



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Clayton

JAN 26 2010

REPLY TO THE ATTENTION OF:

WW-16

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BUREAU OF WATERSHED MGMT

Todd Ambs, Administrator
Division of Water
Wisconsin Department of Natural Resources
P.O. Box 7921
Madison, Wisconsin 53707-7921

Re: Partial Approval/Partial Disapproval of 2008 Section 303(d) List

Dear Mr. Ambs:

The U.S. Environmental Protection Agency has conducted a complete review of Wisconsin's 2008 Section 303(d) list and supporting documentation and, based on this review, EPA has determined that Wisconsin's 2008 list of water quality limited segments still requiring Total Maximum Daily Load calculations partially meets the requirements of Section 303(d) of the Clean Water Act and EPA's implementing regulations. The partially approved 303(d) list includes those waters which are impaired as identified in Wisconsin's September 1, 2008 submitted version of the Impaired Waters List and subsequent e-mails. Following a review of this information, EPA hereby partially approves Wisconsin's Section 303(d) list, as further detailed in Tables 1 and 2 of EPA's Decision Document for the Partial Approval/Partial Disapproval of the Wisconsin's 2008 List with Respect to Section 303(d) of the Clean Water Act (Decision Document), (enclosed).

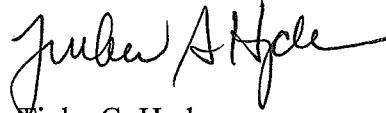
As further detailed in the decision document, EPA agrees with the State's priority rankings for the waters and pollutants listed in the partially approved list. EPA disapproves the State's decision not to list Musky Bay, because EPA finds that the water meets the federal requirements for listing under Section 303(d) at this time. The statutory and regulatory requirements, and EPA's review of Wisconsin's compliance with each requirement, are described in the enclosed decision document. EPA will provide a separate notice and an opportunity for comment on the Agency's decision to add to the state's 303(d) list Musky Bay.

EPA's approval of Wisconsin's Section 303(d) list extends to all water bodies on the list with the exception of those waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. EPA is taking no action to approve or disapprove the State's list

with respect to those waters at this time. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.

We appreciate your hard work in this area and your submittal of the list as required. If you have any questions please contact Mr. Peter Swenson, Chief, Watersheds and Wetlands Branch, at 312-886-0236.

Sincerely,

A handwritten signature in black ink, appearing to read "Yinka G. Hyde". The signature is fluid and cursive, with a long horizontal stroke at the end.

Yinka G. Hyde
Director, Water Division

Enclosure

cc: Robert Masnado, WDNR
Nicole Clayton, WDNR

DECISION DOCUMENT FOR THE PARTIAL APPROVAL/PARTIAL DISAPPROVAL OF
WISCONSIN'S 2008 LIST WITH RESPECT TO SECTION 303(d) OF
THE CLEAN WATER ACT

The U.S. Environmental Protection Agency (U.S. EPA) has conducted a complete review of Wisconsin's 2008 Section 303(d) list and supporting documentation and information. Based upon this review, U.S. EPA has determined that Wisconsin's list of water quality limited segments (WQLSs) still requiring Total Maximum Daily Loads (TMDLs) does not meet the requirements of Section 303(d) of the Clean Water Act ("CWA" or "the Act") and U.S. EPA's implementing regulations. Therefore, U.S. EPA hereby partially approves and partially disapproves Wisconsin's 2008 Section 303(d) list. The statutory and regulatory requirements, and U.S. EPA's review of Wisconsin's compliance with each requirement, are described in detail below.

I. Statutory and Regulatory Background

A. Identification of Water Quality-Limited Segments (WQLS) for Inclusion on 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, 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 U.S. EPA's long-standing interpretation of Section 303(d).

U.S. 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.¹

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 existing and readily available 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

1 40 C.F.R. § 130.7(b)(1).

Section 319 nonpoint assessment submitted to U.S. EPA.² In addition to these minimum categories, States are required to consider any other data and information that is existing and readily available. U.S. 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.³ While States are required to evaluate all existing and readily available 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.

In addition to requiring States to assemble and evaluate all existing and readily available water quality-related data and information, U.S. EPA regulations at 40 C.F.R. §130.7(b)(6) require States to include, as part of their submissions to U.S. 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.⁴

C. Priority Ranking

U.S. 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 also to identify those WQLSs targeted for TMDL development in the next two years.⁵ In prioritizing and targeting waters, States must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters.⁶ 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.⁷

II. Analysis of Wisconsin's Submission

On August 1, 2008 U.S. EPA received electronically Wisconsin's submittal letter and the following attached files:

2 40 C.F.R. § 130.7(b)(5).
3 Guidance for Water Quality-Based Decisions: The TMDL Process, U.S. EPA Office of Water, 1991, Appendix C (hereafter, "U.S. EPA's 1991 Guidance").
4 40 C.F.R. § 130.7(b)(6).
5 40 C.F.R. § 130.7(b)(4).
6 CWA Section 303(d)(1)(A).
7 57 FR 33040, 33045 (July 24, 1992); see also U.S. EPA's 1991 Guidance.

- Proposed submittal letter to U.S. EPA from Wisconsin Department of Natural Resources (WDNR)
- Final proposed 2008 impaired water list including categories 2, 5A, 5B, and 5C
- 2008 proposed additions, deletions and delistings
- 2008 Impaired Waters Listing Methodology
- List of external agencies contacted to request information
- News release for public comment period
- Public comments and response to public comments
- Data Documentation Sheets.⁸

On September 8, 2008, U.S. EPA received a hard copy of the final submittal. The package contained the following:

- Submittal letter, September 1, 2008
- Attachment A: 2008 Proposed Additions, Deletions and De-Listings and 2008 Impaired Waters List by Integrated Reporting Category
- Attachment B: 2008 Methodology for Placing Waters on the Impaired Waters List
- Attachment C: List of external agencies and academia solicited for data
- Attachment D: Press Release
- Attachment E: Summary of Public Comments and WDNR Responses
- Attachment F: List of Specific Water bodies Mentioned in Public Comments and WDNR Responses

During U.S. EPA's review of the August 1 and September 8 submittals, the State provided additional supporting information in response to U.S. EPA questions for additional information and clarification. In today's Decision Document, WDNR's submittals of August 1, September 8, and other supporting information, are collectively referred to as the "2008 Submittal." All of this information is compiled in U.S. EPA's file for this Decision Document.

For the 2008 listing cycle, WDNR chose to submit its CWA Section 303(d) list separately from its 305(b) report. In previous listing cycles the State utilized two separate databases for tracking its assessments and impaired water decisions. During the 2008 listing cycle, WDNR started to integrate its databases into a single database, the Water Assessment Tracking and Electronic Reporting System (WATERS).⁹ For the 2008 cycle, the integration of data into WATERS was not fully verified; therefore WDNR chose not to submit a fully integrated 303(d)/305(b) report to U.S. EPA. Additionally, the State is working on developing a new assessment methodology.

⁸ Wisconsin submitted lists of impaired waters, required under Clean Water Act Section 303(d), ("303(d) list") beginning in 1998, and then again in 2002, 2004 and 2006. U.S. EPA did not require a 303(d) list submittal in 2000.

⁹ See WDNR webpage describing this database at <http://www.dnr.state.wi.us/org/water/WATERS/> (last checked June 10, 2009).

WDNR expects that integration of databases and development of the new assessment methodology should be reflected in the State's integrated report for 2010 or 2012.

The State has made progress toward an integrated report. The 2008 submittal identifies impaired water bodies which need TMDLs (Category 5A) and water bodies that are impaired due to atmospheric mercury deposition and therefore need TMDLs (Category 5B). The State's submittal also identified those impaired water bodies for which the State has completed approved TMDLs but which have not yet attained water quality standards (Category 5C). WDNR's assessment process also identifies water bodies for placement in Category 2. Category 2 waters are waters for which the State has sufficient data to support a determination that some, but not all, designated uses are attained and none are threatened. For these Category 2 waters, attainment status of the remaining designated uses is unknown because data are insufficient to categorize the water consistent with the State's listing methodology. Although not a complete integration, U.S. EPA recognizes that WDNR's use of categories is consistent with U.S. EPA's guidance and this is a positive step toward achieving full integration.

After full review and consideration of the information presented by the State in its 2008 submittal, U.S. EPA is approving the waters identified in Attachments 1 and 2 to this Decision Document as impaired waters in Wisconsin needing TMDLs, i.e., Wisconsin's Category 5A and 5B, respectively. In addition to the waters identified in Attachments 1 and 2 of this Decision Document, U.S. EPA is proposing to add Musky Bay to Category 5A. Further discussion regarding U.S. EPA's rationale for adding Musky Bay can be found in Section II.B.3 below. Although the information was considered in U.S. EPA's review, U.S. EPA is not taking any action to approve or disapprove Category 2 and 5C in today's decision.

A. Listing Methodology

U.S. EPA's regulations at 40 C.F.R. § 130.7(b)(6) require, among other things, 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. The 2008 submittal contained Wisconsin's 2008 "Methodology for Placing Waters on the Impaired Waters List."

Wisconsin has not adopted its 2008 Methodology¹⁰ into the State's approved water quality standards. U.S. EPA guidance provides that:

For methodologies that are not part of the state's applicable water quality standards, U.S. EPA will consider the methodology as it assesses whether the state conducted an adequate review of all existing and readily available water

10 WDNR, 2008 Methodology for Placing Waters on the Impaired Waters List (August 1, 2008) (Hereafter "2008 Methodology").

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 U.S. 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, U.S. EPA may disapprove the list. Regardless of the suitability of the methodology, U.S. EPA must review the list for consistency with the relevant provisions of the CWA and the regulations.¹¹

Wisconsin places waters not meeting water quality standards on the impaired waters list. A water quality standard¹² is not met if either of the following occurs:

1. A numeric or narrative criterion listed in Chapters NR 102, 103 and 105, Wisconsin Administrative Code (Wis. Admin. Code) is exceeded, or
2. The codified designated use of a lake or stream as identified in NR 102 or 104, of Wis. Admin. Code, is not being achieved.¹³

The State considers a water to be impaired if it is not meeting a numeric or a narrative water quality criterion. Wisconsin also reviewed the codified designated use for streams and lakes and, based on monitoring data, listed the waters which were not meeting their codified designated uses. The 2008 Methodology describes how the State will determine whether designated uses are met.¹⁴ These are further described below.

1. Numeric or Narrative Criterion

WDNR considers a water body to be potentially impaired if a numeric or narrative water quality criterion (except for toxic pollutants) is not met.¹⁵ For analysis of numeric or narrative water quality criteria, and unless other specific procedures in the State's administrative rules apply, the

11 U.S. EPA's Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act (July 29, 2005) (2006 IR Guidance) at 29-30.

12 2008 Methodology at 1. The 2008 Methodology states:

Chapter 281 of the Wisconsin Statutes authorized the Department to establish water quality standards that are consistent with the Federal Clean Water Act (Public Law 92-500). These water quality standards are explained in detail in Chapters NR 102, NR 103, NR 104, and NR 207 of the Wisconsin Administrative Code. Water quality standards are the foundation of Wisconsin's water quality management program and they serve to define the goals for a water body by designating its uses, setting criteria to protect those uses, and establishing provisions to protect water quality from pollutants.

13 2008 Methodology at 3-4.

14 2008 Methodology at 3.

15 2008 Methodology at 3.

State generally reviews the (1) relationship of data to critical time periods,¹⁶ (2) frequency and duration of criteria violations, and (3) likelihood of stress on aquatic communities.¹⁷ WDNR's parameters of review are fairly general, and in its July 2008 response to U.S. EPA's request for clarification, the State provided this additional explanation of its process:

... [C]ritical periods, frequency and duration of water quality criteria exceedances, and the likelihood of adverse impacts to the biological community are all considered when determining whether or not to recommend listing a water body. Unlike some other state programs, WDNR does not yet have a regimented decision process that includes minimum data set requirements, frequency of exceedance, etc. Decisions on listing are regularly based on professional judgment using the available data.

