STATEMENT OF SCOPE

Department of Natural Resources

Rule No.: WY-23-19

Relating to: Revision of chapters NR 105, NR 106, and NR 219 and other related regulations to add surface water quality criteria and analytical methods for poly- and perfluoroalkyl substances (PFAS) including PFOS, PFOA, and any other PFAS for the purpose of protecting public health as well as revisions to the procedures in the Wisconsin Pollutant Discharge Elimination System ("WPDES") permitting program to implement the new water quality criteria.

Rule Type: Permanent

1. Finding/nature of emergency (Emergency Rule only):

The rules will be proposed as permanent rules.

2. Detailed description of the objective of the proposed rule:

Poly- and perfluoroalkyl substances (PFAS) are human-made, organic compounds that have been manufactured for use in non-stick coatings, waterproof fabrics, firefighting foams, food packaging, and many other applications since the 1940s. PFAS are highly resistant to degradation and have been detected globally in water, sediment, and wildlife. This global distribution is of concern as PFAS have documented toxicity to animals and because epidemiological studies have suggested probable links to several human health effects. In Wisconsin, PFAS have been detected in drinking and surface water near sources of industrial use or manufacture and near spill locations. Thus, the primary objective of this rule is to create human health surface water quality criteria for perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), as well as any other PFAS which the department determines may be harmful to human health in ch. NR 105, Wis. Adm. Code. The proposed criteria are expected to be numeric and may be expressed as a single number applicable to all waters of the state or may be expressed as different numbers that are applied to different surface water body types. This rule change is being proposed in order to protect humans from the adverse effects of PFOS and PFOA, as well as any other PFAS which the department determines may be harmful to human health, resulting from contact with or ingestion of surface waters of the state and from ingestion of fish taken from surface waters of the state.

Additional changes to associated rules may be pursued which are reasonably related to those discussed here, such as additions to the list of approved test methods to include methods for the detection of PFAS in surface waters or wastewater effluent and biosolids (ch. NR 219), development of Wisconsin Pollution Discharge Elimination System (WPDES) permit implementation procedures for the new criteria (ch. NR 106 and other related chapters), and development of factors to consider when listing waters as impaired for the new criteria.

3. Description of the existing policies relevant to the rule, new policies proposed to be included in the rule, and an analysis of policy alternatives:

States are required to develop water quality standards under the Clean Water Act. The Department has authority to establish water quality standards under Wis. Stat. s. 281.15 and state water quality standards have been promulgated for several toxic pollutants and for other parameters in chs. NR 102, 103 and 105,

Wis. Adm. Code. Water quality standards protect, among other things, public health and welfare, recreational uses, and the propagation of fish and other aquatic life. In general, water quality standards consist of numeric or narrative criteria and designated uses. Water quality criteria specify the level of a pollutant that is protective of a designated use, and the existing numeric criteria for toxic pollutants are listed in ch. NR 105, Wis. Adm. Code. The proposed rules would add numeric surface water quality criteria for human health protection to ch. NR 105 for PFOS, PFOA and any other PFAS which the department determines may be harmful to human health.

In general, the adoption of new surface water quality criteria for a toxic pollutant can result in the imposition of new water quality based effluent limitations (WQBELs) and additional monitoring requirements in WPDES permits issued to municipal and industrial facilities that discharge the pollutant. The Department has existing authority to impose WQBELs in WPDES permits for any toxic pollutant discharged by facilities using the procedures in ch. NR 106, Wis. Adm. Code. There currently are no specific numeric criteria or specific limit calculation procedures for imposing PFAS limitations in permits; however, the Department does have authority to impose a PFAS limitation on a case by case basis if a WPDES permitted facility is discharging PFAS at a level that may adversely impact public health and welfare (s. NR 102.04(1)(d) and chs. NR 105 and NR 106, Wis. Adm. Code). In these cases, the PFAS limitation is calculated based on a secondary value, which is a temporary value that represents the concentration of a substance which ensures adequate protection of sensitive species of aquatic life, wildlife or human health from the toxicity of that substance. The proposed rule changes will include specific procedures in ch. NR 106, Wis. Adm. Code and other related regulations for calculating PFAS WQBELs and determining the necessity of PFAS limitations in WPDES permits. They will also specify requirements for monitoring, compliance schedules and approved analytical test methods. Including specific permitting procedures by rule provides more regulatory certainty for facilities that discharge PFAS.

