

DECISION DOCUMENT FOR THE APPROVAL OF WISCONSIN'S 2018 LIST WITH RESPECT TO SECTION 303(d) OF THE CLEAN WATER ACT

The U.S. Environmental Protection Agency (EPA) has conducted a complete review of Wisconsin's 2018 Clean Water Act (CWA) Section 303(d) list and supporting documentation and information. Based upon this review, EPA has determined that Wisconsin's list of water quality limited segments (WQLSs) still requiring Total Maximum Daily Loads (TMDLs) meets the requirements of Section 303(d) of the Act and EPA's implementing regulations at 40 CFR § 130.7. Therefore, EPA hereby approves Wisconsin's 2018 Section 303(d) list.

EPA concludes that Wisconsin properly assembled and evaluated existing and readily available data and information, including data and information relating to categories of waters specified at 40 CFR § 130.7(b)(5). EPA concludes that the state submitted a methodology that outlines how the state uses readily available data and information to make assessment and impairment decisions. EPA also concludes that Wisconsin provided a rationale for not relying on particular existing and readily available water quality related data and information as a basis for listing waters on the 303(d) list, and that Wisconsin demonstrated good cause for not listing certain WQLSs on its 2018 303(d) list.

EPA's approval of Wisconsin's 2018 303(d) list extends to water bodies identified in Table 1 in the Appendix to this Decision Document, with the exception of those waters that are within Indian Country as defined in 18 U.S.C. § 1151. EPA is taking no action to approve or disapprove the state's list with respect to those waters that are within Indian Country. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.

The statutory and regulatory requirements, and EPA's review of Wisconsin's compliance with each requirement, are described below.

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I. Statutory and Regulatory Background

A. Identification of Water Quality-Limited Segments (WQLS) for Inclusion on CWA Section 303(d) List

Section 303(d)(1) of the Act directs states to identify those waters within their jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard,¹ and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of Section 303(d).

EPA regulations provide that states do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Act, (2) more stringent effluent limitations required by state or local authority, and (3) other pollution control requirements required by state, local, or federal authority.²

B. Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing Section 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or identified as threatened in the state's most recent Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to EPA.³ In addition to these minimum categories, states are required to consider any other existing and readily available data and information. EPA's 1991 Guidance for Water Quality-Based Decisions describes categories of water quality-related data and information that may be existing and readily available.⁴ While states are required to evaluate all such water quality-related data and information, states may decide to rely or not rely on particular data or information in determining whether to list particular waters.

¹ 40 C.F.R. § 130.7(b)(1)(iii).

² 40 C.F.R. § 130.7(b)(1).

³ 40 C.F.R. § 130.7(b)(5).

⁴ "Guidance for Water Quality-Based Decisions: The TMDL Process," EPA Office of Water, 1991, Appendix C (hereafter, "EPA 1991 Guidance").

In addition to requiring states to assemble and evaluate all existing and readily available water quality-related data and information, EPA regulations at 40 C.F.R. §130.7(b)(6) require states to include, as part of their submissions to EPA, documentation to support decisions to rely or not rely on particular data and information, and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; and (3) any other reasonable information requested by the Region.⁵

C. Priority Ranking

EPA regulations also codify and interpret the requirement in Section 303(d)(1)(A) of the Act that states establish a priority ranking for listed waters. The regulations at 40 C.F.R. § 130.7(b)(4) require states to prioritize waters on their Section 303(d) lists for TMDL development, and to identify those WQLSs targeted for TMDL development in the next two years.⁶ In prioritizing and targeting waters, states must, at a minimum, take into account the severity of the pollution and the uses of such waters.⁷ As long as these factors are taken into account, the Act provides that states establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, and state or national policies and priorities.⁸

II. EPA Analysis of Wisconsin's 2018 List

A. Wisconsin's 2018 303(d) List Submittal

1. Timeline of List Submittal

The 2018 303(d) list “submittal” is comprised of the state’s submittals published on its website,⁹ together with an e-mail message received by EPA on April 2, 2018.¹⁰ All of this information is summarized below and was compiled in EPA’s administrative record for this decision:

- Wisconsin 2018 Water Quality Report to Congress
- Clean Water Act Report to Congress Executive Summary
- Final draft 2018 impaired waters list
 - Full 2018 list
 - Proposed Listings/Additions

⁵ 40 C.F.R. § 130.7(b)(6).

⁶ 40 C.F.R. § 130.7(b)(4).

⁷ CWA Section 303(d)(1)(A).

⁸ 57 Federal Register 33040, 33045 (July 24, 1992); see also EPA's 1991 Guidance.

⁹ WDNR attempted to submit the list and information through the updated ATTAINS database. This database was updated by EPA and is the method the states were requested to use for the 2018 list. This is the first listing cycle to use the system. However, at the time of submittal WDNR had difficulty using the database, and instead published the information on the State’s website.

¹⁰ See e-mail message from Ashely Beranek, WDNR, to Donna Keclik, EPA, April 2, 2018.

- Proposed Delisting/Deletions
- Legend
- DNR Categories
- Response to Public Comments on 2018 Draft impaired waters list
- Assessment methods used to develop the impaired waters list
- Framework for prioritizing listings for restoration plan development
- Two-Story Fishery Lake list.