When there is insufficient information to consider all of the factors described above, a recommendation is made to conduct additional monitoring to fill the data gaps with the intention of facilitating a more robust and defensible listing decision in the next listing cycle. However, in some cases, it may be okay to recommend a water body for listing based on a limited number of the noted factors. This would be the case when there are extreme values of one or more parameters that would – in the opinion of the local biologist – result in measurable impacts to the

16 2008 Methodology at 3. The 2008 Methodology states “For example, data collected during the summer months are most appropriate for lakes with severe algae conditions.”

17 2008 Methodology at 3-4. As examples, the State notes “In some cases, there is a natural variability that occurs that may cause criteria not to be met for a short period of time. In other cases, an “event” such as a large amount of runoff during a rainfall or snowmelt may cause a periodic excursion from a criterion.” The Methodology further explains that in addition to analyzing these criteria, the State would verify its overall assessment against additional information:

In all cases, Department staff will look for corroborating information, such as the various biological indices that can be used to measure stress within a fish and aquatic life community. Data indicating the type and number of species of fish, macroinvertebrates (such as insects or snails), plants, or algae are evaluated. The state has available a number of databases, including fish assessment data (IBI), habitat assessment data (QBI), and invertebrate assessment data (HBI). These databases provide a quantitative approach to be used when determining whether a water body should be listed.

In addition, staff has access to water chemistry databases that include such parameters as dissolved oxygen, phosphorus, pH, temperature, or toxic substances. If the suite of available data does not strongly suggest an impairment, then the water body will not be listed, but will be recommended for additional monitoring as resources allow. The Department will provide a rationale for those cases where data are available that a water quality criterion has been exceeded, but the water body has not been recommending for the impaired waters list. In most cases, the criterion has not reached the magnitude, duration or frequency to warrant placing a water body on the list. In the future, as assessment methodology report will provide a more definitive approach for placing waters on the list.

biological community. . . . If data suggest numeric criteria exceedances for a given water body, but the biologist does not recommend listing, that water body will be included in a list of waters needing additional data. Those water bodies will be given priority consideration for monitoring to be done in future field seasons as resources allow.¹⁸

2. Designated Uses

The codified designated use of a water body is a classification that is formally and legally recognized in Wis. Admin. Code NR 102, Water Quality Standards for Wisconsin Surface Waters, and NR 104, Uses and Designated Standards, and is used to determine water quality criteria and effluent limits. The State's codified designated uses include: (1) Recreational Use; (2) Public Health and Welfare; (3) Wildlife; and (4) Fish and Aquatic Life.¹⁹ The standards defining these uses meet the requirements of CWA Section 101(a)(2), 33 U.S.C. § 1251(a)(2), that waters provide for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water.²⁰

For the Fish & Aquatic Life codified designated use, WDNR recognizes five subcategories: Coldwater Community, Warmwater Sport Fish Community (WWSF), Warmwater Forage Fish Community (WWFF), Limited Forage Fish Community (LFF), and Limited Aquatic Life Community (LAL).²¹

For some waters, the State identifies specific codified designated uses in the Wis. Admin. Code NR 102 and NR 104. The State also codifies some coldwater communities by general reference in its 1980 Trout Book.²²

Where there is no codified designated use for a water, Wisconsin assumes the water will support either a coldwater community, a warmwater sport fish community, or a warmwater forage fish community, depending upon the water body's specific temperature and any habitat limitations. The 2008 Methodology sets out how Wisconsin will classify waters without codified designated uses in the absence of a formally adopted new "Trout Book" and given that the State "cannot visit each stream, river or lake very often."²³ WDNR utilizes a tiered class definition of coldwater uses. To address the classification of water bodies not covered by the 1980 Trout Book, WDNR has adopted the following system:

18 WDNR Response to U.S. EPA's March 10, 2008 Comments, July 9, 2009 (Hereafter, "WDNR July 9 Response to EPA Comments") at comment 4.

19 2008 Methodology at 1.

20 NR 102.04(3), Wis. Admin. Code

21 NR 102.04(3), Wis. Admin. Code; 2008 Methodology at 1-2.

22 1980 Trout Book, Wisconsin Trout Streams, Publication 6-3600(80); 2008 Methodology at 4.

23 2008 Methodology at 5.

Water	Classification
Class I or Class II trout streams, identified after 1980	Subcategory of Coldwater Community
Class III trout streams and all other waters identified after 1980	Warmwater Sport Fish Community

Wisconsin's 2008 Methodology includes minimum expectations or parameters for the Fish and Aquatic Life Use Sub-Categories.²⁴ WDNR is in the process of updating their Administrative Code to reference a new 2002 Trout Book, but until this update has been codified, the 1980 Trout Book classifications still apply.²⁵

WDNR biologists conduct field studies to document the conditions of a given water body. These field studies include, but are not limited to, the collection of community data for fish, macro-invertebrates, plants, algae, and bacteria. Data is also collected on water chemistry, flow, temperature, habitat conditions, and surrounding land use. With this data the WDNR can document whether or not a use is being met by comparing the existing use to the codified use. If the existing use is not supporting the codified use, the water body is recommended for listing on the 303(d) list.²⁶

3. Threatened Waters

U.S. EPA's *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act* explains that states should list as "threatened" those waters which are expected to exceed WQS by the next listing cycle if the analysis demonstrates a declining trend in a specific water quality criterion and the projected trend will result in a failure to meet a criterion by next listing cycle.

Wisconsin takes the position that it "does not currently have specific guidance established with quantitative measures to identify threatened waters."²⁷ For past 303(d) lists, WDNR reviewed the waters listed in the Wisconsin State of the Basin Reports,²⁸ as well as "other information from throughout the state" to identify waters being threatened by a declining trend and to determine whether the waters should be listed.²⁹ The 2008 Methodology provides:

24 WDNR, Guidelines for Designating Fish and Aquatic Life Uses for Wisconsin Surface Waters, Appendix 2, WDNR PUBL-WT-807-04 (2004).

25 2008 Methodology at 4-5; 2002 Trout Book, Wisconsin Trout Streams, Publication FH-806-202 or web site at <http://www.dnr.state.wi.us/rg/water/fhp/fish/pubs/troutstreams.pdf>.

26 2008 Methodology at 6.

27 WDNR July 9 Response to EPA Comments at comment 1.

28 These Reports can be found at <http://dnr.wi.gov/org/gmu/stateofbasin.html> (last checked June 11, 2009).

The 2008 Methodology states that there have been no new Basin Reports since at least 2006.

29 2008 Methodology at 7.

Characterization of a water body with a “declining trend” can only be determined through actual water quality monitoring. A trend cannot be determined without having a minimum of two sets of site-specific data. Consequently, a water body identified as having a “declining trend” but lacking adequate data will not be considered further for listing. Department staff will use appropriate evaluation methods and professional judgment for waters where adequate data are available to determine whether water quality standards will be exceeded prior to the next listing.³⁰

For this listing cycle, WDNR determined that there was insufficient data to demonstrate a declining trend in any water such that the water would be impaired by the next listing cycle. Therefore, in 2008 no threatened waters were added to the 303(d) list.

4. Waters Impaired by Atmospheric Deposition of Mercury and Waters Impaired for Fish Consumption

WDNR includes waters on its 303(d) list where there are specific fish consumption advisories (FCA) in place due to atmospheric deposition of mercury. Wisconsin also includes waters with specific advisories due to Polychlorinated Biphenyls (PCBs), dioxin and furan congeners, and perfluorooctane sulfonate (PFOS). The State’s Methodology provides that waters will be included in the impaired list as follows:

Mercury: If a water body has a special mercury based consumption advice of one meal per month or less frequent for panfish (applied when panfish concentrations reach 0.21 to 1 parts per million (ppm), or is “do not eat” for gamefish (applied when gamefish concentrations exceed 1 ppm)).

Polychlorinated Biphenyls (PCBs): If a water body has special PCB-based fish consumption advice of one meal per week or less frequent for panfish species or one meal per month or less frequent for gamefish (applied when PCB concentrations reach total PCB concentration in the range of 0.21 ppm or >2ppm). Some of these sites are due to general residual environmental PCB contamination and some are due to specific deposits of PCBs.

Dioxin and Furan Congeners: If a water body has special dioxin/furan based advice of “do not eat” (applied when dioxin equivalents exceed 10 parts per thousand (ppt) based on 2,3,7,8-substituted dioxin and furan congeners).

30 2008 Methodology at 7.

Perfluorooctane sulfonate (PFOS): If a water body has a special PFOS-based fish consumption advice of one meal per week or less frequent for panfish species or one meal per month or less frequent for gamefish species.³¹

In essence, any water with an FCA based on site specific data was listed if the water had a more stringent eating limit than one meal per week. The State's practice is to add waters to the 303(d) list as they are added to the State's fish consumption advisory publication, and then to de-list the waters where the fish consumption advisory no longer applies. The 2008 Methodology further states "Specific waters will be proposed for de-listed [sic] where fish are collected and analyzed but no longer meet the criteria for specific fish consumption advice for mercury, PCBs, or other chemicals. The general, statewide fish consumption advisory still applies to these waters but they will no longer be included on the 303(d) list."³²

U.S. EPA notes that in 1998 Wisconsin did not have a methodology for listing fish consumption advisory waters. In that year, it listed 240 waters that were covered by a general state-wide mercury-based FCA. In 2002, WDNR developed a new state-wide FCA which covered 1200 waters in the state, and followed this by including the FCA on its 303(d) list; thus, effectively incorporating covered waters by reference. The 2002 state-wide fish consumption advisory did not identify the specific waters subject to the advisory, however, and U.S. EPA requested that WDNR specifically identify and list those affected waters. In response, WDNR developed a methodology based on a pair of U.S. EPA guidance documents: (1) Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health" (2000) and (2) "Water Quality Criterion for the Protection of Human Health: Methylmercury Final," EPA-823-R-01-001. Pursuant to this new methodology, WDNR has chosen only to list those waters as impaired where there is a specific FCA in place. If a water is covered only under the general, state-wide FCA, WDNR no longer considers this a sufficient basis for listing. WDNR has been in the process of implementing its revised listing method for waters with FCAs since the 2002 listing cycle. For the 2002 listing cycle, WDNR kept the originally-listed 240 waters on its impaired waters list. However, in subsequent impaired waters lists, the State has continued to delist waters where there is no specific FCA, and to list those where there is a specific FCA.

5. Waters Impaired by Contaminated Sediment

WDNR listed waters with sediment deposits that are known to have toxic substances that exceed state water quality criteria for ambient water as specified in Wis. Admin. Code NR 105 (Surface Water Quality Criteria and Secondary Values for Toxic Substances). Wisconsin also utilizes concentration guidelines found in a 2002 publication, "Consensus – Based Sediment Quality Guidelines: Recommendations for Use and Application."³³ These guidelines identify the

31 2008 Methodology at 11.

32 2008 Methodology at 11.

33 WDNR, "Consensus-Based Sediment Quality Guidelines, Recommendations for Use and Application, Interim Guidance," WT PUB-732-2003 (December 2003), available at <http://www.dnr.state.wi.us/org/water/wm/sms/documents.html> (last accessed June 11, 2009).

benchmark concentration of pollutants that will cause a probable effect in biological organisms that occupy the contaminated sediment area.³⁴ Wisconsin uses these regulatory- and guidance-derived standards to evaluate actual sediment concentrations of pollutants derived from water quality monitoring efforts.

