

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board adopts an order to **amend** NR 102.01 (1) and 102.06 (7); and to **create** NR 119 relating to the development of site-specific numeric phosphorus water quality criteria for surface waters.

WT-17-12

Analysis Prepared by the Department of Natural Resources

1-3. Statutory Authority, Statutes Interpreted, and Explanation of Agency Authority:

Section 281.15, Stats., provides the authority for the Department of Natural Resources to promulgate by rule water quality standards for surface waters or portions of surface waters in the state. Pursuant to s. 281.15, Stats., water quality standards are comprised of designated uses and criteria. The department has promulgated designated uses and criteria for various pollutants and parameters in chs. NR 102 through 105, Wis. Adm. Code. The criteria for phosphorus that were approved by the U.S. Environmental Protection Agency (U.S. EPA) are promulgated in s. NR 102.06, Wis. Adm. Code.

In s. NR 102.06(7), Wis. Adm. Code, the department recognized that it may be appropriate to promulgate site-specific criteria (SSC) for phosphorus for some surface water segments. These proposed rules will establish detailed procedures and a methodology for developing phosphorus SSC for a waterbody or portion thereof under s. 281.15, Stats. The proposed rules will also ensure that the requirements in s. 281.15, Stats., are met in specific waterbodies or segments. They will help ensure that criteria protect a waterbody's designated uses but are no more stringent than reasonably necessary to assure attainment of those uses under s. 281.15, Stats.

4. Related Statutes or Rules: Wisconsin's statewide phosphorus criteria are established in s. NR 102.06, Wis. Adm. Code. As described above, s. NR 102.06(7), Wis. Adm. Code, recognizes that site-specific phosphorus criteria may be necessary for certain waterbodies. However, this section does not contain an explanation of how such SSC are to be developed. These proposed rules establish detailed methodology for developing phosphorus SSC.

The proposed rules also reference another rule package currently in progress. Rule package WY-23-13 creates phosphorus response indicators and biological assessment thresholds under a new subchapter III in ch. NR 102. Eligibility for an SSC in this proposed rule package is in part dependent on whether a waterbody is attaining its phosphorus response indicators and biological assessment thresholds, and an SSC must be set at a concentration that will support both. Because these rule packages work in tandem and cross-reference one another, they are moving simultaneously through the rulemaking process.

In 2020, phosphorus SSC were promulgated for three specific waterbodies within the Wisconsin River Basin under s. NR 102.06(7)(b). Currently, a separate rule package (WY-21-20) is underway to propose a phosphorus SSC for Lac Courte Oreilles in Sawyer County.

5. Plain Language Analysis: The existing policy for deriving phosphorus SSC is found in s. NR 102.06(7), Wis. Adm. Code, which recognizes that the department can promulgate by rule phosphorus site-specific criteria. The proposed rule, ch. NR 119, Wis. Adm. Code, is not a change from past policy, but rather establishes a methodology and process for establishing SSC. SSC may be appropriate when the statewide phosphorus criteria are either over- or under-protective of Wisconsin's waters in a given water segment. The existing statewide phosphorus criteria are sufficiently protective in most cases. However, there are instances where the applicable phosphorus criteria under s. NR 102.06, Wis. Adm. Code, need to

be adjusted to ensure that the applicable designated uses (such as recreation and aquatic life) are being reasonably protected. If designated uses are not being supported by the statewide criterion, a more stringent SSC may be necessary. In cases where a statewide criterion is more stringent than reasonably necessary to protect the designated uses of the waterbody, a less stringent SSC would likely be warranted. Deriving SSC for these waters may alter WPDES permit limits for point source discharges at or upstream of these specific surface water segments.

This rule specifies the scientifically defensible methods required to derive phosphorus SSC. This rule also identifies the process department staff and interested parties should follow to derive phosphorus SSC. If this rulemaking were not completed, an SSC could still be developed by rule for phosphorus. However, expectations would not be clearly defined, which may result in inconsistencies and added complexity for those developing SSC.

6. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations: The Federal water quality standards regulation at 40 CFR 131.11(b)(1)(ii) provides states with the opportunity to adopt water quality criteria that are “modified to reflect site-specific conditions.” Wisconsin has used this authority, as well as the authority under s. 281.15, Stats., to promulgate the existing narrative phosphorus site-specific criteria language in s. NR 102.06(7), Wis. Adm. Code. The portions of 40 CFR 131 related to establishing water quality standards include:

- 40 CFR 131 Subparts A-C: Requirements for establishing state water quality standards.
- 40 CFR 131.4: States are responsible for establishing and revising water quality standards. U.S. EPA approves or disapproves standards under 40 CFR s. 131.5.
- 40 CFR 131.6: Water quality standards consist of designated uses and criteria to protect the designated uses.
- 40 CFR 131.11: States must adopt water quality criteria that protect designated uses. For waters with multiple uses, the criteria must protect the most sensitive use. 40 CFR 131.11(b)(1)(ii) authorizes states to adopt numeric water quality criteria that are “modified to reflect site-specific conditions.”
- 40 CFR 131.20: Revision of state water quality standards is subject to public participation procedures and U.S. EPA review and approval under 40 CFR 131.20.

Wisconsin has authority under s. 281.15, Stats., to promulgate and revise water quality standards. Promulgation of site-specific criteria methodology would provide consistency with the federal regulations in 40 CFR 131.6 and 131.11 that require that criteria be based on protecting the designated uses of a waterbody.

7. Comparison with Similar Rules in Adjacent States: Iowa, Indiana, Michigan and Ohio do not have statewide numeric phosphorus criteria. However, Michigan widely applies a method to derive appropriate site-specific phosphorus targets for waterbodies in the state. Ohio has a longstanding approach for developing site-specific phosphorus targets using a weight of evidence approach based on several eutrophication indicators. The targets set by Michigan and Ohio are applied in TMDLs and permits.

Illinois has adopted partial phosphorus criteria for lakes and reservoirs. Illinois does not have provisions for site-specific criteria.

Minnesota has adopted phosphorus criteria for lakes, reservoirs, rivers and streams. Minnesota allows specific water quality standards, referred to as SSC in Wisconsin, to be adopted when appropriate if information is available to derive standards based on a waterbody’s specific characteristics. This process is outlined in Minn. R. 7050.0220 and 7050.0222. Site-specific standards must maintain and protect a waterbody’s beneficial uses. Several site-specific phosphorus criteria have been approved in Minnesota.

8. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen: This rule is largely procedural in nature. The department worked with U.S. EPA, department water quality standards staff and attorneys, and an external stakeholder committee to determine the type of information and data necessary to develop an SSC that would be approvable under state and federal regulations and the protocols contained in these rules for submittal of this information.

9. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report: Because this rule simply clarifies and documents a process for conducting a review already expressly allowed by state statutes and recognized in existing code, the creation of this rule is not expected to incur costs. The processes outlined in this rule are similar to those that the department has followed under the existing rule, s. NR 102.06(7), Wis. Adm. Code, and s. 281.15, Stats. The department recognizes that during the SSC development process, a person requesting an SSC is likely to incur some costs for monitoring or modeling, but it is their choice whether to request an SSC and incur those costs. Also, by specifying the type of demonstration that needs to be made to support an SSC, the rule may save requestors costs and time by streamlining their study design and reducing the time needed for SSC approval. Once an SSC is developed for a waterbody, there may be alterations to WPDES (Wisconsin Pollutant Discharge Elimination System) permit limits for point source discharges at, or upstream of, these specific surface water segments which may result in increased or decreased compliance costs. However, these potential economic impacts would be associated with an individual SSC developed through a future rule, and not directly the result of this proposed procedural rule.

This process is expected to be applicable to a relatively small proportion of waterbodies. However, the number of waterbodies in the state that may be eligible for SSC, or for which the permittees or other entities would be interested in pursuing an SSC, is unknown.