2. Integrating the CWA 305(b) report and CWA 303(d) list

EPA encourages states to submit Integrated Reports to fulfill CWA §§ 305(b) and 303(d) requirements. Wisconsin's CWA 305(b) assessment and 303(d) list categories are set out in Table 1, below. The 2018 impaired waters submittal to EPA included waters in Category 4 and Category 5, and subcategories 5A, 5B, 5C, 5P and 5W. Wisconsin submitted data and information required under §305(b) of the CWA directly to EPA through the Water Quality Exchange network.¹¹

¹¹ The Water Quality Exchange (WQX) is a framework that makes it easier for states, tribes, and others to submit and share water quality monitoring data over the Internet. For more information, see <http://www.epa.gov/storet/wqx/> last accessed June 8, 2018.

Table 1. Integrated report categories in the 2018 WisCALM¹²

IR Category	Description
Category 1	All designated uses are met, no use is threatened, and the anti-degradation policy is supported. This category requires that all designated uses have been assessed for a given water.
Category 2	Available information indicates one or more designated uses are met. This category is applied to waters that have been assessed and considered fully meeting one or more designated uses and is also applied in Wisconsin to waters that have been restored and removed from the impaired waters list.
Category 3	There is insufficient available data and/or information to assess whether a specific designated use is being met or if the anti-degradation policy is supported. This category is also used for situations where the state has not yet had time or resources to analyze available data.
Category 4: Waters where a Total Maximum Daily Load (TMDL) is approved by EPA or not required.	
Category 4A	All TMDLs needed for attainment of water quality standards have been approved or established by EPA. This does not mean that all other designated uses have been evaluated and found to be meeting their designated use.
Category 4B	Required control measures are expected to achieve attainment of water quality standards in a reasonable period of time. Environmental Accountability Projects may be proposed as an alternative to TMDL development.
Category 4C	A waterbody where the impairment is not caused by a pollutant. Pollution is defined by EPA as the human-made or human-induced alteration of the chemical, physical, biological, and radiological integrity of water [Section 502(19)].
Category 5: Waters where a TMDL is required.	
Category 5A	Available information indicates that at least one designated use is not met or is threatened and/or the anti-degradation policy is not supported, and one or more TMDLs are still needed.
Category 5B	Available information indicates that atmospheric deposition of mercury has caused the impairment of the water. The water is listed for a specific advisory and no in-water source is known other than atmospheric deposition.
Category 5C	Available information indicates that non-attainment of water quality standards may be caused by naturally occurring or irreversible human-induced conditions.
Category 5P	Available information indicates that the applicable total phosphorus criteria are exceeded; however, biological impairment has not been demonstrated (either because bioassessment shows no impairment or because bioassessment data are not available).
Category 5W	Available information indicates that water quality standards are not met; however, the development of a TMDL for the pollutant of concern is a low priority because the impaired water is included in a watershed area addressed by at least one of the following WDNR approved watershed plans: adaptive management plan, adaptive management pilot project, lake management plan, or CWA Section 319-funded watershed plan (i.e., nine key elements plan).

¹² 2018 WisCALM, p. 59

B. Review of Wisconsin's Consideration of Existing and Readily Available Water Quality-Related Data and Information

EPA's regulations at 40 C.F.R. § 130.7(b)(5) require that states assemble and evaluate existing and readily available data and information to develop their lists of impaired waters. EPA reviewed WDNR's description of the data and information, its effort to gather available data, and other relevant information. EPA concludes that the WDNR properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 C.F.R. §§ 130.7(b)(5)(i) – (iv). EPA's review of Wisconsin's consideration of data for these categories of waters is summarized below.

The 2018 submittal identifies five categories of impaired waterbodies that need TMDLs: water bodies that are not meeting water quality standards (Category 5A), water bodies that are impaired due to atmospheric mercury deposition (Category 5B), water bodies that are impaired due to naturally occurring causes (Category 5C), water bodies that exceed total phosphorus (TP) criteria, but for which available biological data, such as chlorophyll-*a* or biotic indicators, either do not exist or do not exceed *poor* indicator thresholds (Category 5P), and waters for which Adaptive Management plans (as described in Wis. Admin. Code NR § 217) or alternative watershed management plans are in place to address the impairments (Category 5W).

Wisconsin added the subcategories 5P and 5W to the final 2012 303(d) list and continues to use these subcategories for the 2018 list. Waters in these categories receive a lower priority to develop TMDLs. Wisconsin also identified on its 2018 list, impaired waterbodies for which the state has approved TMDLs but where the waters have not yet attained water quality standards. These waterbodies with approved TMDLs are placed in Category 4A. EPA recognizes that these waters are not meeting water quality standards, but are not included on the 303(d) list, as these already have TMDLs.

EPA's long-standing interpretation is that CWA § 303(d) applies to waters impacted by point and nonpoint sources.¹³ Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the sources of the impairment are point sources, nonpoint sources or a combination of the two. EPA reviewed the state's list and determined that the state properly listed waters with point and nonpoint sources causing or expected to cause impairment.