6. Beaches impaired by Bacteria

WDNR evaluates beaches for Recreational Uses rather than Fish and Aquatic Life Uses.³⁵ The State first developed a methodology for reviewing *Escherichia coli* (*E. coli*) data collected under the requirements of the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000, 33 U.S.C. §1313(i), CWA Sec. 303(i), for the State's 2004 list. Wisconsin does not have a standard for *E. coli*, however there is a federally promulgated standard for *E. coli* for the coastal waters of the Great Lakes: 235 cfu/100ml (colony forming units per 100 milliliter sample). To evaluate *E. coli* data derived from monitoring beach waters, WDNR calculates

a percent exceedance of the single sample maximum criterion of 235 cfu/100 ml when there are 15 or more samples taken in a year. If there are fewer than 15 samples, the year is considered to have insufficient data. This data threshold was selected to represent the number of samples typically collected during a Wisconsin "beach season." In Wisconsin, the typical swimming season lasts about 15 weeks – Memorial Day through Labor Day. Samples are collected weekly during this time period for beaches that are heavily used. Stream and river samples were not considered due to limited data.³⁶

The State further explained the relationship between this data analysis and listing as follows:

Waters are proposed to be added to the 2008 list where the rolling geometric mean exceeds the U.S. EPA threshold of 235 cfu/100ml. For purposes of this process, a rolling geometric mean will be calculated for each five consecutive samples analyzed, regardless of sampling frequency (i.e. daily, bi-weekly, weekly etc.).³⁷

34 WDNR, "Consensus-Based Sediment Quality Guidelines, Recommendations for Use and Application, Interim Guidance," at 4, 7; 2008 Methodology at 12.
35 2008 Methodology at 12.
36 2008 Methodology at 12.
37 2008 Methodology at 12-13.

Years of Information Available	Beaches were listed if:
1 year of data	>35% of samples collected exceeded 235 cfu/100ml
2 year of data	>25% of samples collected exceeded 235 cfu/100ml
3 year of data	>15% of samples collected exceeded 235 cfu/100ml

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

U.S. EPA reviewed WDNR's description of the data and information it considered, its methodology for identifying impaired waters, and any other relevant information including information the State submitted in response to U.S. EPA's requests for additional information. U.S. 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). In addition, U.S. EPA concludes that the State provided its rationale for not relying on particular existing and readily available water quality-related data and information as a basis for listing waters, except in the case of Musky Bay, as discussed in Section II.B.3, below.

1. How Wisconsin Considers Existing and Readily Available Water Quality-Related Data and Information

For past listing cycles (2002 and 2004), the State developed its 303(d) list using the State of the Basin Reports,³⁸ which include comprehensive basin-specific water quality information developed over the years. However, the State has not published a new State of the Basin Report since the 2004 list. In developing the 303(d) list, the State biologists reviewed new data collected since the last listing cycle to determine which waters or pollutants/impairments should be added to or removed from the 2006 303(d) list. These assessment decisions are documented on WDNR 2008 Impaired Water Documentation Sheets (Documentation Sheets) and in WATERS.

Data and information collected or received by the State and then used in assessment decisions must be consistent with the WDNR's Quality Management Plan, or must have been obtained using equivalent quality assurance and control procedures. WDNR also requires information used in development of the 303(d) list to meet the State's criteria for monitored data, "Monitored

38 These Reports can be found at <http://dnr.wi.gov/org/gmu/stateofbasin.html> (last checked June 11, 2009).

data are site-specific and considered representative of 2008 conditions, even if the data are more than five years old.”³⁹

U.S. EPA generally encourages States to consider monitored data that is more than five years old, unless other information indicates that conditions have changed such that the data are no longer representative of water body conditions. WDNR uses professional judgment in determining whether monitored information is representative of current conditions.

WDNR does not use non-monitored information (evaluative information) as a sole basis for identifying waters as impaired under Section 303(d). Generally, non-monitored information consists of information about land use practices, volunteer data that doesn't meet the specifications of the Wisconsin Data Quality Management Plan, and professional judgment of WDNR staff based on visual observations and anecdotal reports from local individuals. By itself, WDNR considered such information useful for screening waters and, for identifying where a problem may exist; but WDNR believes that monitoring should be completed to evaluate the status of the water.

Wisconsin's most recent monitoring strategy is entitled "*WDNR Water Division Monitoring Strategy*.”⁴⁰

This strategy has a tiered approach:

- Tier 1 is the statewide baseline monitoring which is used for trend establishment and problem identification. This level collects baseline information on a broad spatial scale. Problems and trends identified during Tier 1 monitoring (or from other credible information sources) are prioritized for further study through Tier 2 monitoring.
- Tier 2 monitoring applies to water bodies identified under Tier 1 as not meeting core indicators.⁴¹ The goal of this more intense level of monitoring is to identify problems and their causes. The State notes that a typical outcome of Tier 2 monitoring would be the development of a TMDL or other management plan. Short term monitoring and one-time sampling events are also considered covered by Tier 2.
- Tier 3 monitoring provides site specific monitoring of targeted areas. This monitoring provides follow-up analysis of management plans that have been

39 2008 Methodology at 8.

40 Wisconsin DNR Water Division Monitoring Strategy (version 2, July 25, 2006), available at <http://dnr.wi.gov/org/water/monitoring/MonitoringStrategyV2.pdf>.

41 Core indicators are discussed in *WDNR Water Division Monitoring Strategy, Version 2*: July 27, 2006, at 31-32 for water body type.

implemented for problem water bodies, to assess progress. This level of monitoring also covers effluent sampling and monitoring to evaluate permit compliance and the effectiveness of permit conditions.⁴²

In assessing water bodies, WDNR considers the data it collects under the three tiers, as well as data received from other state and federal agencies, regional planning commissions, major municipal sewerage districts, and universities. WDNR sent a letter on July 25, 2007, to a group of 35 such entities, requesting them to submit to WDNR relevant data by September 17, 2008.⁴³ Two entities provided data in response to this data solicitation: 1) Capitol Area Regional Planning Commission-Madison and 2) Southeastern Wisconsin Regional Planning Commission. WDNR considered the data collection procedures and the data submitted by these two entities for use in development of the 303(d) list, but ultimately did not make any new listings based solely on this data.⁴⁴

WDNR's Methodology provides that the State will review information provided by any individual or group at any time.⁴⁵ Data used for listing purposes must have been obtained using adequate quality assurance/control procedures. Outside agencies and individuals submitting data must show that a minimum number of samples were collected at appropriate sites and at critical periods, and that certified laboratories were used for sample analysis. If WDNR deems that the information indicates that an impairment is likely, but the quality assurance/control procedures are not adequate, staff will consider collecting additional data in order to determine whether to list the water body in the future. WDNR may also assist outside groups in the data quality procedures that it considers necessary for data to be used.⁴⁶

WDNR states that it did not use several forms of data in compiling the 2008 303(d) list. These included: (1) information generated outside WDNR where data quality was unknown (2) judgments on water quality where only changes in land use were available for review (i.e. no corresponding water sampling information is available); (3) purely visual observations; and (4) anecdotal reports.⁴⁷ U.S. EPA reviewed the information the State submitted which included: (1) the public comments received and responses to comments, (2) information WATERS data sheets, and (3) and readily available information, and concluded that the State's listing decisions are reasonable, except in the case of Musky Bay. U.S. EPA's analysis for Musky Bay is explained in Section II.B.3.

42 2008 Methodology at 8-9.

43 Attachment C of September 8, 2008 submittal from WDNR identifies the agencies and universities from whom the State requested data for the 2008 list.

44 2008 Methodology at 10; WDNR July 9 Response to EPA Comments, at 9.

45 2008 Methodology at 10.

46 2008 Methodology at 10.

47 2008 Methodology at 10.

2. Adding impaired waters to Category 5A and 5 B

As described above, data collected or received by the State is considered in making decisions about placing waters and pollutants in Category 5A and 5B. Based on the review of existing and readily available data and information, in 2008 the State is adding 47 water/pollutant combinations to Category 5A and 5B as shown in the table below.⁴⁸

Table 1: Waters and pollutants being added to list of impaired waters

WBIC	Water Body Name	Start Miles	End Miles or Acres	Pollutants	Impairments	Category
20	Alford Park Beach, Lake Michigan	0	0.23	<i>E. Coli</i>	Elevated Bacteria	5A
2751220	Amnicon River Beach, Lake Superior	0	0.25	<i>E. coli</i>	Elevated Bacteria	5A
20	Amsterdam Beach, Lake Michigan	0	0.33	<i>E. coli</i>	Elevated Bacteria	5A
122200	Ashwaubenon Creek	0	15	Sediment	Degraded Habitat, Low Dissolved Oxygen	5A
122200	Ashwaubenon Creek	0	15	Total Phosphorus	Degraded Habitat, Low Dissolved Oxygen	5A
118100	Baird Creek	3.5	13.1	Sediment	Degraded Habitat, Low Dissolved Oxygen	5A
118100	Baird Creek	3.5	13.1	Total Phosphorus	Degraded Habitat, Low Dissolved Oxygen	5A
804600	Bernies Beach, Lake Monona	0	0.09	<i>Escherichia coli</i>	Elevated Bacteria	5A
118400	Bower Creek	0	3	Sediment	Degraded Habitat	5A
118400	Bower Creek	0	3	Total Phosphorus	Degraded Habitat	5A
118400	Bower Creek	3	13	Sediment	Degraded Habitat	5A
118400	Bower Creek	3	13	Total Phosphorus	Degraded Habitat	5A

48 WDNr proposed to add Silver Creek Kmart Beach and Silver Creek Spaulding Beach, both on Silver Lake, to the 2008 list of impaired waters due to elevated bacteria. Ron Anderson, Laboratory Coordinator, Bureau of Science Services, WDNr, submitted clarifying information on the bacteria monitoring locations for both of these waters. Both locations are part of bacteria monitoring conducted by the Green Lake Sanitary District; however, both locations are river/stream monitoring locations, not beaches. The State did not include either of these proposed waters on its list of impaired waters for U.S. EPA review and approval because beach data analysis was used and these segments are not beaches.

WBIC	Water Body Name	Start Miles	End Miles or Acres	Pollutants	Impairments	Category
804600	Brittingham Beach, Lake Monona	0	0.34	Escherichia coli	Elevated Bacteria	5A
2089000	Chetek River	0	5	Total Phosphorus	Eutrophication, Low Dissolved Oxygen	5A
136200	East Tributary to Parsons Creek	0.01	1.89	Elevated Water Temperature	Degraded Habitat, Low Dissolved Oxygen	5A
136200	East Tributary to Parsons Creek	0.01	1.89	Sediment	Degraded Habitat, Low Dissolved Oxygen	5A
804600	Esther Park Beach, Lake Monona	0	0.15	Escherichia coli	Elevated Bacteria	5A
1227700	Garners Creek	0	5	Sediment	Degraded Habitat	5A
1227700	Garners Creek	0	5	Total Phosphorus	Degraded Habitat	5A
70	Green Bay, Inner Bay AOC	0	13867.36	Sediment	Degraded Habitat	5A
2838000	Interfalls Lake, Pattison Beach State Park	0	0.07	Escherichia coli	Elevated Bacteria	5A
805400	James Madison Beach, Lake Mendota	0	0.36	Escherichia coli	Elevated Bacteria	5A
20	KK Road Beach, Lake Michigan	0	0.56	Escherichia coli	Elevated Bacteria	5A
126800	Kankapot Creek	0	2.66	Total Phosphorus		5A
126800	Kankapot Creek	2.66	9.57	Total Phosphorus		5A
2601500	Lake Saint Croix	0	4668	Total Phosphorus	Eutrophication	5A
241600	Lake Winneconne	0	4527.95	PCBs	Contaminated Fish Tissue	5A
20	Lions Den Gorge National Preserve South Beach, Lake Michigan	0	0.38	Escherichia coli	Elevated Bacteria	5A
38700	Long Lake Kettle Moraine State Park North Beach	0	0.33	Escherichia coli	Elevated Bacteria	5A
805400	Marshall Park Beach, Lake Mendota	0	0.22	Escherichia coli	Elevated Bacteria	5A
2751220	Middle River Beach, Lake Superior	0	0.5	Escherichia coli	Elevated Bacteria	5A
721000	Mississippi River (St. Croix River to Chippewa River)	763.4	811.5	Sediment	Degraded Submerged Aquatic Vegetation	5A
129500	Mud Creek	0	3.71	Total Phosphorus		5A
1900	North Branch Pike River	0	5.23	Sediment	Degraded Habitat	5A
804600	OIbrich Park Beach, Lake Monona	0	0.23	Escherichia coli	Elevated Bacteria	5A

