

## ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

<b>1. Type of Estimate and Analysis</b> <input checked="" type="checkbox"/> Original <input type="checkbox"/> Updated <input type="checkbox"/> Corrected	<b>2. Date</b> February 18, 2019
<b>3. Administrative Rule Chapter, Title and Number (and Clearinghouse Number if applicable)</b> Chapter 102, Water Quality Standards for Wisconsin Surface Waters; WY-09-18	
<b>4. Subject</b> Site-specific phosphorus water quality criteria for Petenwell Lake, Castle Rock Lake, and Lake Wisconsin	
<b>5. Fund Sources Affected</b> <input type="checkbox"/> GPR <input type="checkbox"/> FED <input type="checkbox"/> PRO <input type="checkbox"/> PRS <input type="checkbox"/> SEG <input type="checkbox"/> SEG-S	<b>6. Chapter 20, Stats. Appropriations Affected</b> None
<b>7. Fiscal Effect of Implementing the Rule</b> <input checked="" type="checkbox"/> No Fiscal Effect <input type="checkbox"/> Increase Existing Revenues <input type="checkbox"/> Increase Costs <input type="checkbox"/> Decrease Costs <input type="checkbox"/> Indeterminate <input type="checkbox"/> Decrease Existing Revenues <input type="checkbox"/> Could Absorb Within Agency's Budget	
<b>8. The Rule Will Impact the Following (Check All That Apply)</b> <input type="checkbox"/> State's Economy <input checked="" type="checkbox"/> Specific Businesses/Sectors <input checked="" type="checkbox"/> Local Government Units <input checked="" type="checkbox"/> Public Utility Rate Payers <input type="checkbox"/> Small Businesses (if checked, complete Attachment A)	
<b>9. Estimate of Implementation and Compliance to Businesses, Local Governmental Units and Individuals, per s. 227.137(3)(b)(1).</b> <b>\$1,052,105 in compliance costs; \$11,500,000 in cost savings</b>	
<b>10. Would Implementation and Compliance Costs Businesses, Local Governmental Units and Individuals Be \$10 Million or more Over Any 2-year Period, per s. 227.137(3)(b)(2)?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>11. Policy Problem Addressed by the Rule</b> This proposed rule will create phosphorus site-specific criteria (SSC) for three waterbodies, Petenwell Lake located in Wood, Juneau, and Adams Counties, Castle Rock Lake located in Adams and Juneau Counties, and Lake Wisconsin located in Columbia and Sauk Counties. Pursuant to s. NR 102.06 (7), Wis. Adm. Code, and s. 281.15, Wis. Stats., the Department of Natural Resources (department) has the authority to develop an SSC in place of the current applicable phosphorus criteria in s. NR 102.06, Wis. Adm. Code, where site-specific and scientifically defensible data and analysis demonstrate a different criterion is protective of the designated use of a specific surface waterbody.  The department is proposing rules to establish SSC for the three waterbodies because modeling and analysis of monitoring data conducted during the development of the legislative initiated Wisconsin River Basin Total Maximum Daily Load (TMDL) has concluded that the current statewide phosphorus criteria for Petenwell Lake and Castle Rock Lake are more restrictive than needed to protect the designated uses and that the current phosphorus criterion for Lake Wisconsin is not sufficiently protective of the designated uses. The designated uses associated with the phosphorus criteria for reservoirs and lakes are recreational uses and aquatic life uses.	
<b>12. Summary of the Businesses, Business Sectors, Associations Representing Business, Local Governmental Units, and Individuals that may be Affected by the Proposed Rule that were Contacted for Comments.</b> The cost estimates used in this FE/EIA were obtained from the cost curves and estimates developed by the consulting firm Arcadis as part of the Economic Impact Analysis Supporting Report developed for the Department of Administration in support of Wisconsin's phosphorus multi-discharge variance (MDV) determination. Arcadis developed cost curves for 755 municipal and industrial facilities across the state for the different levels of treatment needed to reach concentration-based phosphorus effluent limits. This report was made available during the comment period for the MDV.  Facilities that may be affected and other interested parties were contacted and given the opportunity to comment on the draft EIA during the public solicitation period.	

## ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

---

13. Identify the Local Governmental Units that Participated in the Development of this EIA.

Local governments and their treatment facility operators were given the opportunity to comment on the draft EIA during the public solicitation period. No comments were received from local governmental units.

---

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

There are 109 individually permitted wastewater treatment facilities that could be impacted as outlined below:

- 3 facilities are already installing treatment capable of meeting TMDL-based effluent limits under both the current criteria and recommended SSC so the SSC will have no economic impact.
- 2 facilities that discharge to large wetland complexes may not be impacted by the SSC as the department currently believes the discharges do not impact downstream waters, so the SSC will have no economic impact.
- 20 facilities are already meeting effluent limits under both the current criteria and recommended SSC so the SSC will have no economic impact.
- 32 facilities have no change in effluent limits as a result of the TMDL so the SSC will have no economic impact.
- 16 facilities will have similar treatment options under both the current criteria and recommended SSC such that it is unlikely the recommended SSC will shift compliance costs much in either direction.

For the remaining 36 wastewater treatment facilities, 29 of the facilities are municipal wastewater treatment plants and 7 are industrial facilities. The economic impact for these 36 facilities is summarized below:

For the 29 municipal facilities, 19 will see reduced compliance costs (20-year present worth) estimated at \$93,617,625 which translates to an annual cost of \$5,593,602 and 10 facilities will see increased compliance costs (20-year present worth) estimated at \$8,951,719 which translates to an annual cost of \$534,860. This analysis assumes plant upgrades are done to comply with effluent limits. Compliance costs may be reduced if the facilities choose to comply through adaptive management or water quality trading, or if they seek a variance, but these costs were not estimated.