Based on its review of existing and readily available data and information, and the assessments made for the 2018 303(d) list, the state has added 289 pollutant/impairments to Category 5 and

¹³ In *Pronsolino v. Nastri*, the Ninth Circuit Court of Appeals held that Section 303(d) of the CWA authorizes EPA to identify and establish TMDLs for waters impaired by nonpoint sources, 291 F.3d 1123 (9th Cir. 2002). See also EPA 1991 Guidance, EPA, "National Clarifying Guidance for 1998 State and Territory Clean Water Act 303(d) Listing Decisions," August 17, 1997.

its subcategories (Table 2 in the attachment to this document), and delisted¹⁴ 61 waterbody impairments¹⁵ (Table 3 in the attachment to this document)¹⁶ bringing the total number of pollutant/impairments on the 303(d) list to 1754.

After full review and consideration of the information presented by the state in its 2018 submittal, EPA is approving all the waters identified in Table 1 of the Appendix to this Decision Document as impaired waters in Wisconsin needing TMDLs (i.e. waters identified in Categories 5A, 5B, 5C, 5P, and 5W).

C. Review of Wisconsin's rationale to list or not list WQLSs on the 303(d) List

EPA's regulations at 40 C.F.R. § 130.7(b)(6) require that states provide documentation to support their decisions to list or not list waters including: a description of the methodology used to develop the list (40 C.F.R. § 130.7(b)(6)(i)), a description of data and information used to determine whether to include a WQLS on the 303(d) list (40 C.F.R. § 130.7(b)(6)(ii)), a rationale for a decision to not use any data (40 C.F.R. § 130.7(b)(6)(iii)), and a demonstration of good cause for not including a water on the list (40 C.F.R. § 130.7(b)(6)(iv)).

1. Methodology used to assess waters and develop the list

While WisCALM is not part of the state's approved water quality standards, integrated reporting guidance provides that EPA should consider the methodologies that are not part of state approved standards to determine whether:

[T]he state conducted an adequate review of all existing and readily available water quality-related information, whether the factors that were used to make listing and removal decisions were reasonable, whether the process for evaluating different kinds of water-quality related data and information is sufficient, and whether the process for resolving jurisdictional disagreements is sufficient. If EPA finds that the state's methodology is inconsistent with its water quality standards, and its application has resulted in an improper section 303(d) list, EPA may disapprove the list [....]¹⁷

¹⁴ Wisconsin identified impairments removed from the impaired waters list as either *delisted* or *deleted*. A waterbody that has been identified as delisted is now meeting standards and is no longer identified as impaired for any pollutant/impairment. A waterbody impairment that is marked as deleted refers to the removal of a pollutant and associated impairment. WDNR considers waters in both Categories 4A and 5 when identifying whether a water is to be delisted or deleted. EPA has referred to both delisted and deleted waters as "delisted" in this document.

¹⁵ Some of the delistings are a change in the impairment, which also effects the number of new listings. EPA tracks these changes as delistings and new listings.

¹⁶ A new cause of impairment to a water already listed for another cause is referred to by WDNR as an *addition*, whereas WDNR refers to a water *proposed for list* as new waterbody segment that has no pollutant/impairments on a prior list. EPA considers these to be additions to the list.

¹⁷ U.S. EPA, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Section 303(d) and 305(b) of the CWA at pp 29-30 (hereafter 2006 IR Guidance).

a. *Summary of WisCALM*

The WisCALM describes a three-tiered monitoring strategy that WDNR uses to gather information for CWA 305(b) and 303(d) purposes, as well as other state programs. The WisCALM describes these as: statewide baseline (Tier 1), targeted evaluation (Tier 2), and management effectiveness and compliance (Tier 3). The WisCALM also contains indicators to assess general waterbody condition and thresholds to assess attainment of designated uses. These indicators include physical, chemical, and biological parameters.

Under the current strategy, Tier 1 monitoring is used to collect baseline information and to establish trends and identify problems. Tier 1 monitoring occurs on a statewide scale. The information reviewed at this level provides general information on conditions of the waters. Based on the general review, the state identifies waters needing further evaluation or “specific assessments.” WDNR prioritizes those waters that do not meet the minimum indicator levels in Tier 1 for further monitoring in its Tier 2 stage. WDNR uses Tier 2 to confirm Tier 1 results or gather more information regarding waterbody conditions and aquatic life use. WDNR uses data collected in Tier 2 to determine impairment status and the cause(s) of impairment. WDNR uses Tier 3 monitoring to determine the effectiveness of management measures and permit conditions. WDNR also includes regulatory monitoring of permitted entities in Tier 3.¹⁸

To determine if a water should be added to the 303(d) list, WDNR first conducts a general assessment and identifies the qualitative condition of a water as either excellent, good, fair or poor. Waters are identified as either *excellent* or *good* if they are attaining designated uses that were assessed; waters are identified as *fair* if they attain their designated uses but actions may be needed to prevent further decline of water quality. Waters identified as *poor* do not meet designated uses and may be considered *impaired* and listed in accordance with Section 303(d) of the CWA. A water is considered impaired if available data, which meet minimum requirements (data quality and data quantity), indicate that a designated use and/or a numeric or narrative water quality criterion is not met.¹⁹

WDNR staff use best professional judgment to assess whether data are relevant and appropriate for use in impairment decisions. The factors that are important in these determinations include: data quality, frequency and magnitude of exceedances, weather and flow conditions during sample collection, and anthropogenic or natural influences on water quality in the watershed. WDNR provides a rationale if professional judgment results in not relying on some available data in the final impairment decision.²⁰

Wisconsin's water quality standards include designated uses, numeric/narrative criteria, and antidegradation provisions. Wis. Admin. Code NR §§ 102, 103, 104, 105, 207, and 217.