WBIC	Water Body Name	Start Miles	End Miles or Acres	Pollutants	Impairments	Category
804600	Olin Park Beach, Lake Monona	0	0.07	Escherichia coli	Elevated Bacteria	5A
125100	Plum Creek	0	13.86	Total Phosphorus		5A
20	Southport Park Beach, Lake Michigan	0	0.07	Escherichia coli	Elevated Bacteria	5A
2435700	Spider – Clear Lake	0	1454	Mercury	Contaminated Fish Tissue	5B
805400	Spring Harbor Beach, Lake Mendota	0	0.1	Escherichia coli	Elevated Bacteria	5A
2751220	Thompson West End Park, Lake Superior	0	0.53	Escherichia coli	Elevated Bacteria	5A
771650	Unnamed, Frame Park Creek	0	1.26	PAHs	Contaminated Sediment	5A
148300	Unnamed, Wuerches Creek	0	4.4	Total Phosphorus	Elevated Water Temperature, Low Dissolved Oxygen	5A
20	Van Ess Road Beach, Lake Michigan	0	0.49	Escherichia coli	Elevated Bacteria	5A
805000	Vilas Park Beach, Lake Wingra	0	0.25	Escherichia coli	Elevated Bacteria	5A
2300	Waxdale Creek	0	2.91	Sediment	Degraded Habitat	5A
2751220	Wisconsin Point Beach #2, Lake Superior	0	0.48	Escherichia coli	Elevated Bacteria	5A

In February 2008, the State made its draft list of impaired waters available to the public for review and comment. During this public review and comment opportunity, groups and individuals submitted requests to add several additional waters, Black Earth Creek, Lake Michigan and Lake Superior, to the State's list of impaired waters. For reasons explained in more detail below, Wisconsin did not agree that Black Earth Creek and Lake Michigan should be added to the list of impaired waters. Consequently, these two waters were not added. As discussed below, the State noted that Lake Superior was already included on the list of impaired waters. In its draft list the State also proposed listing nine Madison area beaches. The State received one adverse comment to this proposal. For reasons discussed below, these beaches are included in the State's 2008 Category 5 list. Two commenters requested that waters be identified as impaired due to the presence of aquatic nuisance species (ANS). One of these commenters specifically requested that Beaver Dam Lake be added to Category 5A due the presence of carp. As discussed further below, in 2008 the State is not adding waters impaired due to the presence of ANS.

a) Black Earth Creek

Capital Area Regional Planning Commission submitted a comment that suggested that dissolved oxygen (DO) levels in Black Earth Creek (BEC) above the Village of Black Earth are not acceptable. WDNR believes that there is insufficient information to include BEC on the impaired waters list at this time. WDNR noted that BEC contains a naturally reproducing population of brown trout. Since a runoff-induced fish kill of 2001, WDNR management efforts have included work with Dane County and others partners to address pollutant inputs into BEC and stream bank stabilization. Recent fish surveys show that BEC continues to have one of the highest densities of naturally-reproducing brown trout of any stream in the region.

WDNR documented that lower dissolved oxygen events in BEC have been associated with a variety of factors. WDNR indicated that the most notable factor was due to low flow (discharge) conditions. However, from the data reviewed, there were no violations of DO water quality standard. Low water levels coupled with available nutrients in the system have resulted in the establishment of dense aquatic plant beds in some stream reaches. Cycles of photosynthesis and respiration in the plants drive diurnal swings in DO, and peak summer temperatures also contribute to a reduced potential to concentrate DO in the water column. According to WDNR, at this time the increase in plant growth has not impaired the public rights to the waterbody.

The Documentation Sheet for BEC states that there appears to be declining trend in DO but that it is not impairing the fish and aquatic life use or recreational use of BEC. The State also found insufficient data to determine that the water would be impaired due to low DO and nutrient enrichment. Based on WDNR's Documentation Sheet, BEC continues to meet all of the minimum coldwater steam community expectations. WDNR recommends that this stream should continue to be monitored and WDNR will continue to work with the watershed group on management practices.⁴⁹ U.S. EPA agrees that despite the declining trend in DO, available data indicates that BEC is currently meeting water quality standards and the fish and aquatic life use or recreational use, and the State's plan of additional monitoring is appropriate at this time.

b) Lake Michigan and Lake Superior

The Alliance for the Great Lakes submitted information in support of a request that WDNR include Lake Michigan and Lake Superior on its list of impaired waters due to elevated mercury concentrations in fish tissue. No specific data was submitted with the request. WDNR responded to this request by stating that Lake Superior and tributaries (up to the first impassible barrier) were already included on the list of impaired waters due to specific FCAs based on mercury levels in fish tissue. As previously discussed in this Decision Document and in the State's 2008 Methodology, the State's decision to include a water on the impaired water list is currently determined by whether there is a specific FCA in place for that water.⁵⁰ The State further responded that fish tissue data available for Lake Michigan does not warrant a specific FCA for mercury at this time, although the state's Lake Michigan waters are covered by the

49 WDNR, 2008 303(d) List Submittal, Attachment E at 4 – 5.

50 2008 Methodology at 11 and WDNR, 2008 303(d) List Submittal, Attachment E at 4 – 5.

general state-wide FCA, and portions of Lake Michigan remain listed for PCBs and *E. coli*. On the basis of the information presented, U.S. EPA finds that the State's determination is reasonable.

c) Madison Beaches

The Madison and Dane County Public Health Department submitted data and information to request that WDNR not add nine Madison area beaches to the 2008 list of impaired waters. In support of this request, the commenter raised the concern that the State was inappropriately using *E. coli* data when its Methodology provides that the applicable numeric water quality criterion for inland beaches is based on fecal coliform. While WDNR agrees that the applicable numeric criterion is expressed as fecal coliform, WDNR's rules do not prohibit the state from using other indicator species or endpoints to determine that narrative standards and uses are met. The State points out that the Department of Public Health uses *E. coli* to advise beach users of elevated risks and to make beach closure decisions. The State believes that this information is relevant to assessing if the recreational use of a beach is being attained. The State concluded: "WDNR believes the narrative criterion is inclusive of pathogen indicators and their relationship to public health and believes the *E. coli*-based advisories warrant the same consideration as if they were based on fecal coliform."⁵¹

As discussed in Section II.A.6 above, WDNR proposed waters to be added to the 2008 list where the rolling geometric mean exceeds the U.S. EPA threshold of 235 cfu/100ml. The State analyzed the available data and determined that there is a history of water quality exceedences sufficient to demonstrate impairment at the nine beaches.⁵² Therefore, the nine beaches proposed to be added to the 2008 list of impaired waters will remain on the list.⁵³ The commenter also asked why WDNR didn't differentiate between daily/weekly sampling. WDNR explained that it takes a conservative approach and its methodology includes setting a minimum of 15 samples per year, which it believes is reasonable to cover its beach season. The State further explained that "By using the geometric mean of the available data, WDNR was attempting to censor the affect of a few values that may be significantly greater or less than [sic] the mean value of a representative dataset."⁵⁴ The Commenter also asked WDNR to re-evaluate the 2005-2007 data, which the State did (Table 2 of WDNR's response to comments), before finalizing its listing decision. U.S. EPA reviewed WDNR's analysis of the data and concurs that the State's decision to list the nine Madison beaches is reasonable.

51 WDNR, 2008 303(d) List Submittal, Attachment E at 11.

52 WDNR, 2008 303(d) List Submittal, Attachment E at 11, Table 2. *E. Coli* Monitoring: 2005-2007 Beach Seasons.

53 WDNR, 2008 303(d) List Submittal, Attachment E at 11 – 14. Also, attachment to September 18, 2008 email from Robert Masnado, WDNR, to Julianne Socha and Donna Kecklik, U.S. EPA.

54 WDNR, 2008 303(d) List Submittal, Attachment E at 13.

d) Aquatic Nuisance Species

The State received a comment letter from Neil Kagan, National Wildlife Federation (NWF), requesting that WDNR take the following actions: implement a listing approach for aquatic nuisance species (ANS), include waters impaired or threatened by ANS, identify the ANS at issue, and develop TMDLs to address the threats or impairments caused by ANS.⁵⁵ WDNR responded that it did not consider the presence of ANS as a cause for listing in 2008, pending the development of specific listing criteria, both at the state level and by U.S. EPA. The State noted that development of specific state regulations will require development of a routine assessment protocol, which would be developed in consultation with the public and the Wisconsin legislature. The WDNR intends to work to develop such procedures. In U.S. EPA's view, the discussion in NWF's letter describes a number of concerns potentially raised by aquatic nuisance species, but does not demonstrate that WDNR's decision resulted in impaired waters being omitted from WDNR's 303(d) list. The information NWF provided to Wisconsin did not identify specific waters as impaired, describe the applicable water quality standards for such waters, or indicate the data that would support listing specific waters as impaired by ANS. Accordingly, U.S. EPA believes that WDNR's decision not to add waters to its list as impaired by ANS is reasonable.

The State also received a comment letter from Pat Clark, a Beaver Dam Lake resident, requesting that Beaver Dam Lake be added to the list of impaired waters due to "huge problems with carp."⁵⁶ The State's response to this comment noted that "the commenter's general concerns are warranted and a more detailed evaluation is appropriate before a definitive listing recommendation is made."⁵⁷ WDNR recommended that "additional evaluation of the condition of this water body should occur in preparation for a re-consideration during the 2010 listing cycle."⁵⁸ U.S. EPA reviewed the comment letter and concluded that since no specific data was provided to support listing Beaver Dam Lake, and because no specific state or federal listing criteria for excessive carp is available, that the State's recommendation for further evaluation as part of the 2010 listing cycle is reasonable.

U.S. EPA notes that states have taken different approaches regarding identification of waters that may be impaired by ANS. The different approaches taken by the states may reflect the fact that U.S. EPA has not determined whether ANS are pollutants within the definition of CWA 502(b) and has not provided guidance to the states on how to address waters that may be impaired by ANS. In addition, some states may not have appropriate methodologies for assessing ANS impairments. U.S. EPA has initiated work to develop listing guidance on how monitoring and assessment methodologies should address the negative impacts of ANS on states' waters.

55 Letter from Neil Kagan, National Wildlife Federation, to Robert Masnado, WDNR, March 19, 2008.

56 See email from Pat Clark to Robert Masnado, WDNR, March 18, 2008.

57 WDNR, 2008 303(d) List Submittal, Attachment E at 15.

58 WDNR, 2008 303(d) List Submittal, Attachment E at 15.

3. Musky Bay

During the public review and comment period, WDNR received data and information submitted on behalf of the Victory Heights Association and the Lac Courte Oreilles Lakes Association demonstrating impairment of Musky Bay due to excessive nutrients. After reviewing the existing and readily available data, U.S. EPA has determined, for reasons discussed below, that Musky Bay should be included in Category 5A of Wisconsin's 2008 list of impaired waters.