10. Effect on Small Business (initial regulatory flexibility analysis): As discussed above, this rule is not expected to incur costs other than those that would be incurred under the existing rule.

11. Agency Contact Person:

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12. Place where comments are to be submitted and deadline for submission: A hearing was held on September 12, 2019. The department accepted written comments at the public hearings, by regular mail, and by email. The comment submission deadline was September 20, 2019. After that comment period, Board Order WT-17-12 was adopted by the Natural Resources Board at its December 2019 meeting, along with another related rule, WY-23-13 regarding waterbody assessments using biological metrics, which this rule cross-references extensively. After approval by the Governor, both rules were submitted for legislative review. Both rules were subsequently recalled by the department from legislative committees on February 28, 2020 to make germane modifications. The modifications were made primarily within the waterbody assessments rule (WY-23-13), and included changing the term “biocriteria” to “biological assessment thresholds” and making associated structural revisions that necessitated renumbering. Accordingly, the SSC rule contains minor revisions to reflect the terminology changes and to update the cross-references to the other rule. This rule reflects these germane modifications.

SECTION 1. NR 102.01 (1) is amended to read:

NR 102.01 Purpose. (1) The purpose of this chapter is to establish, in conjunction with chs. NR 103 to 105, water quality standards for surface waters of the state pursuant to s. 281.15, Stats. This chapter describes the designated use categories for such waters and the water quality criteria necessary to support these uses. ~~This chapter and chs. NR 103 to 105~~chapter, chs. NR 103 to 105, and ch. NR 119 constitute the water quality standards for the surface waters of Wisconsin.

SECTION 2. NR 102.06 (7) is amended to read:

NR 102.06 (7) SITE-SPECIFIC CRITERIA. A criterion contained within this section may be modified by rule for a specific surface water segment or waterbody. A site-specific criterion may be adopted in place of the generally applicable criteria in this section where site-specific data and analysis using scientifically defensible methods and sound scientific rationale demonstrate a different criterion is protective of the designated use of the specific surface water segment or waterbody. Procedures for developing site-specific criteria for phosphorus are established in ch. NR 119.

SECTION 3. NR 119 is created to read:

CHAPTER NR 119

PHOSPHORUS SITE-SPECIFIC WATER QUALITY CRITERIA

NR 119.01 General. This chapter establishes standard protocols for developing site-specific water quality criteria for total phosphorus. A phosphorus site-specific criterion may be established to appropriately protect a waterbody's designated uses when the applicable statewide total phosphorus criterion, as specified in s. NR 102.06, is determined by the department to be more or less stringent than necessary to protect the uses of the waterbody due to site-specific conditions. The requirements specified in s. 281.15 (1) and (2) (b) to (e), Stats., shall be met when developing a site-specific criterion under this chapter. Protection of a waterbody's designated uses is evaluated using indicators of the ecosystem's response to phosphorus and overall biotic integrity. After a phosphorus site-specific criterion is adopted, approved by the U.S. EPA, and takes effect, it becomes the applicable water quality criterion under s. 281.15, Stats., for the approved waterbody or segment.

NR 119.02 Definitions. In this chapter the following definitions apply:

(1) “Biological assessment threshold” has the meaning defined in s. NR 102.03 (1e).

Note: Biological assessment thresholds are specified in subch. III of ch. NR 102.

(2) “Clean Water Act” or “CWA” means the federal Clean Water Act of 1972 and amendments.

(3) “Designated use” means a use assigned to Wisconsin’s waterbodies as specified in s. NR 102.04.

Note: Pursuant to the Clean Water Act, all of Wisconsin’s surface waters are assigned to the following use categories: aquatic life, recreation, public health and welfare, wildlife.

(4) “Less stringent SSC” means a site-specific phosphorus criterion that is established at a concentration higher than a waterbody’s statewide phosphorus criterion.

(5) “More stringent SSC” means a site-specific phosphorus criterion that is established at a concentration lower than a waterbody’s statewide phosphorus criterion.