¹⁸ 2018 WisCALM, April 2017, pp 4-5.

¹⁹ 2018 WisCALM, April 2017, pp 11-12.

²⁰ 2018 WisCALM, April 2017, pp 9-10.

i. Designated Uses

Designated uses in Wisconsin include: fish and aquatic life (FAL), recreation, public health and welfare, wildlife. The state subcategorizes FAL use. The subcategories for the FAL use include coldwater community, warmwater sport fish community, warmwater forage fish community, limited forage fish community, and limited aquatic life community. Designated uses, including the subcategories for FAL, are codified in Wis. Admin. Code NR §§ 102 and 104. Waters that are not referenced in code are considered FAL waters by default and are assumed to support either a coldwater community or warmwater community depending on water temperature and habitat. In some cases, coldwater fish communities referenced in the “1980 Trout Book” (Wisconsin Trout Streams - Publication 6-3600(80)) may be codified by reference.

The designated uses are considered in listing decisions by comparing water quality data to narrative or numeric nutrient criteria that are set to protect a designated use. If data for a particular water meet minimum data requirements and quality considerations, and exceed the appropriate water quality criteria, then Wisconsin may add the water to the 303(d) list.

ii. Numeric and Narrative Criteria

Narrative criteria describe qualitative conditions to be met in a given waterbody. A narrative water quality criterion is a statement that prohibits unacceptable conditions in or upon the water, such as floating solids, scum, or nuisance algae blooms that interfere with public access. Such standards protect surface waters and aquatic biota from eutrophication, algae blooms, and turbidity, among other things. Wisconsin’s narrative criteria are found in Wis. Admin. Code NR § 102.04(1).

Wis. Admin. Code NR § 102 includes numeric surface water quality criteria for conventional parameters such as pathogens, nutrients, and temperature to protect FAL and recreation designated uses. The regulations in NR § 105 include surface water quality criteria for toxic substances (for example, metals and organics) to protect public health and welfare uses, the present and prospective use of all surface waters for public and private water supplies and the propagation of fish and aquatic life and wildlife.

iii. Antidegradation

Wisconsin’s antidegradation policy provides:

No waters of the state shall be lowered in quality unless it has been affirmatively demonstrated to the Department that such a change is justified as a result of necessary economic and social development, provided that no new or increased effluent interferes with or becomes injurious to any assigned uses made of or presently possible in such waters.²¹

WDNR identifies waters that may be subject to antidegradation during Tier 3 monitoring.

²¹ Wis. Admin. Code § NR 102.05(1).

b. EPA's review of WisCALM

EPA reviewed and provided comments on the draft WisCALM, which was placed on public notice on December 20, 2016.²² In its review of the draft WisCALM, EPA expressed concerns about WDNR's threshold levels for assessments.²³ EPA has worked and continues to work with WDNR to resolve these concerns.

2. Data and information used to develop the list

In developing its list, WDNR uses its own monitoring data and information, as well as data submitted by the public, other agencies, and universities. Available water quality information used in making assessments are summarized in impaired waters reports. These reports are available online.²⁴

a. WDNR monitoring data

WDNR created and manages two databases that support the State's listing process:

The Surface Water Integrated Monitoring System (SWIMS) database contains chemical (water, sediment), physical (flow), and biological (macroinvertebrate, aquatic invasive) data collected for CWA programs. Data in SWIMS are shared through the federal [Water Quality Exchange Network](#), which is an online federal repository for all states' water monitoring data.²⁵

Since 2004, WDNR has also used its "Water Assessment, Tracking and Electronic Reporting System (WATERS)" database, which contains:

- Program Objectives, Goals, Performance Measures, and Success Stories;
- CWA Use Designations and Classifications (NR102, NR104);
- Outstanding and Exceptional Resource Waters Designations (NR102);
- CWA assessment data, including decisions about whether a waterbody is meeting its designated use or is considered "impaired";
- Impaired waters tracking information, including the methodology used for listing, the status of the TMDL development, and restoration implementation work;
- Fisheries Trout Classifications (Administrative Code, NR 1.02(7)); and
- Watershed planning recommendations, decisions, and related documents.²⁶

²² See e-mail message dated February 13, 2017 from Donna Keelik, EPA, to Brian Weigel, WDNR, concerning comments on the draft WisCALM.

²³ See EPA Comments for the 2016 WisCALM, at VI. 1, p. 5, February 17, 2015.

²⁴ WDNR Impaired Water Search website, <https://dnr.wi.gov/water/impairedSearch.aspx>. Last accessed June 11, 2018.

²⁵ Wisconsin Water Quality Report to Congress 2018, p. 46.