During the 2008 public notice and comment period, Lac Courte Oreilles Lake Association asked WDNR to list Musky Bay for impairment due to the presence of excessive nutrients, including phosphorus, elevated pH values, as well as the degradation of Musky Bay due to large floating algal mats. Additional information was submitted on July 17, 2008,⁵⁹ indicating that a survey had been performed by the consulting firm of Harmony Environmental to determine the extent and distribution of an invasive plant species known as Curly Leaf Pondweed (*Potamogeton crispus*) in Musky Bay. Information was also submitted on July 21, 2008 and July 23, 2008 to support the Lac Courte Oreilles Lake Association request for listing, based on similar concerns.⁶⁰

The State rejected this proposal for listing the Bay because Wisconsin does not have numeric criterion for phosphorus and WDNR did not believe that the available data provided a compelling rationale for listing. These data included water samples taken at four locations in the Bay. These locations are (1) MB-1, a deep hole in the Bay; (2) MB-2, the east outlet from the cranberry bog operation (an inlet to the lake); (3) MB-2a, the west outlet from the cranberry bog operation (an inlet to the lake); and (4) MB-4, the north shore line of the Bay.

After reviewing these data, WDNR determined that samples taken only from MB-1, the deep hole, were representative of the Bay because this location was centrally located and arguably provided a natural average of the various influences on the Bay's water quality, as represented by the other sample locations. After isolating the data for MB-4, WDNR concluded that sampling here showed lower phosphorous levels than at any other sites, and that the Bay was not impaired due to phosphorus.⁶¹ WDNR stated that it will continue to monitor phosphorous levels in the Bay and will reconsider an impairment determination on the basis of phosphorus in 2010.⁶² Further, WDNR noted that the presence of curly leaf pondweed as an invasive aquatic species was not a sufficient basis for making an impairment determination.⁶³

59 See emails from Gary Pulford to Donna Keelik, U.S. EPA, July 17, 2008.

60 See emails from Gary Pulford to Donna Keelik dated July 22, 2008 and July 23, 2008.

61 See email from Craig Roeler, WDNR to Donna Keelik, April 4, 2009.

62 WDNR July 9 Response to EPA Comments, at 3-4.

63 WDNR, 2008 303(d) List Submittal, Attachment E at 9.

U.S. EPA agrees with the State that additional sampling is needed to make an impairment decision with regard to phosphorus. However, after reviewing available data, U.S. EPA determined that the Bay is impaired based on Wisconsin's narrative standard Wisc. Admin. Code NR 102.04 (1)(b), which provides that "Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the State" and thus the Bay should be listed as a Category 5A water. U.S. EPA reviewed the information submitted during the public comment period⁶⁴ and held subsequent discussions with WDNR staff. WDNR supplied a copy of a letter dated November 8, 2007, from WDNR to Lac Courte Oreilles Lake Association stating that "there are very significant water quality concerns for Musky Bay and that the cranberry bogs' discharge of nutrients is major source of the problems." WDNR further stated in the letter that there are two suggestions that could be considered to help partially address the water quality/water use concerns:

1. Navigational corridors through the dense beds of aquatic plants could be maintained by mechanical harvesting or possibly herbicide application. This would improve access to the main lake by Musky Bay property owners and improve access to the bay by other lake users. Implementing this activity would be likely to enhance your argument that the public use of the bay is currently limited and costs are being incurred to address the limitation. . . .
2. Sources of nutrient loading other than the cranberry bogs could be assessed for application of nutrient loading reductions practices. Other agricultural areas and residential areas in Musky Bay watershed have been estimate to be the source of about 12% of the annual phosphorus load to the bay (Lac Courte Oreilles Conservation Department). . . .⁶⁵

Based on the information submitted, including the documented impaired use of the Bay for boating, as evidenced by WDNR's acknowledgement of the need to cut navigational corridors through the heavy algal mats, U.S. EPA is proposing to list Musky Bay on the 2008 Wisconsin's 303(d) list in Category 5A. U.S. EPA's decision is the subject of a separate notice and comment action.

64 See Letter from Alf Siverston, Courte Oreilles Lakes Association, Inc., to Bob Masnado, WDNR, March 10, 2008, enclosing USGS report.

65 See Letter from Tom Aartila, Upper Chippewa Basin Watershed Supervisor, WDNR, to Messrs. Siverston and Umland, November 8, 2007, attached to e-mail message from Craig P. Roesler, WDNR to Donna Keclik, U.S. EPA, April 7, 2009.

4. Identification of Mississippi River for impairment due to fish consumption advisory for PFOS

As previously discussed in this Decision Document, the State's 2008 methodology identifies generally how the State will assess waters for impairment due to FCAs for PFOS. The State's 2008 Methodology states that a segment of the Mississippi River is being added to the impaired waters list for PFOS, however, this segment⁶⁶ was inadvertently omitted from both the August 1 and the September 8, 2008 submittals to U.S. EPA. WDNR has indicated that this error, along with other necessary corrections identified during further integration quality assurance efforts, will be corrected in the State's 2010 Integrated Report.⁶⁷ As previously discussed in this Decision Document, U.S. EPA recognizes that WDNR has been working to merge two databases into one integrated assessment and listing database. U.S. EPA recognizes that errors and oversights will occur as the State continues to move toward an integrated assessment and listing program. U.S. EPA agrees that making this correction during the 2010 Integrated Reporting process is reasonable.

5. Listing of waters impaired by nonpoint sources

Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the source of the impairment is a point and/or nonpoint source. U.S. EPA's long-standing interpretation is that Section 303(d) applies to waters impacted by point and/or nonpoint sources. In *Pronsolino v. Marcus*, the District Court for the Northern District of California held that section 303(d) of the Clean Water Act (CWA) authorizes U.S. EPA to identify and establish TMDLs for waters impaired by nonpoint sources.⁶⁸ After complete and full review of WDNR's 2008 submittal, U.S. EPA concurs that the State properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with Section 303(d) and U.S. EPA guidance.

C. Waters Being Removed from Wisconsin's list of impaired waters needing TMDLs

A state can remove a waterbody from the 303(d) list for good cause. Title 40 C.F.R. § 130.7(b)(6)(iv) provides that good cause includes, but is not limited to, more recent or accurate data, more sophisticated water quality monitoring, flaws in the original analysis, or changes in conditions. U.S. EPA's "Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act," elaborates on what constitutes good cause for delisting.⁶⁹ Additionally, according to U.S. EPA guidance, once a

66 February 2008 public notice "2008 Additions, Deletions and Technical Changes, Proposed Additions to Existing Impaired Waters List," available on WDNR website (last checked February 25, 2008) proposal to add Mississippi River, Pools 3, 4, 5, 5a, and 6, for impairment due to fish consumption advisories for PFOS.

67 E-mail message from Lisa Helmuth, WDNR, to Julianne Socha, U.S. EPA, November 19, 2009.

68 *Pronsolino et al. v. Marcus et al.*, 91 F.Supp.2d 1337, 1347 (N.D. Ca. 2000). See also U.S. EPA's Guidance and National Clarifying Guidance for 1998 Section 303(d) Lists, Aug. 27, 1997.

69 See Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Section 303(d) and

water/pollutant combination has an approved TMDL, that water/pollutant combination can be placed in the Integrated Report category 4A. Category 4A presents waters that are still impaired but have an approved TMDL addressing one or more pollutants causing an impairment.⁷⁰

U.S. EPA has reviewed the information provided by the State in the 2008 submittal and agrees that the waters identified in the table below should not be included in WDNR's Category 5A or 5B. The State did not remove any waters based on the fact that the data used for the original listing was now old. The state removed waters only if there was new data or information indicating the water was not impaired; or if the data considered in the original listing decision was determined to be flawed and the water pollutant combination was listed in error; or if there was an approved TMDL.

Table 2: Waters and pollutants being removed from list of impaired waters

WBIC	Waterbody Name	Start Mile	End Mile or Acres	Pollutants	Impairments	Reason for removing water and pollutant
1427400	Big Eau Pleine Reservoir	0	4909.16	Mercury	Contaminated Fish Tissue	New data
1580200	Boom Lake	0	364.76	Mercury	Contaminated Fish Tissue	New data
1537800	Booth Lake	0	207	Mercury	Contaminated Fish Tissue	New data
1345700	Castle Rock Flowage	0	12385.63	Mercury	Contaminated Fish Tissue	New data
2050000	Chippewa River	0	20.73	Mercury	Contaminated Fish Tissue	New data
2050000	Chippewa River	60.05	77.04	Mercury	Contaminated Fish Tissue	New data
2050000	Chippewa River ⁷¹	77.04	80.18	Mercury	Contaminated Fish Tissue	New data
97700	Clark Lake	0	865.13	PCBs	Contaminated Sediment	New data
2460500	Deer Lake (T36n R15w S23-13)	0	16	Mercury	Contaminated Fish Tissue	New data
409700	Duck Creek	4.96	25.69	Sediment, Total Phosphorus	Low Dissolved Oxygen, Sediment	Being removed from Wisconsin list because this segment of the Creek is on tribal lands

305(b) of the Clean Water Act, Section V H.2, at 58-59.

70 Wisconsin identifies waters that have approved TMDLs in Wisconsin category 5C. Wisconsin category 5C and U.S. EPA category 4A serve the same purpose, i.e., to identify waters that are still impaired but have approved TMDLs addressing pollutants causing impairments.

71 This segment was formally identified as WBIC 215800 Chippewa River at Lake Wissota in WDNR's 2006 Impaired Waters List, TMDL 538.

WBIC	Waterbody Name	Start Mile	End Mile or Acres	Pollutants	Impairments	Reason for removing water and pollutant
121600	Dutchman Creek	4.04	17.97	Ammonia, Sediment	Chronic Aquatic Toxicity, Low Dissolved Oxygen	Being removed from Wisconsin list because this segment of the Creek is on tribal lands
1802900	French Creek	0	4	Sediment	Degraded Habitat, Elevated Water Temperature	Error in original listing
1652300	Gill Coulee Creek	0.00	1.39	Sediment	Degraded Habitat	TMDL approved
1652300	Gill Coulee Creek	1.39	4.86	Sediment	Degraded Habitat	TMDL approved
1686900	Hardies Creek	0.00	1.64	Sediment	Degraded Habitat	TMDL approved
1686900	Hardies Creek	1.64	3.54	Sediment	Degraded Habitat	TMDL approved
2184900	Holcombe Flowage North	0	1541.92	Mercury	Contaminated Fish Tissue	New data
758300	HR1 Robinson Hillside Beach (Geneva); Linn/Robinson Public Beach Creek – Geneva Lake; Lake Geneva; Geneva Lake ⁷²	0	0.36	Escherichia coli	Elevated Bacteria	Error in proposal to add HR1 Robinson Hillside Beach as new listing in 2008; and error in original listing
1792200	Irvin Creek	0.00	5.31	Sediment	Degraded Habitat	TMDL approved
15800	Jackson Park Pond	0	7.36	PCBs	Contaminated Fish Tissue	New data
967600	Lake Alice	0	1438.32	Mercury	Contaminated Fish Tissue	New data
139900	Lake Butts Des Morts	0	8569.14	Mercury	Contaminated Fish Tissue	New data

72 The draft list which WDNR presented to the public for review and comment proposed to add HR1 Robinson Hillside Beach (Geneva) and Geneva Lake to Category 5A in 2008. Linn/Robinson Public Beach Creek – Geneva Lake was already on the list of impaired waters. During the public review and comment period, Geneva Lake Environmental Agency submitted clarifying information on three pathogen sampling locations regarding the 2006 listing for Linn/Robinson Public Beach Creek – Geneva Lake and the 2008 proposed new listing for HR1 Robinson Hillside Beach (Geneva). WDNR reviewed the information submitted and determined that the data collected at the three sampling locations were erroneously combined and considered by the State to represent conditions at the beach on Geneva Lake. The State determined that one of the sampling points (HR1) was an upstream location in the flowing portion of Robinson Hillside Creek and did not represent the conditions at the beach on Geneva Lake. The other two sampling locations (HR2 and HR3) were determined by the State to represent the east and west boundaries of the beach area and are the most representative samples for assessment of attainment of the recreational use at the beach. The State did consider the data from HR2 and HR3, however, in accordance with the State's 2008 Methodology, a minimum of 15 samples is needed for an assessment of recreational use at a beach, and neither sampling location had 15 samples. Although insufficient data was available for sample locations HR2 and HR3, the State still considered the available data. However, there were no single samples that exceeded the listing criteria. Therefore, WDNR did not include the proposed 2008 listing for HR1 Robinson Hillside Beach (Geneva) on the list of impaired waters submitted for U.S. EPA's review.