Water quality criteria are also used to determine whether surface waters are meeting their assigned uses. Waterbodies not meeting criteria are listed as impaired. The rule changes may also include factors for determining whether a surface water should be listed as impaired for PFAS.

Other Department programs have also undertaken efforts to monitor PFAS. The fish contaminant and advisory program has been monitoring concentrations of PFAS in fish tissue since 2006 and currently issues fish consumption advisories based on PFOS in several locations along the Mississippi River. The wildlife program has previously monitored PFAS in bald eagles, waterfowl, and small mammals.

Policy alternatives:

One alternative is to not establish a water quality standard for PFAS. If there is no water quality standard, there may be less protection of human health because the Department will only be able to proceed on a case by case basis to assess discharges and set limits for PFAS discharges. This creates regulatory uncertainty and does not provide a consistent methodology for protecting human health.

A second alternative is to create a technology-based effluent standard and/or pretreatment standard for PFOA, PFOS, and any other PFAS substances of concern, either instead of or in addition to a water quality standard. This would require that certain categories of direct dischargers and/or pretreatment industries achieve compliance with effluent limitations that the department expects to be achievable through deployment of the best available treatment technology for PFAS. If this alternative were to be selected, a uniform, statewide date for compliance would be set. Requiring installation of a specific treatment technology could be costly for permitted facilities and from a regulatory perspective, it would not emphasize less costly actions such as source reduction and use of alternatives. Additionally, variances to water quality standards would not be available for technology-based effluent or pretreatment standards. A facility that expects it will be unable to comply with the technology-based limitation may be able to pursue a "fundamentally different factors" variance per subch. IV of ch. NR 220, Wis. Adm. Code within 180 days of promulgation of the effluent or pretreatment standard.

4. Detailed explanation of statutory authority for the rule (including the statutory citation and language):

The statutory authority for developing PFAS water quality standards for human health protection and for developing factors for listing waters as impaired for PFAS is as follows:

- Wis. Stat. s. 227.11(2) provides the Department with the authority to promulgate rules that are necessary to administer the specific statutory directives in chapter 281.
- Wis. Stat. s. 281.12 grants the WDNR general supervision and control to carry out the planning, management, and regulatory programs necessary for prevention/reduction of water pollution and for improvement of water quality.
- Wis. Stat. s. 281.13(1)(a) and (b) give the Department the authority to create rules to research and assess water quality in the state.
- Wis. Stat. s. 281.15 mandates that the Department promulgate water quality standards, including water quality criteria and designated uses. It recognizes that different use categories and criteria are appropriate for different types of waterbodies, and that the department shall establish criteria which are not more stringent than reasonably necessary to ensure attainment of the designated use for the waterbodies.
- Wis. Stat. s. 281.65(4)(c) and (cd) directs the Department to prepare a list of impaired waters.

The statutory authority to promulgate WPDES Permitting procedures to implement the new standards is as follows:

- Wis. Stat. s. 227.11(2) provides the Department with the authority to promulgate rules that are necessary to administer the specific statutory directives in chapter 283.
- Wis. Stat. s. 283.13(5) states that the department shall establish more stringent limitations than required under subs (3) and (4) when necessary to comply with water quality standards.
- Wis. Stat. s. 283.31(3) and (4) state that the department may issue a permit upon condition that the permit contains limitations necessary to comply with any applicable federal law or regulation, state water quality standards, and total maximum daily loads.
- Wis. Stat. s. 283.37 gives the Department authority to promulgate rules regarding permit applications.
- Wis. Stat. s. 283.55 gives the Department authority to impose monitoring and reporting requirements.
- Wis. Stat. s. 283.83 requires that the Department establish a continuing planning process and that plans shall include implementation procedures including compliance schedule for new water quality standards.

5. Estimate of amount of time that state employees will spend developing the rule and of other resources necessary to develop the rule:

The Department estimates that 4600 hours of state employee time will be required to complete the promulgation of the proposed rules.