(6) “Natural background phosphorus concentration” means the phosphorus concentration from natural sources, including forested and undeveloped lands, and from natural processes such as weathering and dissolution, that would exist in the absence of measurable impacts from human activity or influence.

(7) “Phosphorus response indicator” means an indicator and its thresholds, as specified in s. NR 102.60 (2) to (4), that characterize the condition or abundance of aquatic organisms that are responsive to phosphorus.

(8) “Section 303(d) list” means a list of waters that do not attain water quality standards and require a total maximum daily load analysis, as specified in Section 303(d) of the Clean Water Act.

(9) “Site-specific criterion” or “SSC” means a phosphorus criterion applicable to a waterbody or segment that differs from the statewide phosphorus criterion due to specific conditions at the waterbody or segment, documented using data for the specific site or a similar reference site.

(10) “Statewide phosphorus criterion” means the statewide phosphorus surface water quality criterion specified in s. NR 102.06 that applies to a specific waterbody in absence of an adopted, approved, and effective site-specific criterion.

(11) “Strahler stream order” is a numerical hierarchy of stream segments increasing from headwaters through downstream reaches.

Note: A map layer showing Strahler stream order is available online on the department’s Surface Water Data Viewer, <https://dnr.wi.gov/topic/surfacewater/swdv/>.

(12) “Total maximum daily load” or “TMDL” has the meaning defined in s. NR 212.72 (11).

(13) “U.S. EPA” means the United States environmental protection agency.

(14) “Weather-controlled total phosphorus concentration” has the meaning defined in s. NR 102.07 (1) (c) 1.

(15) “WPDES permit” means a Wisconsin pollutant discharge elimination system permit issued by the department under ch. 283, Stats.

NR 119.03 Less stringent SSC. A waterbody or segment may be eligible for a less stringent SSC if the requestor demonstrates and the department determines that the designated uses of the waterbody and its affected downstream waters can be protected by a less stringent phosphorus criterion based on the analysis of site-specific data. For the department to approve a less stringent SSC, the SSC shall be developed using methods specified in ss. NR 119.05 to 119.06 and be protective of downstream uses as specified in s. NR 119.06 (6). The categories of waterbodies that may qualify for less stringent SSC include all of the following:

(1) **BIOLOGICAL METRICS ATTAINED.** A less stringent SSC may be appropriate for a waterbody that is not attaining its statewide phosphorus criterion if all of its phosphorus response indicators and biological assessment thresholds are attained.

(2) **BIOLOGICAL METRICS NOT ATTAINED.** A less stringent SSC may be appropriate for a waterbody that is not attaining its statewide phosphorus criterion even if one or more of its phosphorus response indicators or biological assessment thresholds are not attained, provided a modeling analysis demonstrates that the phosphorus response indicators are expected to be attained if the waterbody’s phosphorus concentration is sufficiently reduced to attain a proposed SSC that is less stringent than the statewide phosphorus criterion.

Note: Certain reservoirs with a statewide phosphorus criterion of 30-40 ug/L may fit in this category. An example of this analysis is the modeling and analysis conducted for Petenwell and Castle Rock Lakes.

(3) HIGH NATURAL BACKGROUND PHOSPHORUS CONCENTRATION. A less stringent SSC may be appropriate if a waterbody is not attaining the statewide phosphorus criterion because the natural background phosphorus concentration is higher than the statewide phosphorus criterion.

NR 119.04 More stringent SSC. A waterbody or segment is eligible for a more stringent SSC if the requestor demonstrates and the department determines that the statewide phosphorus criterion is not sufficiently protective of the waterbody's designated uses. A more stringent SSC may be appropriate if a waterbody is in one of the following categories:

(1) BIOLOGICAL METRICS NOT ATTAINED. A more stringent SSC may be appropriate if a waterbody attains its statewide phosphorus criterion but does not attain one or more of its phosphorus response indicators or biological assessment thresholds. However, a more stringent SSC is not appropriate under this subsection if a biological assessment threshold or phosphorus response indicator is not attained due to factors other than phosphorus, and the department determines that phosphorus is not contributing to the nonattainment.

