more than 6 gallons of water. As an alternative, a commercially prepared mix may be used if the mix has at least 6 bags of cement per cubic yard and the gravel size does not exceed 1/3 of the inside diameter of the tremie pipe used for filling and sealing the well or drillhole.

SECTION 2. EFFECTIVE DATE. This rule takes effect on the first day of the month following publication

in the Wisconsin Administrative Register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 3. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on May 24, 2023.