6. List with description of all entities that may be affected by the proposed rule:

Business/industry and municipalities: Affected entities include facilities that discharge PFAS to surface waters that are required to conduct monitoring or that receive new PFAS WQBELs. Compliance with these PFAS WQBELs may involve the implementation of new treatment methods and/or source reduction measures by wastewater treatment facilities, businesses, and/or industries with current or historic use of PFAS.

Public: From a public health perspective, the public will benefit from any reductions in PFAS discharged associated with the imposition of PFAS limitations in WPDES permits.

7. Summary and preliminary comparison with any existing or proposed federal regulation that is intended to address the activities to be regulated by the proposed rule:

Federal statutes and regulations direct states to establish and periodically review water quality standards. State adoption of water quality standards and revisions to standards require EPA approval pursuant to 40 CFR 131.20 and 131.21.

- 33 USC s. 1313(c) (section 303(c) of the Clean Water Act) requires that states periodically review and modify or adopt, if necessary, water quality standards. This requirement applies to all surface waters in the state.
- 33 USC s. 1314(a) (section 304 of the Clean Water Act) requires that EPA develop and publish criteria for water quality for all waters for uses such as aquatic life, public health protection, and recreation.
- 40 CFR s. 130.3 defines water quality standards as setting water quality goals for a waterbody that will protect its designated uses (such as protection of fish, wildlife, recreation, and public health and welfare). Criteria will be set to protect those uses.
- 40 CFR s. 131.4 specifies that states are responsible for reviewing, establishing and revising their own water quality standards.
- 40 CFR ss. 131.10 and 11 require states to develop water quality standards including uses and criteria to protect the uses. 40 CFR s. 131.11 (b) states that the criteria must be based on federal guidance, federal guidance modified to reflect site-specific criteria, or other scientifically-defensible methods.
- 40 CFR s. 131.11 specifies that criteria must protect the designated uses and that criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. Furthermore, states must review water quality data and information on discharges to identify specific water bodies where toxic pollutants may be adversely affecting water quality or the attainment of the designated use or where the levels of toxic pollutants are at a level to warrant concern, and must adopt criteria for such toxic pollutants applicable to the water body sufficient to protect the designated use.
- 40 CFR 131.20 requires states to periodically review water quality standards.
- 40 CFR 132 and Appendices contain requirements for developing water quality standards in the Great Lakes System as well as implementation procedures for the standards and NPDES permitting requirements for point source discharges to the Great Lakes System.
- 40 CFR 123.25 lists the federal regulations in 40 CFR 122 and 124 that states must follow in the administration of the National Pollutant Discharge Elimination System (NPDES) permit program. State rules must be at least as stringent as these federal requirements.

8. Anticipated economic impact of implementing the rule (note if the rule is likely to have a significant economic impact on small businesses):

The economic impact to sources of PFOS and/or PFOA that will have to provide treatment as a result of this rule is expected to be significant. However, exact concentrations of PFOS and PFOA in surface waters of the state and wastewater effluents are unknown at this time, although monitoring efforts are scheduled to begin in summer 2019. Should monitoring results identify effluents that are exceeding the proposed criteria, there are currently three treatments that effectively remove PFAS from wastewater: granular activated carbon, anion exchange resins, and reverse osmosis (RO) combined with granular activated carbon treatment of RO reject water. There are costs associated with installation, operation, and maintenance with each of these treatment technologies, so permitted facilities whose effluent has the reasonable potential to cause or contribute to an exceedance of the water quality standard would be expected to incur costs. Treatment costs, however, could be reduced or avoided altogether through source reduction measures. A permittee may apply for a variance using the procedures outlined under Wis. Stat. s. 283.15 if its treatment costs are expected to result in substantial and widespread adverse economic impacts.

The economic impact of this rule to small businesses is uncertain at this time as surface water monitoring has not been completed, but additional work will be completed during rule development to evaluate small business impacts.

9. Anticipated number, month and locations **of public hearings:**

The Department anticipates holding two public hearings in August of 2021. Hearing cities will be: Madison and Wausau or Eau Claire (or other as appropriate).

The Department will hold these hearings in these locations to receive input from affected parties based in the Madison area and at a centrally located city in the state.