²⁶ 2016 WisCALM, April 2018, p. 7.

WDNR uses data from both systems in its listing process.²⁷

b. Public data

WDNR held a 1-month data solicitation period from December 28, 2016 to January 31, 2017, to gather data from the public, academic institutions, and other relevant agencies. WDNR notified the public of the data solicitation period through a December 28, 2016 press release and an e-mail message sent from WDNR's GovDelivery listserv (widnr@service.govdelivery.com) to those who have signed up for information concerning impaired waters in the state of Wisconsin.

WDNR requires that data used in assessment and list decisions meet quality control requirements that are specified in WisCALM and specified on WDNR's website during the data solicitation period.²⁸ If WDNR deems that impairment is likely but the quality assurance/control procedures used for data collection were not adequate, staff will consider collecting additional data to determine whether to list the waterbody in the future.

WDNR received data submittals from nine entities during the data solicitation period:

- Courte Oreille Lake Association (COLA)
- Friends of Starkweather Creek
- Kewaunee CARES
- Lake Mallalieu Association
- Milwaukee Riverkeeper
- Polk County Land and Water Resources Department (LWRD)
- Rock River Coalition
- Taylor County Land Conservation Department (LCD)
- United States Geological Survey (USGS).

WDNR indicated that it reviewed all the data submitted during the data solicitation and used the data submitted by COLA, Kewaunee CARES (TP data only), Milwaukee Riverkeeper, Polk County LWRD, Rock River Coalition, Taylor County LCD, and USGS in its 2018 list development.²⁹

EPA reviewed the information described above that was submitted by the state and concluded that WDNR considered all readily available information for use in 305(b) assessments and 303(d) list decisions. Information included: (1) the public comments received and responses to comments, (2) a description of the data submitted by the public, (3) impaired waters reports from WDNR website, which identify WDNR monitoring data and public data used in assessments,

²⁷ Wisconsin Water Quality Report to Congress 2018, p. 46.

²⁸ 2016 WisCALM, April 2018, pp. 7-8.

²⁹ Wisconsin Water Quality Report to Congress 2018, pp. 46-48.

and (4) a rationale for why certain data were not used to make impairment decisions. EPA concludes that WDNR's data solicitation and work with specific agencies to gather information is consistent with what EPA considers active solicitation in its integrated reporting guidance.³⁰

3. Rationale for a decision to not use existing and readily available data

EPA's 2006 IR guidance provides that data quality considerations are important in determining which data to use in assessments.³¹ WDNR reviewed the data submitted by the public to determine if data quality requirements were met. WDNR excluded data where it had concerns about data:

- **Friends of Starkweather Creek:** WDNR stated that Friends of Starkweather Creek submitted a final report on hydrophobic organic compounds collected using semipermeable membrane devices (SPMDs) and that were performed in 2005 by the UW-Madison Water Resources Management Practicum students. Methods used in this study were not comparable to water quality criteria in the state's rules so these data were not used for assessment. The report was saved to the state's database for future reference.³²
- **Kewaunee CARES:** Kewaunee CARES submitted data for chloride, *E. coli*, total coliform, nitrate, and TP. While the state accepted the data as meeting quality assurance requirements, WDNR excluded chloride concentration data because these "were calculations rather than lab tested, which is different from data used for assessments."³³ The state noted that "There are no available numeric criteria for comparison of the *E. coli*, nitrate, and total coliform data," but WDNR used the submitted TP data in its assessment.³⁴
- **Lake Mallalieu Association:** The Lake Mallalieu Association submitted lake level information for the lake's shoreline. This information was not used in assessments due to lack of assessment methods for lake levels, but WDNR included the Association's spreadsheet to the SWIMS database for future use.³⁵

EPA reviewed instances where WDNR excluded data for use in listing decisions and confirmed that exclusion of data was due to issues related to data quality, insufficient data quantity, and the lack of a methodology for assessing measured conditions. WDNR's exclusion of data based on concerns related to data quality and lack of criteria is consistent with EPA integrated report

³⁰ EPA 2006 IR guidance, pp. 31.

³¹ EPA 2006 IR guidance, pp. 32-33.

³² Wisconsin Water Quality Report to Congress 2018, p. 47.

³³ *Ibid* p. 47.

³⁴ *Ibid* p. 47.

³⁵ *Ibid* p. 47.

guidance.³⁶ The remaining information submitted during the public solicitation period was used to make assessment and impairment decisions.³⁷ EPA concludes that where data were excluded for use in listing decisions, WDNR supported its decisions based on a rationale consistent with EPA guidance.

4. Demonstration of good cause for not including WQLSs or pollutants on the list

A state may remove a waterbody from the 303(d) list for good cause. Good cause includes, but is not limited to, the availability of more recent or accurate data, or more sophisticated water quality monitoring, flaws in the original analysis, or changes in conditions (40 C.F.R. § 130.7(b)(6)(iv)). EPA's "Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the CWA," elaborates on what constitutes good cause for delisting.³⁸ Additionally, according to EPA guidance, once a pollutant/impairment combination for a water has an approved TMDL, that pollutant/impairment combination can be placed in Category 4A. Category 4A includes waters that are still impaired but have an approved TMDL addressing the pollutant causing the impairment in question. Wisconsin tracks waters that are in 5 and 4A as impaired and considers this the list of impaired waters.