WBIC	Waterbody Name	Start Mile	End Mile or Acres	Pollutants	Impairments	Reason for removing water and pollutant
1515400	Lake Mohawksin	0	1515.05	Mercury	Contaminated Fish Tissue	New data
804600	Lake Monona	0	3357.56	Mercury	Contaminated Fish Tissue	New data
131100	Lake Winnebago	0	131871.1	Mercury	Contaminated Fish Tissue	New data
241600	Lake Winneconne ⁷³	0	4527.95	Mercury	Contaminated Fish Tissue	New data
2151400	Little Hay Creek	0	2.14	Total Phosphorus, Sediment	Low Dissolved Oxygen, Degraded Habitat, Elevated Water Temperature	New data
963400	Martin Br	0.00	4	Sediment	Degraded Habitat	TMDL approved
963400	Martin Br	4.00	5.32	Sediment	Degraded Habitat	TMDL approved
963400	Martin Br	5.32	9.94	Sediment	Degraded Habitat	TMDL approved
955100	Martinville Creek	0.00	2.6	Sediment	Degraded Habitat	TMDL approved
955100	Martinville Creek	2.59	5.05	Sediment	Degraded Habitat	TMDL approved
2143900	Mead Lake	0.00	310.27	Sediment, Total Phosphorus	Degraded Habitat, Excess Algal Growth, Total Phosphorus, pH	TMDL approved
1232200	Melancthon Creek	6.76	7.59	Sediment	Degraded Habitat	New information shows use being attained
609000	Menominee River	88.32	95.5	Mercury	Contaminated Fish Tissue	New data
2692900	Minong Flowage (L Nancy)	0	1564	Mercury	Contaminated Fish Tissue	New data
1237100	Otter Creek	0.00	14.89	Sediment	Degraded Habitat	TMDL approved

73 Letter from Betsy Lawton, Midwest Environmental Advocates (MEA), to Bob Masnado, March 26, 2008, at 12. MEA stated that WDNR did not provide "specific data" on this and three other waters that are noted below in this table. These waters include: Tainter Lake (WBIC 2068000), Unnamed tributary to Onion River in Waldo Impoundment (WBIC 52600), Winneconne Lake (WBIC 241600), and the Wisconsin River (WBIC 1179900). U.S. EPA reviewed the information WDNR provided to support WDNR's listing for all waters, including these four, and found that the State's decision to remove these waters from the list was reasonable.

In the case of Lake Winneconne, WDNR explained that the water is not being removed from the list, but rather that this water was previously erroneously listed as being impaired by mercury, and the 2008 list is correcting the source of impairment to be PCB.

As further discussed in Section II.H below, U.S. EPA understands members of the public had access to WDNR's Documentation Sheets and additional fish tissue data for these and other delisted waters. U.S. EPA does not know what additional specific data MEA may have been seeking when it asserted that there was "insufficient data" for MEA to comment on the proposed delistings.

WBIC	Waterbody Name	Start Mile	End Mile or Acres	Pollutants	Impairments	Reason for removing water and pollutant
1237100	Otter Creek	14.88	19.86	Sediment	Degraded Habitat	TMDL approved
1237100	Otter Creek	21.37	23.3	Sediment	Degraded Habitat	TMDL approved
136000	Parsons Creek	0.00	2.58	Sediment, Total Phosphorus	Degraded Habitat	TMDL approved
178400	Peppermill Creek	0	1.71	Sediment	Degraded Habitat, Elevated Water Temperature	Error in original listing
779200	Pine Lake	0	710.54	Unknown Pollutant	Chronic Aquatic Toxicity	Error in original listing
378400	Roberts Lake	0	452	Mercury	Contaminated Fish Tissue	New data
964300	Rogers Br	0.00	8	Sediment, Total Phosphorus	Degraded Habitat, Low DO	TMDL approved
964300	Rogers Br	8.00	11.83	Sediment, Total Phosphorus	Degraded Habitat, Low DO	TMDL approved
672300	Sea Lion Lake	0	122	Mercury	Contaminated Fish Tissue	New data
817600	Scuppernong River	16.8	17.3	Elevated Water Temperature	Elevated Water Temperature	New data
50700	Sheboygan River	13.58	33.91	PCBs	Contaminated Sediment	New data
944600	Snowden Br (Big Patch Creek)	0.00	5	Sediment	Degraded Habitat	TMDL approved
1806900	South Branch Trempealeau River	0	8.7	Sediment	Degraded Habitat, Elevated Water Temperature, Low Dissolved Oxygen	Error in original listing
1665800	Squaw Creek	0.00	0.07	Elevated Water Temperature	Elevated Water Temperature	TMDL approved
1662600	Stillwell Creek	0.01	2.46	Sediment	Degraded Habitat, Elevated Water Temperature	TMDL approved
2068000	Tainter Lake ⁷⁴	0	1387.21	Mercury	Contaminated Fish Tissue	New data

74 See note 73 above. The State proposed to remove the listing of Tainter Lake for mercury based on an analysis of 2004 data that showed that fish tissue concentrations for Walleye no longer exceed the mercury threshold for imposing a specific FCA for gamefish. U.S. EPA finds that the State's analysis of available data is reasonable.

WBIC	Waterbody Name	Start Mile	End Mile or Acres	Pollutants	Impairments	Reason for removing water and pollutant
410200	Trout Creek	0	12.77	Sediment, Total Phosphorus	Low Dissolved Oxygen, Sediment	Being removed from Wisconsin list because this segment of the Creek is on tribal lands
1665600	Unnamed Creek 23-13b	0.00	0.9	Sediment	Degraded Habitat	TMDL approved
2447250	Unnamed Creek 16-10	0	0.98	Sediment	Degraded Habitat, Elevated Water Temperature	Error in original listing
2447270	Unnamed Creek 16-2	0	0.69	Sediment	Degraded Habitat, Elevated Water Temperature	Error in original listing
52600	Unnamed Tributary to Onion River Through Waldo Impoundment ⁷⁵	0	0.4	Sediment	Degraded Habitat	New data
1179900	Wisconsin River	187.81	204.17	Mercury	Contaminated Fish Tissue	New data

75 See note 73 above. This water has two segments. The State's Documentation Sheet for this water notes: "Current habitat and fish biological indices rate the stream in good to fair condition at the downstream site and very poor to fair at the upstream (STH 28) site. Dissolved oxygen levels were below 5.0 mg/L at the STH 28 location and appeared to be in good condition at the downstream site." Based on information in the Documentation Sheet, the State is proposing to de-list the tributary below Depot Street in Waldo (STH 28) for degraded habitat, but retain the impaired listing for degraded habitat above Depot Street, and add low dissolved oxygen as an impairment for the segment above Depot Street. U.S. EPA finds that the State's analysis of the data is reasonable.

WBIC	Waterbody Name	Start Mile	End Mile or Acres	Pollutants	Impairments	Reason for removing water and pollutant
1179900	Wisconsin River ⁷⁶	304.23	324.68	Mercury, BOD, SOD	Contaminated Fish Tissue, Low Dissolved Oxygen	New data
1179900	Wisconsin River	324.68	347.81	Mercury, BOD, SOD	Contaminated Fish Tissue, Low Dissolved Oxygen	New data
241300	Wolf River – Main Stem	85.58	105.29	Mercury	Contaminated Fish Tissue	New data

1. Public comments relating to waters being removed from list of impaired waters

WDNR received several comments disagreeing with WDNR's proposed removal of certain waters from the impaired waters list. First, WDNR had proposed delisting the main stem of Slaughterhouse Creek but designating three related sloughs as impaired. During the public review and comment period, WDNR received comments requesting that all of the Slaughterhouse Creek waters should be removed from the impaired waters list. Second, WDNR received comments from another group, Madison Environmental Justice Organization, requesting that Lake Monona should not be removed from the impaired waters list. Finally, Midwest Environmental Advocates (MEA) sent comments to WDNR which named many waters they believe should not be removed from the list. These comments and the waters they reference are described in detail in the discussion below.

76 See note 73 above. WDNR's Documentation Sheet for this water notes:

This segment of the Wisconsin River was originally listed in 1998 because of low levels of dissolved oxygen attributed to a high Sediment Oxygen Demand. Recent monitoring conducted by WDNR and analysis of the results found that any remaining dissolved oxygen excursions from the minimum 5.0 mg/L criterion were equal to the error associated with the monitoring practices. These marginal excursions are believed to reflect natural background as this segment of the river is influenced by a large wetland complex immediately upstream. Furthermore, modeling of point source influences indicates that those sources have little impact on the ambient dissolved oxygen concentrations which corroborates the heavy influence of the wetland complex and other natural features.

In addition to Best Professional Judgment, WDNR staff has conducted multiple fish surveys in the past few years and have show there to be a robust community of pollution intolerant species. The most recent survey conducted in October 2007 in an area believed to historically have low dissolved oxygen concentrations found a fish community consisting of smallmouth bass, muskellunge, northern hog sucker, and rock bass. (Data Sheet for Wisconsin River, WBIC no. 1179900).

Based on the information above, U.S. EPA finds that the State's decision to delist was reasonable.

a) Slaughterhouse Creek

WDNR listed Slaughterhouse Creek in 2006 as one segment which included the three backwater sloughs. For the 2008 list, WDNR proposed to re-segment the original listing by dividing the main stem from the three backwaters (Backwaters #1, #2, and #3). The proposal would have included delisting the main stem but continuing to list the three backwater areas as impaired. The State based this decision on a variety of long term monitoring data.

The Rhinelander Landfill Group commented that Slaughterhouse Creek and its three backwaters should all be delisted. These comments asserted that impairments had ceased to exist in Backwaters #1 and #3, and that Backwater #2 should not be listed at all because it had been improperly classified as a coldwater fishery and as such should never have been subject to the Fish and Aquatic Life Standard.

Following an analysis of the information submitted by the commenter, WDNR withdrew both its proposal to de-list the mainstem of Slaughterhouse Creek and its proposal to re-segment the water body. The State reasoned that the backwaters areas should remain listed as impaired based on water chemistry and ambient toxicity data it had collected in June and September 2007; and data from long term monitoring of the backwater sloughs from 1997 through 2001. WDNR concluded that the 1997-2001 data showed the presence of elevated concentrations of ammonia and aquatic toxicity in the backwater sloughs adjacent to the landfill. WDNR believes that these data demonstrate that groundwater containing landfill leachate continues to discharge to backwater slough areas adjacent to Slaughterhouse Creek, creating "a potential for adverse impacts to fish and aquatic life in the system."⁷⁷

Additionally, Slaughterhouse Creek, which currently includes the mainstem and all three backwaters, is identified in the State's codified rules as a coldwater fishery. While the commenter asserted that this classification for the Creek is incorrect, the State has not reclassified the waters (nor do the State's rules provide a codified designated use specific to the backwaters). Until the State makes a formal change to the classification of Slaughterhouse Creek, its codified use remains as a coldwater fishery.