Note: Because flowing waters may transport algae downstream from where it is produced, an SSC should only be established on the segment of the waterbody where the impairment is being generated. For example, if a river directly downstream of an impoundment attains its phosphorus criterion but receives high algae concentrations passed through from the impounded area, a more stringent SSC for the river segment downstream from the dam may not be appropriate since the source of the algae is upstream. Establishing an SSC downstream from the dam is not likely to achieve attainment of the phosphorus response indicator.

(2) BIOLOGICAL METRICS ATTAINED. A more stringent SSC may be appropriate even if a waterbody is below its statewide phosphorus criterion and it attains its phosphorus response indicators and biological assessment thresholds if it is demonstrated that a more stringent SSC than the statewide phosphorus criterion is necessary to maintain attainment of any of these indicators and the level necessary can be demonstrated through modeling.

Note: For example, certain impounded flowing waters with a statewide phosphorus criterion of 100 ug/L may fit in this category if the ambient concentration of the waterbody is below the statewide criterion but concentrations approaching 100 ug/L would be too high to support recreation and aquatic life.

NR 119.05 Methods for determining an SSC. An SSC shall be developed using one of the following methods:

(1) **SSC BASED ON AMBIENT PHOSPHORUS CONCENTRATION.** For cases under s. NR 119.03 (1) when it is demonstrated that a less stringent SSC is appropriate because biological metrics are attained, the department may set the SSC at a concentration not to exceed a flowing water's median ambient concentration, or a lake or reservoir's mean ambient phosphorus concentration. If the weather-controlled total phosphorus concentration can be determined for the waterbody, this value may be used as the ambient phosphorus concentration.

Note: The SSC is set at the waterbody's median ambient concentration (or weather-controlled phosphorus concentration) because the ambient concentration is deemed to be protective of designated uses if the waterbody attains its phosphorus response indicators and biological assessment thresholds at current concentrations.

(2) **SSC DERIVED THROUGH MODELING.** (a) *Modeling analysis.* If a statistical or modeling analysis demonstrates that attaining a phosphorus concentration higher or lower than the statewide phosphorus criterion will attain a waterbody's suspended chlorophyll *a* phosphorus response indicators specified in s. NR 102.60 (2) to (4), and the department initiates rulemaking to establish an SSC, the department shall propose an SSC at the modeled phosphorus concentration expected to attain the applicable indicators. The analysis shall be conducted following requirements specified in s. NR 119.06 (4) (b).

Note: Modeling demonstrations under this subsection do not require modeling of biological communities such as fish, aquatic insect, or aquatic plant communities because, while predictive modeling is well-established for chlorophyll *a* concentrations, there are no widely-accepted modeling approaches that predict community-scale responses of fish, aquatic insect, or aquatic plant communities to variation in phosphorus concentrations with a high degree of precision.

(b) *Use of natural background phosphorus concentrations.* An SSC may be set no lower than a waterbody's natural background phosphorus concentration if the background concentration can be determined. The natural background concentration may be estimated using the concentration for similar nearby waterbodies with minimal human impacts or other methods approved by the department. For natural lakes, the background concentration may be determined from a sediment core using paleolimnological methods.

Note: Natural background phosphorus concentrations can be inferred from diatoms deposited in the sediment prior to significant impacts from Euro-American settlement, circa 1850s but variable across the state.

(3) ALTERNATIVE METHODS. An alternative method for setting an SSC may be used in cases that are outside of those described in ss. NR 119.03 to 119.04, when methods in subs. (1) to (2) are not appropriate or feasible, or to consider alternative or additional metrics. An SSC based on an alternative method may be approved if the department and U.S. EPA determine that the SSC is protective of the designated uses of the waterbody and downstream waters under s. NR 119.06 (6).