Waters or impairments removed from Wisconsin's list of impaired waters are either identified as *delisted* or *deleted*. Where all pollutants/impairments for a waterbody have been resolved and the water is no longer included in category 4 or 5, the State has identified the water as *delisted*. Impairments are identified as *deleted* when a pollutant/impairment combination can be removed but the waterbody will remain on the list for other pollutant/impairment combinations.³⁹

EPA has reviewed the information provided by WDNR in its 2018 submittal and agrees that the impairments that were proposed to be *delisted* and *deleted* were appropriately delisted or deleted from Wisconsin's 2016 303(d) list and not included on the Wisconsin's 2018 list. Wisconsin proposed to remove waters where additional data and/or information supported that:

- a water now meets water quality standards;
- the historical reasons for listing were inaccurate;
- a TMDL has been approved by EPA that addresses the listed cause of impairment(s).⁴⁰

³⁶ EPA 2006 IR guidance Section V, H.2, pp. 31-36.

³⁷ Wisconsin Water Quality Report to Congress 2018, pp. 47-48.

³⁸ EPA 2006 IR guidance pp. 58-59.

³⁹ See link http://dnr.wi.gov/topic/ImpairedWaters/2018IR_IWLlist.html, in e-mail message from Ashley Beranek, WDNR, to Donna Keclik, EPA, April 2, 2018. Last accessed June 11, 2018.

⁴⁰ 2018 WisCALM, April 18, pp. 57-58.

a. Delisted WQLSs

Wisconsin delisted 35 waters from the Wisconsin impaired waters list (which included one water in category 4A and 34 waters in category 5).⁴¹ Four beaches, one inland lake and one river segment were delisted for *E. coli* impairment; one lake was delisted for mercury impairment; three river segments and 10 lakes were delisted for TP; two lakes and three river segments were delisted for unknown pollutant; and four river segments were delisted for PCBs. The rationale to delist these waters was supported by additional data and information on state's website <https://dnr.wi.gov/water/impairedSearch.aspx> and can be accessed by identifying the specific water, going to the waterbody segment, and then going to the *View Water Details* link. WDNR also considers waters that have a TMDL to be on the impaired waters list. EPA recognizes these waters to be in category 4A (impaired, but have a TMDL). WDNR has removed one water from category 4A as now meeting the standard (Bark River WATERS ID 310752, WBIC 813500). Although this water is now considered to be in category 2 (meeting some uses) by WDNR for TP, the TMDL remains in place and the water is still covered by that TMDL. The list of waters with the specific pollutant/impairment identified as being *delisted* can be found in Table 3 of the Appendix to this decision (identified by segment removed).

b. Deletion of an impairment in a WQLSs

WDNR defines *deletion* of a WQLS impairment as removal of a pollutant/impairment for a waterbody that will remain on the list due to other pollutants/impairments.⁴² While Wisconsin considers both category 4 and 5 waters to be on the list, EPA only approves waters in category 5.

Wisconsin deleted 26 impairments from the impaired waters list (see Table 3 of the Appendix to this decision for deleted impairments identified as pollutant removed). Three of the pollutant impairments were for segments that were listed in category 4A, (Kummel Creek WATERS ID 358204, WBIC 863500, Token Creek WATERS ID 310734, WBIC 806600 and Yahara, Stoughton To L. Kegonsa WATERS ID 355202, WBIC 798300), the remaining 23 deleted segments all remain in Category 5 for other pollutants. WDNR removed the following impairments: Ten lakes and three river segments for unknown pollutant; one impoundment, one lake for mercury and one river segment for mercury; four lakes and one river segment for PCBs; one lake for TP; and one river segment for fish barrier impairment. Several of the pollutants were changed and new pollutant impairments were added. These changes can be found in the additions to the list (see Table 2 of this document for pollutants added to the list) and were supported by additional data found in <https://dnr.wi.gov/water/impairedSearch.aspx>. EPA reviewed information from the state's website regarding deletion of these impairments. WDNR also considers waters that have a TMDL to be on the impaired waters list. EPA recognizes these waters to be in category 4A (waters which have a TMDL). WDNR has indicated that three impairments from category 4A are now meeting the applicable standard (Kummel Creek, removed for TP; Token Creek, removed for fish barriers; Yahara River, removed for TP). All of

⁴¹ Wisconsin Water Quality Report to Congress, 2018 p. 8.

⁴² See e-mail message from Ashley Beranek, WDNR, to Donna Keclik, EPA, Attachment B, April 22, 2016.

the 4A listings (waters which have a TMDL) are identified in Table 4 of the Appendix to this decision document.

EPA concludes that Wisconsin demonstrated good cause not to include the above waters on its 2018 303(d) list. EPA also concludes that the state provided a rationale for not relying on particular existing and readily available water quality-related data and information as a basis for listing waters, and where necessary, the state followed up or has made plans to acquire additional data in order to make impairment decisions.