For the reasons outlined above, WDNR concluded that the current codified designated use for Slaughterhouse Creek is not being met and therefore, Slaughterhouse Creek, including the three backwater areas, shall remain on Wisconsin's list of impaired waters.⁷⁸ WDNR further noted that it would conduct a "formal use attainability analysis . . . to determine if alternative use designations should be considered for all or portions of Slaughterhouse Creek."⁷⁹ On the basis

77 WDNR, 2008 303(d) List Submittal, Attachment E at 6.

78 WDNR, 2008 303(d) List Submittal, Attachment E at 5. See meeting notes July 2, 2008 from Donna Keclik, U.S. EPA.

79 WDNR, 2008 303(d) List Submittal, Attachment E at 6. Additionally, MEA's comments request an attainability analysis for this water. Lawton to Masnado, March 26, 2008, at 13-14.

of information available to WDNR and U.S. EPA, U.S. EPA agrees that the State has appropriately retained the listing for Slaughterhouse Creek

b) Lake Monona

The Madison Environmental Justice Organization commented that there was insufficient fish tissue data to support WDNR's decision to de-list Lake Monona for impairment due to mercury. The commenter stated that WDNR only had new data for 10 panfish in 2006, of which one had a mercury level of 0.21 ppm.⁸⁰ WDNR's Documentation Sheet, however, shows that there were 20 panfish and 36 game fish sampled during a multi-year period ending in 2006.⁸¹ Of the 20 panfish sampled during this time, none exceeded the threshold of 0.21 ppm total mercury for panfish. Of the 36 game fish sampled, WDNR reported having 13 samples from 1997-2006 and 23 from pre-1997, and of these, only 1 exceeded the threshold of 1 ppm total mercury for game fish. Based on a review of this data, WDNR concluded that a specific FCA for mercury was not supported.⁸² Therefore, the State has deleted Lake Monona based on mercury. Lake Monona remains on the impaired water list, however, because of a specific PCB-based FCA. U.S. EPA reviewed WDNR's analysis of the data and concurs that the State's decision to remove this water from the list is reasonable.

c) Other Waters—Comments submitted by Midwest Environmental Advocates

MEA submitted comments objecting to WDNR's delisting of specific waterbodies in three general categories: (1) waters where MEA raised objections based on mercury data above general FCA levels; (2) waters where MEA raised objections because they believe WDNR had insufficient data to delist; and (3) waters where MEA asserted that WDNR had failed to provide them with sufficient information in time to comment. Waters in categories (1) and (2) are specifically addressed below. Waters in category (3) are addressed in notes 73 through 76 in Table 2 above.

Generally, MEA objected to WDNR's methodology for setting FCAs. MEA objected to the State's methodology for basing FCAs on the "Protocol for a Uniform Great Lakes Sport Fish Consumption Advisory" (2007) instead of on U.S. EPA's "Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories,"

<http://www.epa.gov/fishadvisories/technical/guidance.html>. WDNR correctly notes that U.S. EPA's 2000 Guidance provides guidelines that are to be used as a supplement to the technical resources already being used by states, tribes, and other governmental entities that set FCAs, but does not itself require the adoption of specific numeric values for establishing FCAs.⁸³

80 WDNR, 2008 303(d) List Submittal, Attachment E at 14. See also email message from Jim Powell, Madison Environmental Justice Organization, to Robert Masnado, WDNR, March 23, 2008.

81 For gamefish, the Documentation Sheet indicates 23 fish tissue samples taken pre-1997 and 13 fish tissue samples for the period 1997 - 2006. The discussion in the Documentation Sheet, however, references "35" samples.

82 WDNR, 2008 303(d) List Submittal, Attachment F, 2008 Impaired Waters Documentation Sheet for Lake Monona.

83 WDNR, 2008 303(d) List Submittal, Attachment E, at 18-19. WDNR's Impaired Waters Listing

- (1) Waters where fish tissue data appears to show mercury levels above the State's general FCA for mercury.

Chippewa River at Lake Wissota (WBIC 2152800)

WDNR proposed delisting this waterbody for mercury, but retaining the water on the impaired list for PCBs. MEA states that its analysis of "raw data" provided by WDNR for 2001 – 2005 shows an average fish tissue contamination level for mercury of 0.664 ppm.⁸⁴ It is unclear from MEA's comment whether the fish tissue average cited in its comment relates to pan fish or other species. WDNR's analysis concluded:

Data for samples collected between 1996-2005 verify that the advisory reach (Holcombe Dam to Mississippi River) does not require special mercury-based fish consumption advice because panfish⁸⁵ tissue concentrations did not exceed 0.22 ppm and other species did not exceed 1 ppm (exception was 1 musky sample which is covered by the general advisory and is only 1 result).⁸⁶

EPA reviewed WDNR's pan fish tissue data for Lake Wissota, including data that was made available to MEA, and concurs with the State's finding regarding the mercury concentration averages for pan fish and game fish and that these don't exceed the State's current FCA mercury trigger levels. In light of the specific analysis provided by WDNR, and the State's Methodology to rely on specific FCA designations, U.S. EPA finds the State's decision to delist this waterbody for mercury, while retaining its listing for PCBs to be reasonable.

Methodology provides that waters will be included on the impaired waters list as follows:

Mercury: If a waterbody has special mercury based consumption advice of one meal per month or less frequent for panfish (applied when panfish concentrations reach 0.21 to 1 parts per million (ppm)), or is "do not eat" for gamefish (applied when gamefish concentrations exceed 1 ppm).

PCB's: If a waterbody has special PCB-based fish consumption advice of one meal per week or less frequent for panfish species or one meal per month or less frequent for gamefish (applied when PCB concentrations reach total PCB concentration in the range of 0.21 ppm or > 2 ppm).

Some of these sites are due to general residual environmental PCB contamination and some are due to specific deposits of PCB's.

2008 Methodology at 11. EPA interprets this approach to mean generally that WDNR will list a water where sampling averages for panfish reach 0.21 ppm, and greater than 2 ppm for gamefish.

84 Lawton to Masnado, March 26, 2008, at 11.

85 Phone memo from Donna Keclik to file, dated January 12, 2010 with attached email from Bob Masando submitting fish tissue data for Lake Wissota. WDNR's sampling for panfish from Lake Wissota occurred in 1995. The data for panfish consists of five black crappie, which had mercury concentrations ranging from 0.1 - 0.21 ppm. This supports the delisting of this water.

86 WDNR, 2008 303(d) List Submittal, Attachment E at 19; Data Documentation Sheet.

Menominee River (WBIC 609000)

MEA states that its analysis of data from electronic files provided by WDNR on available fish tissue data from 2003-2005 for the Menominee River shows an average of 0.417 ppm for mercury, and 0.093 ppm for PCBs.⁸⁷ It is unclear from MEA's comment whether the fish tissue average relates to pan fish or other species. The Menominee River remains listed for PCBs, however segment identification for some reaches have changed due to WDNR's merging of databases. WDNR states that of four segments of the Menominee River, one (TMDL ID 173) was listed in error in 2006 as being impaired for mercury, but is now being listed based on PCBs as the cause for impairment. A second segment (TMDL ID 282) remains listed as impaired based on a specific mercury-based FCA and additionally is listed as impaired based on a specific PCB-based FCA. A third segment (TMDL ID 283) was removed because the segment overlaps with other listed segments of the river. A fourth segment (TMDL ID 672) has been delisted for mercury because the specific mercury-based FCA has been removed on the basis of new data. This segment continues to be listed as impaired based on a specific PCB-based FCA.⁸⁸ Based on available information, U.S. EPA finds WDNR's decision to be reasonable.

Roberts Lake (WBIC 378400)

MEA states that mercury concentrations for Walleye (a game fish) average 0.317 ppm based on data collected between 2002 and 2004.⁸⁹ WDNR's listing requirement for mercury for game fish is 1 ppm. WDNR states that "recent fish tissue data for walleye" supported lifting the specific FCA based on mercury, and that the lake is covered by the state's general fish consumption advisory for mercury.⁹⁰ Based on the absence of a specific FCA for mercury for this waterbody, the State has proposed de-listing. U.S. EPA finds that WDNR's decision to remove this waterbody from the list because there is no mercury-specific FCA in place for this lake is reasonable.

(2) Waters where WDNR appeared to lack sufficient data to de-list

Black River (WBIC 1676700)

MEA also objected to the proposed delisting of Black River. Subsequent to WDNR's public comment on the proposed list, the State collected additional fish tissue data for the Black River (miles 0- 60.78), but has not yet obtained the results of these samples. Until it obtains these results, WDNR has chosen to retain this segment on the impaired waters list.⁹¹

87 Lawton to Masnado, March 26, 2008, at 11.

88 WDNR, 2008 303(d) List Submittal, Attachment E at 19-20.

89 Lawton to Masnado, March 26, 2008, at 11.

90 WDNR, 2008 303(d) List Submittal, Attachment E at 20.

91 WDNR, 2008 303(d) List Submittal, Attachment E at 20-21. See also email from Lisa Helmuth, WDNR, to Julianne Socha, U.S. EPA, September 29, 2008.

Clark Lake (WBIC 97700)

MEA objected to WDNR's proposed delisting of Clark Lake based on fish tissue data which MEA states averages 0.084 ppm for PCBs. It is not clear from MEA's comment what type of fish tissue is included in this average.⁹² The State explained that in the case of Clark Lake, the State has not designated a specific PCB-based FCA for this waterbody. WDNR's data documentation sheet indicates "in 2005 three additional carp samples were collected with PCB concentration ranging from 0.078-0.091 ppm," which is below the State's listing criteria. Clark Lake remains covered by the State's general FCA. Based on available information, U.S. EPA finds WDNR's decision to be reasonable.

Jackson Park Pond (WBIC 15800)

MEA commented that the State lacked sufficient information to delist Jackson Park Pond for impairment due to PCBs. MEA's comment letter suggested that average contaminant levels in available fish tissue samples suggested an average PCB contamination level of .051 ppm, based on fish tissue samples collected in 2004. It is unclear from MEA's comment whether the fish tissue average cited by the commenter relates to pan fish or other species, although the average contaminant level is below the State's specific PCB listing criteria for either species.⁹³ WDNR's analysis of fish tissue samples taken in 2004 yielded an average contamination level less than 0.04 – 0.06 ppm, which is consistent with MEA's average. On the basis of this sampling, WDNR found that it does not have grounds to establish a specific PCB-based FCA for Jackson Park Pond, and accordingly, the State has delisted this waterbody.⁹⁴ U.S. EPA finds WDNR's decision to be reasonable.

Lake Winnebago (WBIC 131100)

MEA commented that the State lacked sufficient information to delist Lake Winnebago for impairment due to PCBs. Lake Winnebago remains on the list for PCB-based FCAs.⁹⁵

Sheboygan River (WBIC 50700)

MEA commented that the State lacked sufficient information to delist the Sheboygan River for impairment due to PCBs. MEA's comment letter suggested that average contaminant levels in available fish tissue samples suggested an average PCB contamination level of 0.112 ppm, based on fish tissue samples collected in 2000. WDNR indicated that this water originally was listed

92 Lawton to Masnado, March 26, 2008, at 11.

93 Lawton to Masnado, March 26, 2008, at 11.

94 U.S. EPA notes that we were unable to verify MEA's statement that WDNR's Impaired Waters Listing Methodology includes a requirement to average fish tissue samples for 2 consecutive years within a five year timeframe. WDNR, 2008 303(d) List Submittal, Attachment E at 21-22; Documentation Data Sheet.

95 Lawton to Masnado, March 26, 2008; at 11. WDNR, 2008 303(d) List Submittal, Attachment E at 22; Documentation Data Sheet

based on WDNR's pre-2000 listing methodology, and that current fish tissue data does not warrant a specific PCB based FCA. U.S. EPA finds WDNR decision to be reasonable.

