Wisconsin Water Quality Report to Congress 2016

Wisconsin Department of Natural Resources
Water Quality Bureau
Division of Environmental Management

Wisconsin's Water Quality Report

The Federal Clean Water Act (CWA) requires all states to prepare a Water Quality Report to Congress every two years. This "Integrated Report" combines the CWA sections 305(b) and 303(d). The report contains an overall summary of water quality conditions in the State and an updated Impaired Waters List. Wisconsin data are also provided electronically to the United States Environmental Protection Agency (EPA) as part of the Integrated Reporting Process.

Wisconsin's 2016 Wisconsin Water Quality Report to Congress summarizes assessment progress and activities related to water quality protection during the past two years. This document is an online publication only that can be accessed at the Wisconsin Department of Natural Resources (WDNR) website: http://dnr.wi.gov/topic/surfacewater/assessments.html.

View of the Wisconsin River from Wyalusing State Park. Photo by Ashley Beranek.

Editors:
Ashley Beranek and Aaron Larson

Authors and contributors of this report include:
Tim Asplund, Jim Amrhein, Kendra Axness, Kate Barrett, Tom Bauman, Ashley Beranek, Tom Bernthal, Jim Bertolacini, Corrinne Billings, Dave Bolha, Cheryl Bougie, Camille Bruhn, Heidi Bunk, Marsha Burzynski, Jeanne Cargill, Peggy Compton, Matt Diebel, Taryn Davis, Donalea Dinsmore, Tyler Dix, Maureen Ferry, Bill Fitzpatrick, Kari Fleming, Pam Foster Felt, Steve Galarneau, Mary Gansberg, Kevin Gauthier, Shawn Giblin, Joe Graham, Sue Graham, Mike Goettel, Doug Haag, Ilana Haimes, Mark Hazuga, Katie Hein, Craig Helker, Kaylin Helm, Lisa Helmuth, Stacy Hron, Andy Hudak, Scott Inman, Jim Killian, Jon Kleist, Jim Klosiewski, Jim Kreitlow, Paul LaLiberte, Laurel Last, Aaron Larson, Jodi Lepsch, Mary Anne Lowndes, Kay Lutze, Aaron Marti, Adam Mednick, Kristi Minahan, Brenda Nordin, Megan O'Shea, Shaili Pfeiffer, Emily Punke, Kurt Rasmussen, Craig Roesler, Rachel Sabre, Mike Shupryt, Lois Simon, Alex Smith, Mike Sorge, Matt Steiger, Linda Talbot, Jo Temte, Pam Toshner, Jean Unmuth, Marry Ellen Vollbrecht, Josh Weid, Brian Weigel, Michele Wheeler, Molly Wick, Xiaochun Zhang, and all Water Quality Biologists, Water Resources Specialists, and Water Program Managers.

Previous reports were published in 2014 (online only), 2012 (online only), 2010, 2008 (data submittal only), 2006, 2004, 2002, 2000, 1996, 1994, 1992, 1990, 1988, 1987, and earlier. WDNR's earlier documents are available for review at the GEF II building, 101 S. Webster Street, Madison. Later versions are available electronically.

Letter to Citizens

Every two years, Wisconsin provides a *Water Quality Report to Congress*. This report summarizes the condition of the State's water resources (i.e., lakes, rivers, streams, wetlands, drinking water, groundwater, and Great Lakes) and describes Wisconsin's programs to manage, protect and enhance those water resources that are so vital to our culture and our economy.