NR 119.06 Minimum requirements for an SSC submittal. Any person may submit a request to the department to review a proposed SSC for a waterbody or waterbody segment. The department may also develop an SSC through rulemaking absent any request. A person submitting the request is responsible for developing the proposed SSC, including conducting monitoring and modeling if needed. An SSC request submittal shall contain all of the following:

(1) SSC STUDY AREA. The submittal shall contain identification of all waterbodies and segments within the SSC study area. The SSC study area includes all waterbodies and segments for which monitoring data are needed to determine whether a proposed SSC would be protective of designated uses. The study area is determined as follows:

(a) For any SSC on an isolated waterbody such as a seepage lake, the isolated waterbody may comprise the entire SSC study area. At least one monitoring site within the waterbody is required.

(b) For a more stringent SSC on a flowing water system, a single waterbody or segment may comprise the SSC study area. In this case, at least one monitoring site within the waterbody is required. A larger study area may also be established.

(c) For a less stringent SSC on a flowing water system, the study area shall include monitoring sites on all of the following upstream and downstream waters:

1. A site upstream from the segment under consideration for an SSC.
2. At least one site within the segment under consideration for an SSC. This site shall be located downstream from any WPDES permitted dischargers present on the segment.

3. Downstream of the SSC segment, one site per Strahler stream order until the terminal waterbody defined in subd. 4. is reached.

4. At least one site within the study area's terminal waterbody, which is the nearest downstream waterbody that has a statewide phosphorus criterion different from the statewide phosphorus criterion applicable to the proposed SSC segment. If no terminal waterbody is reached before the Mississippi River, the Mississippi River is the terminal waterbody.

Note: Sampling beyond state lines is not usually necessary unless the department determines it is needed for protection of a downstream water with a more stringent phosphorus criterion in an adjacent state.

Note: The combined sites listed in par. (c) should typically result in 6 or fewer sites. If more than one discharger is present, additional sampling sites may be needed. The delineation of the study area is consistent with the approach used by the department when developing an SSC.

(2) APPLICABLE WATERQUALITY STANDARDS, PHOSPHORUS RESPONSE INDICATORS, AND BIOLOGICAL ASSESSMENT THRESHOLDS. For each waterbody or segment identified in sub. (1), the submittal shall contain identification of all applicable designated uses under s. NR 102.04, phosphorus criteria under s. NR 102.06, phosphorus response indicators under s. NR 102.60 (2) to (4), and biological assessment thresholds under subch. III of ch. NR 102.

(3) MONITORING. The submittal shall contain sampling data for each of the study area monitoring sites specified in sub. (1). Data shall be collected following the department's monitoring and quality assurance protocols for each metric. If additional relevant data are available beyond the minimum requirements specified in this section, such as more frequent data or a longer-term data record, they shall also be submitted and analyzed under sub. (4).

Monitoring data requirements include all of the following:

(a) At least 2 years of total phosphorus data. Sampling frequency at each site shall comply with one of the following:

1. For lakes and reservoirs, a minimum of 12 phosphorus samples are required over a 2-year period. Collection of 12 samples requires 6 samples from June 1 to September 15 each year.

2. For flowing waters, a minimum of 12 phosphorus samples are required over a 2-year period. Collection of 12 samples requires monthly sampling from May to October each year.

3. For sites with total phosphorus concentrations that are more variable than typical or where the phosphorus concentration is close to the statewide criterion, more frequent sampling than the minimum specified in subds. 1. to 2. may be necessary to demonstrate the need for an SSC and the appropriate SSC value. A requestor may consult with the department to determine if a higher sampling frequency is necessary.

Note: For example, if the two-sided 80% confidence interval around the proposed SSC phosphorus concentration contains the statewide criterion, then more frequent samples may be necessary to demonstrate the need for an SSC. A power analysis can be used to statistically estimate the amount of additional data needed.

(b) At least 2 years of data for each of the applicable phosphorus response indicators and biological assessment thresholds. For biological sampling, the department may approve sampling to be conducted by the requestor, conduct the sampling itself, or agree to a designee.

(c) Documentation of the monitoring protocols and quality assurance methods followed.

(d) Depending on site-specific circumstances, for the purposes of making an SSC determination, the department may require an additional number of samples, monitoring sites, or other chemical, biological, or physical metrics in addition to those specified in this section.