Wisconsin River – Rainbow Flowage (WBIC 1595300) Wisconsin River – Lake Alice (WBIC 967600)

MEA commented that the State lacked sufficient information to delist two segments of the Wisconsin River for impairment due to mercury. MEA's comment letter suggested that fish tissue samples taken in 2002 show an average mercury contamination level of 0.583 ppm (Rainbow flowage), and 0.537 ppm (Alice Lake). It is unclear from MEA's comment whether the fish tissue average relates to pan fish or gamefish.⁹⁶ WDNR indicated that new sampling does not support a specific mercury-based FCA for these waters and therefore Rainbow Flowage will remain delisted and WDNR will delist Lake Alice. U.S. EPA finds the State's analysis to be reasonable.⁹⁷

Wolf River (WBIC 241300)

MEA commented that the State lacked sufficient information to delist the Wolf River for impairment due to mercury. MEA's comment letter suggested that fish tissue samples taken in 2002 showed an average mercury contamination level of 0.236 ppm. However, WDNR found that 2005 fish tissue sampling did not support a specific mercury-based FCA and therefore WDNR delisted the segment.⁹⁸ One segment of the Wolf River remains on the list for mercury-based FCA. Based on available information, U.S. EPA finds WDNR's decision to be reasonable.

Castle Rock Flowage (WBIC 1345700)

MEA submitted a request to retain Castle Rock Flowage⁹⁹ as impaired for mercury and PCBs. MEA cites 1998 fish tissue data to support listing. WDNR, however, has indicated that more recent fish tissue data does not support a specific mercury-based FCA, although a specific PCB based FCA is warranted. Accordingly, WDNR has removed mercury as an impairment for this water, while it remains listed for PCBs.¹⁰⁰ Based on available information, U.S. EPA finds WDNR's decision to be reasonable.

D. Corrections to existing waters on Wisconsin's list of impaired waters

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- 96 Lawton to Masnado, March 26, 2008; at 12. WDNR, 2008 303(d) List Submittal, Attachment E at 22; Documentation Data Sheet
- 97 WDNR, 2008 303(d) List Submittal, Attachment E at 22; Documentation Data Sheets
- 98 Lawton to Masnado, March 26, 2008, at 12; WDNR, 2008 303(d) List Submittal, Attachment E at 22-23; Documentation Data Sheets
- 99 Castle Rock Flowage-Wisconsin River is now identified as Castle Rock Lake in Attachment 1 of this Decision Document.
- 100 Lawton to Masnado, March 26, 2008; at 12-13; WDNR, 2008 303(d) List Submittal, Attachment E at 23; Documentation Data Sheet.

As previously mentioned in this Decision Document, WDNR is moving toward an integrated report for 305(b) and 303(d). To accomplish this task of integration, the State is using its WATERS database for both tracking assessment data and information needed for its 305(b) report and data and information to support 303(d) listing decisions. In this integration effort, WDNR has undertaken a quality check of data and information being integrated. Tracking 303(d) list decisions and assessment information in two different database systems in the past has created inaccuracies between the two systems. During the development of Category 5 for the 2008 cycle, WDNR has worked to correct inaccuracies in water body description and location. Corrections to river miles, lake acreage, county, water body name, and WBIC have been made. Additionally, for some water bodies the State has re-segmented the water body. For instance, Branch River was identified as one segment, river miles 0-30, on the 2006 list but the 2008 Category 5A identifies Branch River as three segments, river miles 0-12.4, 12.4-20.15, and 20.15-36.78. Additionally, this water body name on the 2006 was Branch River in Manitowoc Co., while in the 2008 Category 5A list the water body name has been corrected to be Branch River. U.S. EPA considers these changes and corrections reasonable and necessary in Wisconsin's efforts toward an accurate integrated assessment and listing program.

During its integration effort, the State also found several pollutants and causes that were inaccurate and needed to be corrected. These corrections fall into the following general categories:

*More specific pollutant or cause identified: For example, if a pollutant or cause in 2006 was identified as metals, in 2008 this pollutant or cause may be identified as a specific metal.

*PCB and mercury data were transposed: For some water bodies on the 2006 list the State may have identified a pollutant as PCB, however, in development of Category 5 for 2008 the State found no available PCB data or PCB advisory, however, mercury data and advisory information was available, or visa versa.

E. Waters where no known pollutant is causing the impairment

Under Section 303(d) of the Clean Water Act, States are required to develop TMDLs for pollutants causing impairments of listed waters. Since the Section 303(d) list is, under current regulations, 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 that are beyond those that are required by federal regulations, e.g., waters where the State has shown pollution, rather than pollutants, is the cause of the impairment (See listings for water impaired by Degraded Habitat). While U.S. EPA is not taking any action to approve or disapprove the list due to the inclusion of such waters, neither the State nor U.S. EPA has an obligation under current federal regulations to develop

TMDLs for such waters because the waters are not impaired by a pollutant. 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 that go beyond those required by current U.S. EPA regulations. U.S. EPA's regulations do not compel the Agency to disapprove the State's list because of the inclusion of such waters. U.S. EPA guidance also recognizes that States may take a conservative, environmentally protective approach in identifying waters on their Section 303(d) lists.¹⁰¹

F. Waters included on the list which may be in Indian country

U.S. EPA's approval of Wisconsin's Section 303(d) list extends to all water bodies on the list with the exception of those waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. U.S. EPA is taking no action to approve or disapprove the State's list with respect to those waters at this time. U.S. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.

G. Priority Ranking and Targeting

U.S. EPA also reviewed the State's priority ranking of listed waters for TMDL development and concludes that the State properly took into account the severity of pollution and the uses to be made of such waters, as well as other relevant factors, such as likelihood to respond, availability of information, opportunities provided by other activities, and time to develop TMDLs. Wisconsin ranked its waters in terms of "high," "medium" and, "low" priority. A ranking of "high" indicated a TMDL to be submitted to U.S. EPA within the next two years (two year schedule). A ranking of "medium" indicates likely completion of a TMDL in the next two to five years. A ranking of "low" indicates likely completion of a TMDL for in the next five to 13 years. The ranking is not an indication of the starting point for TMDL development.

U.S. EPA reviewed the State's identification of WQLSs targeted for TMDL development in the next two years, and concludes that the targeted waters are appropriate for TMDL development in this time frame. In developing the priority rank, the following was considered by WDNR: the availability of data; other actives in the area; likelihood of the water body to respond to management actions; severity of the impairment; and public health concerns. The high and

101 See U.S.EPA National Clarifying Guidance for 1998 Section 303(d) Lists, August 27, 1997.

medium waters will also take advantage of the tier I and tier II monitoring taking place throughout the state.

U.S. EPA has received WDNR's long-term schedule for TMDL development for all waters on the State's 2008 Section 303(d) list. As a policy matter, U.S. EPA has requested that States provide such schedules.¹⁰² U.S. EPA is not taking any action to approve or disapprove this schedule pursuant to Section 303(d). The long term schedule, included with the list are those waters which the State has ranked as medium or low priority.

The State does re-evaluate its two-year and long-term schedules each listing cycle. During U.S. EPA review, several changes in priorities from the approved 2006 list of impaired waters were noted by U.S. EPA. The State provided U.S. EPA with the following rationale for making changes to the two-year and long-term schedules.¹⁰³

1. WDNR re-evaluates its prioritization schedule for each listing cycle by making sure the proposed schedule is still appropriate considering current available resources for monitoring and modeling to support TMDL development.

2. The State considers recent monitoring data and status of implementation of best management practices. If recent data is available that indicates a possible upward trend in water quality, although not attainment of water quality standards, and if implementation of best management practices is underway, the State may delay TMDL development to allow a reasonable time period for implemented best management practices to demonstrate an impact on water quality standards.

U.S. EPA finds that the State's rationale for changes to its two-year and long-term schedules is reasonable. The State's original prioritization included consideration of available resources. If available resources have changed, U.S. EPA considers it reasonable for the State to re-evaluate the prioritization of TMDL development for an impaired water. Additionally, U.S. EPA agrees that there are non-TMDL mechanisms which can be used to attain water quality standards. If these mechanisms are in process, yet have not been fully implemented or have not had sufficient time to impact water quality, it is reasonable for the State to change the TMDL prioritization to allow time for full implementation and evaluation of impacts of implementation.

H. Public Participation

U.S. EPA's regulations require states to include in their Continuing Planning Process (CPP) the process for involving the public and other stakeholders in the development of the section 303(d)

102 Memorandum from Robert Perciasepe, Assistant Administrator for Water, to Regional Administrators and Regional Water Division Directors, "New Policies for Developing and Implementing TMDLs," August 8, 1997.

103 Email from Nicole Richmond, WDNR, to Julianne Socha, U.S. EPA, September 12, 2008.

list.¹⁰⁴ WDNR's CPP has not been updated to cover public participation relating to the 303(d) process, which U.S. EPA has noted in the past.¹⁰⁵ Nevertheless, WDNR did provide for public notice and comment on its 2008 303(d) list, as described below.

WDNR posted the draft 2008 303(d) list, together with supporting documents, including its impaired waters list, its methodology, list of 35 agencies contacted for information in development of the list, press release, and an address to which comments should be addressed, on its website on February 19, 2008. WDNR extended the public comment period by one week to March 26, 2008, after receiving a request for an extension. WDNR received 16 sets of comments on the proposed list and responded to those comments.¹⁰⁶ WDNR provided copies of the comments they received to U.S. EPA.¹⁰⁷ WDNR's summary of comments received and their responses to comments are documented in Attachment E of the State's September 8, 2008 submittal. Earlier discussions in this decision document discuss in more detail some of the comments received by the State while others are discussed in more detail below.

WDNR received two comments requesting greater access for the public to the States 303(d) listing process. MEA commented that WDNR did not provide adequate information for the public to make informed comments on the proposed list, and, in particular, detailed information about delisting and deletion decisions.¹⁰⁸ WDNR responded by explaining that:

WDNR provided commenters with electronic files and access to paper files of all requested data after retrieving those data from central data systems. These mainframe-based data systems are the main repository of water quality data and are not available online for several technical reasons as well as the need to protect certain types of information (i.e., locations of threatened and endangered species) from being misused.

In addition, WDNR has data documentation sheets for each 2008 listing update/change as compiled by water quality biologists. These documents are available to the public upon request.¹⁰⁹

104 40 C.F.R. 130.7(a).

105 U.S. EPA, "Decision document Approving Wisconsin's 2006 List with respect to Section 303(d) of the Clean Water Act," September 29, 2006, at 23.

106 WDNR, 2008 303(d) List Submittal, Attachment E at 2.

107 Copies of the comments were submitted by Robert Masnado, WDNR to Donna Keclik, U.S. EPA, through a series of nine emails, including May 30, 2008, June 19, 2008, and August 28, 2008. WDNR did not send a copy of the Slaughterhouse Creek comment. This comment was submitted directly to U.S. EPA at the same time it was submitted to WDNR. This comment consisted of two volumes of information. Because of the voluminous nature of this submittal, U.S. EPA did not require WDNR to resubmit it with the other comments.

108 Lawton, to Masnado, March 26, 2008 at 3-4.

109 WDNR, 2008 303(d) List Submittal, Attachment E at 16-24.

MEA's concerns regarding a lack of "specific data" on Tainter Lake, Unnamed tributary to Onion River in Waldo Impoundment, Winneconne Lake, and Wisconsin River, are addressed in footnotes 73 – 76 above. U.S. EPA has reviewed the information WDNR has made available in its Documentation Sheets for these four waters -- information that was made available to the public -- and does not know what additional "specific" information MEA may have requested. In making its decision to approve the State's 2008 listing and delisting decisions, U.S. EPA finds that the State's decision in each case is reasonable.

On the basis of the available information, U.S. EPA finds WDNR's process to be adequate; U.S. EPA encourages Wisconsin to continue its efforts to present a transparent assessment and listing process to the public.

I. Attachments

- Attachment 1: U.S. EPA Approved Category 5A: list of impaired waters needing TMDL, except for waters solely impaired due to atmospheric mercury
- Attachment 2: U.S. EPA Approved Category 5B: list of impaired waters solely impaired due to atmospheric mercury needing TMDL
- Attachment 3: WDNR Category 5C: waters impaired not needing TMDL because TMDL is already approved
- Attachment 4: WDNR Category 2: waters meeting some designated uses but still insufficient data to determine if all designated uses are being met