For industrial facilities, 5 facilities will see reduced compliance costs (20-year present worth) estimated at \$86,115,333 which translates to an annual cost of \$5,895,862 and 2 facilities will see increased compliance costs estimated at \$7,554,925 which translates to an annual cost of \$517,245. These facilities are not small businesses.

See the attached memo for additional information about cost estimates.

---

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

The cost savings (economic benefit) for facilities that will be associated with establishing SSC for the three waterbodies is estimated to be very significant (\$11.5 million per year, \$179,732,958 over 20 years). We assume a 20-year period for compliance cost and benefit estimations in this section. The positive economic benefits associated with improvements in water quality are not factored into the costs. Adoption of recommended SSC will impact allocations resulting from the TMDL and thus have an economic impact, both through changes in compliance costs and the positive economic benefits associated with improvements in water quality. Adoption of recommended SSC for these waterbodies will have conflicting impacts for dischargers and businesses. The anticipated increased compliance cost from establishing SSC for

---

## ADMINISTRATIVE RULES

### Fiscal Estimate & Economic Impact Analysis

the three waterbodies is estimated to be moderate (\$1 million year in present worth). The estimated compliance costs reflect wastewater treatment cost (capital and O&M costs) at the facility.

---

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

Implementing this rule sets appropriate targets for phosphorus for the three reservoirs, assures water quality improvement and creates regulatory certainty. Without the SSC for Lake Wisconsin, water quality impairments will not be addressed in Lake Wisconsin and U.S. EPA may not approve the proposed TMDL for Lake Wisconsin. More importantly, without an approved Wisconsin River Basin TMDL and associated SSC, facilities will not receive the economic relief outlined above and facilities may face future upgrade requirements.

---

#### 17. Compare With Approaches Being Used by Federal Government

40 CFR 131 Subparts A-C contain requirements for establishing state water quality standards.

40 CFR s. 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.

---

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

Iowa does not have numeric nutrient criteria.

Illinois has adopted partial phosphorus criteria for lakes and reservoirs. The phosphorus criteria for any lake or reservoir greater than 20 acres is set at 50 µg/L. Illinois does not have provisions for site-specific criteria.

Michigan has phosphorus goals set through Rule 60(2) which prevents total phosphorus levels in ambient water from stimulating growth of plants, fungi, and bacteria which are or may become injurious. Michigan translates water quality goals into effluent limits. Total phosphorus goals range from approximately 1.0 mg/L to 0.1 mg/L. Site-specific total phosphorus goals for lakes range between 0.008 and 0.06 mg/L. In Michigan, like Wisconsin, the evaluation of site-specific total phosphorus criteria is an inherent component of the TMDL analysis process.

Minnesota (MN) has adopted phosphorus criteria (standards) for lakes and reservoirs by ecoregion with values ranging from 12 to 90 µg/L. In addition, MN allows specific water quality standards, referred to as SSC in Wisconsin, to be adopted when appropriate and information is available to derive standards based on information specific to a water body including temperature, variations in hydraulic residence time, watershed size, and distance from neighboring ecoregion. This process is outlined in Minn. R. 7050.0222. Other site-specific standards can be considered using Minn. R. 7050.0220, Subp. 7 (Site-specific Modification of Standards) and in the Lake Superior Basin using Minn. R. 7052.0270 (Site-specific water quality standards or criteria). Site-specific standard must maintain and protect the beneficial use.

In MN, six site-specific standards for lakes have been approved and one that is proposed. The proposed site-specific standard is for the Sauk River Chain of Lakes and was submitted to U.S. EPA for their approval in June 2017. The Sauk River Chain of Lakes is a reservoir system. Given the unique characteristics of this reservoir system, MN deemed it appropriate to propose and use site-specific eutrophication standards to protect swimming and boating uses. The flowage lakes are very shallow, with a large watershed to lake surface area, and water residence times are very low. The non-flowage lakes are influenced by their connection to the flowage lakes and were adjusted accordingly to utilize

---

**ADMINISTRATIVE RULES**  
**Fiscal Estimate & Economic Impact Analysis**

appropriate standards. The site-specific standards focus on reduction in the frequency and intensity of algal blooms so that aquatic recreational uses are protected for the majority of the summer.

---

19. Contact Name

Marcia Willhite

20. Contact Phone Number

608-267-7425

---

This document can be made available in alternate formats to individuals with disabilities upon request.

**ADMINISTRATIVE RULES**  
**Fiscal Estimate & Economic Impact Analysis**

**ATTACHMENT A**

---

1. Summary of Rule's Economic and Fiscal Impact on Small Businesses (Separately for each Small Business Sector, Include Implementation and Compliance Costs Expected to be Incurred)

None of the affected industrial permittees meets the definition of a small business.

---

2. Summary of the data sources used to measure the Rule's impact on Small Businesses

---

3. Did the agency consider the following methods to reduce the impact of the Rule on Small Businesses?

- Less Stringent Compliance or Reporting Requirements
- Less Stringent Schedules or Deadlines for Compliance or Reporting
- Consolidation or Simplification of Reporting Requirements
- Establishment of performance standards in lieu of Design or Operational Standards
- Exemption of Small Businesses from some or all requirements
- Other, describe:

---

4. Describe the methods incorporated into the Rule that will reduce its impact on Small Businesses

---

5. Describe the Rule's Enforcement Provisions

---

6. Did the Agency prepare a Cost Benefit Analysis (if Yes, attach to form)

- Yes    No
-