Note: The department's monitoring protocols and standard operating procedures, including quality assurance protocols, and existing data housed by the department may be accessed through the department's SWIMS database. Contact the department at DNRSWIMS@wisconsin.gov for access to the database. More information is available by contacting the department's surface water monitoring section or on its surface water monitoring website at <https://dnr.wi.gov/topic/SurfaceWater/monitoring.html>.

(4) ANALYSIS. The submittal shall contain an analysis of the data, including all of the following:

(a) An analysis of monitoring data following the department's assessment protocols to indicate current and historic attainment status of all water quality standards, phosphorus response indicators, and biological assessment thresholds identified in sub. (2). This shall include identifying whether any waters are or have been on the section 303(d) list, and any trends observable over time. If any relevant water quality standard is not attained, evaluate whether there is a relationship between phosphorus and the non-attainment, and any other potential factors that may be causing the non-attainment.

Note: The department's surface water assessment protocols are found under specific metrics within chs. NR 102 and 105 and in guidance titled "Wisconsin Consolidated Assessment and Listing Methodology," or WisCALM, which is available on the department's surface water assessments website at <https://dnr.wi.gov/topic/SurfaceWater/assessments.html>.

(b) A statistical or modeling analysis if needed to determine the appropriate SSC, as specified in s. NR 119.05 (2), and documentation of methods and results. The analysis shall demonstrate a clear link between phosphorus and attainment of a designated use, including characterization of the relationship between phosphorus and the applicable phosphorus response indicators. The analysis shall be based on or calibrated to data from the waterbody that are representative of the range of environmental variability that may influence the applicable phosphorus response indicators. For rivers that contain a reservoir, impounded flowing water, or natural drainage lake, the model may be based on attainment of the applicable phosphorus response indicators for frequency of moderate algae levels and chlorophyll *a* specified in s. NR 102.60 (2) (a) to (b). In those cases, a model demonstrating attainment of the river phosphorus response indicator for chlorophyll *a* specified in s. NR 102.60 (3) is not required. For rivers without a reservoir, impounded flowing water, or natural drainage lake, modeling shall include a demonstration that the river phosphorus response indicator for chlorophyll *a* specified in s. NR 102.60 (3) is expected to be attained.

Note: The option for rivers with impounded flowing waters, reservoirs, or natural drainage lakes is provided because modeling chlorophyll *a* – phosphorus correlations is more cost-effective for these waters than modeling such correlations in rivers, and attaining the chlorophyll *a* targets for lakes, reservoirs, and impounded flowing waters should ensure that chlorophyll *a* targets are also met within the river.

(5) PROPOSED SSC EXTENT. The submittal shall contain identification of the extent of the study area that may be eligible for the SSC. For a less stringent SSC, this may include any segments within the study area that do not attain their applicable phosphorus criteria but do attain all phosphorus response indicators and biological assessment thresholds. For a more stringent SSC, this may include any segments that are demonstrated to need a more stringent phosphorus criterion to protect designated uses.

Note: Typically, monitoring and analysis under subs. (3) to (4) will need to be completed before the extent of the study area eligible for the SSC can be identified.

(6) **DOWNSTREAM PROTECTION.** For less stringent SSC, the submittal shall contain a demonstration that potentially affected downstream waters' uses are protected by the proposed SSC, using one of the following methods:

(a) Waters in the study area under sub. (1) that are downstream of the extent of the study area that may be eligible for the SSC as determined under sub. (5) shall be assessed as follows:

1. If the downstream segment adjacent to the proposed SSC extent attains its applicable phosphorus criteria, phosphorus response indicators, and biological assessment thresholds, the SSC is protective of downstream waters.

2. If the proposed SSC extent directly joins a river listed in s. NR 102.06 (3) that is not attaining one or more of its phosphorus response indicators or biological assessment thresholds, an SSC may be established but shall not be set higher than either the phosphorus criterion of the river or the ambient total phosphorus concentration of the SSC extent.