D. Review of Wisconsin's Priority Ranking

Once readily available data have been gathered and assessed, the WQLSs that are included on the 303(d) list must be assigned a priority ranking for TMDL development. Past priority rankings were evaluated during each listing cycle, generally according to a ranking of *high*, *medium*, or *low*.⁴³ WDNR based its rankings on a number of factors including severity of the impairment and public health concerns. Under its TMDL Vision process Wisconsin uses a modeling process that identifies watershed areas at a 12-digit Hydrologic Unit Code (HUC-12) scale. TP and total suspended solids (TSS) are priority concerns.⁴⁴ Wisconsin submitted its Prioritization Framework with the information for the 2016 303(d) list and it appears on the State's website. http://dnr.wi.gov/topic/impairedwaters/2016IR_IWLlist.html. Wisconsin has also identified TMDLS which will be completed within the next two years. EPA agrees that, as to the WQLSs included on the 2018 Section 303(d) list, WDNR has satisfied the requirement to submit a priority ranking consistent with EPA's regulations.

E. Public Participation

EPA regulations require states to involve the public and other stakeholders in the development of the 303(d) list as part of their Continuing Planning Process (CPP).⁴⁵ WDNR provided notice to the public on its initial draft 2018 303(d) list from November 15, 2017 to December 29, 2017, and received comments from a total of 153 individuals and organizations, including EPA. WDNR also hosted a webinar⁴⁶ regarding the 2018 draft list on November 8, 2017. Wisconsin provided to EPA a copy of comments received and a summary of Wisconsin's response, which are included in the administrative record to this decision.⁴⁷ EPA reviewed WDNR's response to those comments and concludes that WDNR acknowledged and responded to public comments related to the list.

⁴³ 2018 WisCALM, April 18, pp. 60-61

⁴⁴ WDNR, Wisconsin's Water Quality Restoration and Protection Prioritization Framework (2015), pp. 3-4.

⁴⁵ 40 C.F.R. 130.7(a).

⁴⁶ Youtube copy of webinar can be found at https://www.youtube.com/watch?v=rDM1emH_Kdo. Last accessed June 11, 2018.

⁴⁷ See e-mail message from Ashley Beranek, WDNR, to Donna Keclik, EPA, dated June 6, 2018.

1. Public comments on Specific Water bodies

a. Waters Added after draft public noticed list based on public comments

Mack Creek (WIBIC 267300, Waters ID 10312): A commenter submitted data during the public comment period in support of an impairment finding for Mack Creek. WDNR, working together with a local biologist, reviewed the 2016 total phosphorous data and calculations. The state listed the water for phosphorus, but with no specific impairment because both the fish and macroinvertebrate samples showed populations in good condition.⁴⁸

b. Waters/impairments identified on the draft public notice list but not included on the final submitted impaired waters list based on public comment.

Goose Lake (WBIC 103600, Waters ID 10724): A representative of the Adams County Land and Water Conservation Council requested that Goose Lake not be included on the 2018 impaired waters list because information submitted by the Council supported that the lake should be considered a shallow seepage lake and not a deep seepage lake. After review of the information, WDNR agreed that Goose Lake is a shallow seepage lake and that the lake is meeting the listing criteria of 40 µg/l.⁴⁹

c. Waters where there were significant number of comments received

*Lac Courte Oreilles (WBIC2390800)*⁵⁰: WDNR received 133 comments regarding Lac Courte Oreilles (LCO). Of the 133 comments received, 131 were in support of LCO being added to the list for dissolved oxygen (DO). These commenters also requested that the impairment basis be changed from “unknown” to “TP” as the cause of the low DO.

The Wisconsin State Cranberry Growers Association (WSCGA) wrote that “WSCGA objects to the listing of the entirety of Lac Courte Oreilles for low dissolved oxygen (“DO”) due to the lack of and quality of data for the entire lake. To the extent that WDNR lists Lac Courte Oreilles for low DO, WSCGA agrees that (1) the source category is appropriately identified as non-point; (2) the pollutant is unknown; and (3) the TMDL priority is low.”⁵¹

Another commenter argued that the lake’s low DO was due to natural causes and thus should not be listed as impaired, as further detailed in a report he enclosed.⁵²

⁴⁸ WDNR Response to Comments 2018, p. 18.

⁴⁹ WDNR Response to Comments 2018, p. 13.

⁵⁰ EPA reviewed the listing for LCO during the 2016 listing cycle and summarized its findings in its *Review of Courte Oreilles Lake Association data for Lac Courte Oreilles Lake*. This review looked at listing based on data in the epilimnion and hypolimnion and where white fish and cisco may be present during summer months. The analysis determined that there were not sufficient lake areas during parts of the summer to support these fish species. See email message to Brian Weigal, WDNR, from Donna Keclik, EPA, with attachments. The state’s listing of LCO for DO considers the concerns identified by EPA in 2016.

⁵¹ WDNR Response to Comments 2018, p. 14.

⁵² WDNR Response to Comments 2018, pp. 14-15.