Note: Under this paragraph, Strahler stream order should be used to determine the length of the adjacent downstream segment.

(b) If a demonstration for downstream protection under par. (a) is not appropriate or feasible, an alternative demonstration of downstream protection may be submitted by the requestor to the department.

(7) **PROPOSED SSC AND SUPPORTING MATERIALS.** The submittal shall contain the proposed SSC and materials supporting the proposal, including all of the following:

(a) Determination of the SSC that would be appropriately protective of designated uses in the waterbody and downstream, based on the analyses in this section.

(b) Demonstration that there is a statistically significant difference between the proposed SSC and the statewide phosphorus criterion, based on estimation of the uncertainty in the relationships developed under sub. (4) (b).

Note: For example, an SSC may be demonstrated to be significantly different from the statewide criterion if the statewide phosphorus criterion is outside the 2-sided 80% confidence interval around the proposed phosphorus SSC concentration.

(c) A draft technical support document that contains the information required in this chapter to support the SSC and meets the requirements specified in s. 281.15, Stats. All raw data and calculations shall also be submitted to the department.

Note: Section 281.15 (2) (b) to (e), Stats., requires information on socioeconomic costs and considerations, a demonstration that the criterion is no more stringent than reasonably necessary to assure attainment of a waterbody's designated uses, application of reasonable statistical techniques, and a technical support document detailing methods used to develop the criterion.

Note: The department recommends that requestors meet with the department early in the process to determine additional data needs and protocols before developing a monitoring or modeling plan or submitting an SSC request. The department may provide technical assistance as resources allow. Any preliminary advice provided by the department is not binding, but is meant to inform the requestor's decision on whether to develop an SSC and the information needed to do so.

NR 119.07 Decision regarding SSC request. (1) The department shall review an SSC request and make a determination on whether the SSC is approvable.

(2) The department may initiate rulemaking under subch. II of ch. 227, Stats., if, after reviewing the submittal, it determines that the proposed SSC is approvable under s. 281.15, Stats. The department shall notify the requestor of its determination. Promulgation of an SSC is a revision to a water quality standard and it requires U.S. EPA approval under 40 CFR ss. 131.20 and 131.21.

Note: An SSC can only be used as the basis for a TMDL after it has been approved by U.S. EPA and taken effect.

(3) If the department determines that a proposed SSC is not approvable under s. 281.15, Stats., s. NR 102.06 (7), and this chapter, then it shall notify the SSC requestor in writing and provide an explanation of the reason for the denial. If a request for an SSC is denied, the requestor may choose to submit additional data or analysis or submit a petition for rulemaking to the department pursuant to the procedures specified in ss. NR 2.03 and 2.05 and s. 227.12, Stats.

Note: If the department chooses not to initiate rulemaking under this section, a petition for rulemaking may be submitted to the department pursuant to s. 227.12, Stats. A petition for rulemaking under s. 227.12 (1), Stats., may be submitted by a municipality, an association which is representative of a farm, labor, business or professional group, or any 5 or more persons having an interest in the rule. If a s. 227.12, Stats., petition is denied by the department, the

petitioners may seek review of the decision under ch. 227, Stats. In addition, a person may request that U.S. EPA promulgate an SSC under 40 CFR 131.22 (b).

Note: To be notified of rulemaking related to water quality standards and assessments, including SSC, the public may subscribe to the water quality standards and assessments electronic notification system on the department's home page at <http://dnr.wi.gov/>. Requests to be placed on the WPDES permit public notification list may be directed to the Department of Natural Resources, WPDES Permits, P.O. Box 7921, Madison, Wisconsin 53707-7921. Notifications to the mailing list will be sent electronically unless the requestor specifies a preference for a mailed copy.

(4) Any promulgated SSC may later be revised through rulemaking.

SECTION 4. 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 5. BOARD ADOPTION. This rule was approved and adopted with germane modifications by the State of Wisconsin Natural Resources Board on January 26, 2022.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN

DEPARTMENT OF NATURAL RESOURCES

BY _____

For Preston D. Cole, Secretary