After reviewing the comments received, WDNR determined that LCO will remain on the list for low DO:

RESPONSE: WDNR thanks the commenters for their interest in the Lac Courte Oreilles impaired water listing. Lac Courte Oreilles was assessed during the 2018 listing cycle as a Two-Story Fishery lake and new dissolved oxygen (DO) data clearly exceeded the listing thresholds for the Fish and Aquatic Life Use. For the dissolved oxygen assessment, the criterion of 5 mg/L, currently in Wisconsin Administrative Code NR 102.04(4)(a), was used. The Two-Story dissolved oxygen assessment method determines habitat availability for coldwater fish species based on temperature and dissolved oxygen levels. This method measures the “oxythermal layer thickness” (OLT) and states that at least 1 meter (3 feet) of OLT must have a DO > 5 mg/L and a temperature <66 F for whitefish (< 73 F for cisco) for fish survival. If the required OLT is not maintained throughout the summer for more than one in three years then the water is considered impaired. Using the thermal requirements for whitefish, the OLT was found to be insufficient every year for the past 5 years in LCO. Total phosphorus and chlorophyll-*a* sample data, on the other hand, clearly met the Fish and Aquatic Life and Recreation use thresholds. Therefore, the cause of the impairment was listed as “Unknown” because total phosphorus data does not support an impairment decision based on 2018 WisCALM methodologies.

This impairment listing was determined in conjunction with an in-depth analysis of whether a site specific total phosphorus criterion for LCO would be appropriate. An in-depth analysis was done of phosphorus and dissolved oxygen data dating back to 1975. Based on this analysis there does not appear to be a correlation between oxygen depletion and ambient phosphorus concentrations. In other words, ambient phosphorus is likely not driving oxygen depletion in LCO.

There is a strong but slow warming trend in the surface of the lake (about 0.05C/yr), which equates to approximately 2C (3.6F) increase since 1975 at the surface. There is no long-term trend in water temperature in the lower layers of the lake (thermocline, hypolimnion, or bottom) and the OLT layer has not changed with this increase in temperature.

Based on the in-depth analysis of LCO data it appears that the largest contributor to low dissolved oxygen is Sediment Oxygen Demand (SOD). Sediment cores taken in January 2018 were analyzed for oxygen demand and it was found that SOD accounts for the majority of oxygen consumption in the hypolimnion (59%, 92%, and 75% in the East, Central, and West Basins, respectively). Based on sediment cores taken in 2012 by UW-Stout it was found that the sediment had high organic matter content (23 – 52%) and there were high iron levels. Future studies are needed to tease out which component, organic decomposition or oxidation of reduced substances (iron, methane, ammonium,

nitrite, manganese, sulfide), is the main driver of SOD in LCO. With this evidence the dissolved oxygen listing will remain an “Unknown Pollutant”.⁵³

EPA reviewed the public participation information submitted by the State and concludes that WDNR adequately addressed public comments regarding the 2018 303(d) list. EPA also reviewed information made available by WDNR to the public for review and comment, and WDNR's announcement of the public comment period. EPA finds that the State's public participation process for the 2018 303(d) list provided the public with a reasonable opportunity to review and provide comments.

F. Waters with no known pollutant causing the impairment

Under Section 303(d) of the CWA, states are required to develop TMDLs for pollutants causing impairments of listed waters. Since the Section 303(d) list is a list of waters “still requiring TMDLs,” states are not required to include waters where they determine that no pollutant is causing the impairment.

WDNR has included some WQLSs on its 303(d) list beyond those that are required by federal regulations (e.g., WQLSs listed as impaired by Degraded Habitat). The state may consider scheduling these waters for monitoring to confirm that there continues to be no pollutant-caused impairment and to support appropriate water quality management actions to address the causes of the non-pollutant impairment. The state has the discretion under Section 303(d) of the Act, which charges states with the primary responsibility to identify WQLSs for TMDL development, and Section 510 of the Act, which authorizes states to adopt more stringent pollution controls, to list waters for reasons beyond those required by current EPA regulations. EPA's regulations do not compel EPA to disapprove the state's list because of the inclusion of such waters. EPA guidance also recognizes that states may take a conservative, environmentally protective approach in identifying waters on their Section 303(d) lists.⁵⁴

G. EPA Tribal Consultation

Under its tribal consultation process, EPA consults with federally-recognized tribes on a government-to-government basis where EPA decisions may impact tribal interests. EPA contacted federally-recognized tribes within Region 5 to provide the opportunity to consult with EPA on its decision on the final Wisconsin 2018 303(d) list. EPA sent invitations to tribal leaders and relevant staff on May 2, 2018.⁵⁵ The invitation letter was also placed in the Tribal Consultation Tracking System. No tribes requested consultation with EPA regarding this action.

⁵³ WDNR Response to Comments 2018, pp. 15-16.

⁵⁴ EPA “National Clarifying Guidance for 1998 Section 303(d) Lists,” August 27, 1997.

⁵⁵ Letter from Christopher Korleski, EPA, to Tribal chairpersons of the 37 tribes in Region 5, May 2, 2018. The letter to Chairman Cox of the Menominee Indian Tribe of Wisconsin was e-mailed on May 10, 2018 as the letter was returned due to an incorrect address. See e-mail message regarding the mailing of the letter from Matthew Gluckman, EPA, to Heather Pyatskowitz, Menominee Indian Tribe of Wisconsin.