As part of the Department of Natural Resources' mission, staff in the Water Programs work hard to use the resources available – in the most efficient manner possible – to ensure that our efforts are focused on meeting the needs of the state's citizens and visitors. With the vast water resources in Wisconsin, it is critical to conduct our work in an organized manner that can be evaluated regularly and improved upon as needed. To that end, the Water Programs have four strategic objectives that help define our program goals and guide the work that we do:

- Protecting the Public Trust
- Implementing the Clean Water Act
- Sustaining Healthy Fisheries
- Providing Safe Drinking Water and Groundwater

WDNR's Water Program staff work hard to efficiently use resources available to ensure focused efforts on meeting water quality goals and protecting recreational uses for generations to come. The quality of life benefits from protecting our water resources that are vital to the State's economy. WDNR continually strives to make decisions based on science, track and document progress, and educate the public about water quality issues. In partnership with citizen groups, tribal partners and other state and federal agencies, staff will continue to seek opportunities for collaboration to assess and improve our water resources.

Wisconsin's responsibilities to assess, manage, protect, and enhance our water resources for the citizens of Wisconsin are reflected in this 2016 Integrated Water Quality Report to Congress. This report satisfies federal reporting requirements and provides insights into the WDNR's multitude of water-related programs.

Looking forward, I am confident that you'll agree that Wisconsin is well prepared to continue to evaluate, protect and improve our precious water resources for the citizens of Wisconsin.

Eric Ebersberger, Deputy Administrator
Environmental Management Division

Contents

A. Introduction

Wisconsin is a state bountiful with natural resources, including many and varied lakes, streams, wetlands, aquifers, and springs. Every other year, the Wisconsin Department of Natural Resources (WDNR) provides reports on the quality of the State's water resources to the United States Environmental Protection Agency (EPA), which in turn, shares this information with the United States Congress. The information provided may be considered as a tool for rule making, budget appropriations, and program evaluation by federal legislators.

Key Points

- Wisconsin has made great strides in surface water quality assessment and the assessment program continues to increase the number of assessed waters in the state. Through the combined use of careful study design, systematic assessment protocols, and innovative information technology tools that expedite the assessment and documentation process, more rivers, streams, and lakes have been assessed in this 2016 cycle than in previous cycles. There has been an 85% increase in assessed river and stream miles from 2008 to 2016 (Figure 1).

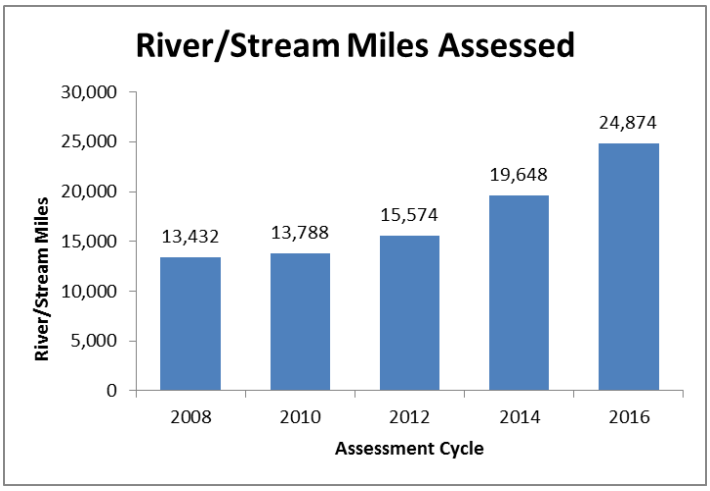


Figure 1. Total river and stream miles assessed during each assessment cycle since 2008.

- The Water Action Volunteers (WAV) Program involves citizen monitors in the collection of stream water quality data that may be used by the WDNR and their partner organizations. The WAV program has grown steadily throughout its 20 year history (Figure 2). In 2015, volunteers monitored a record 751 unique stream sites (making 4500+ site visits) in 59 counties across the three levels of the WAV program. In addition 150 new volunteers were trained in total phosphorus monitoring protocols. These new monitors, along with returning volunteers, monitored 198 unique stream sites for total phosphorus. The year 2015 also marked a shift to volunteers entering their data in the WDNR's Surface Water Integrated Monitoring System (SWIMS) database directly, which aligns with data management protocols of other volunteer monitoring programs.

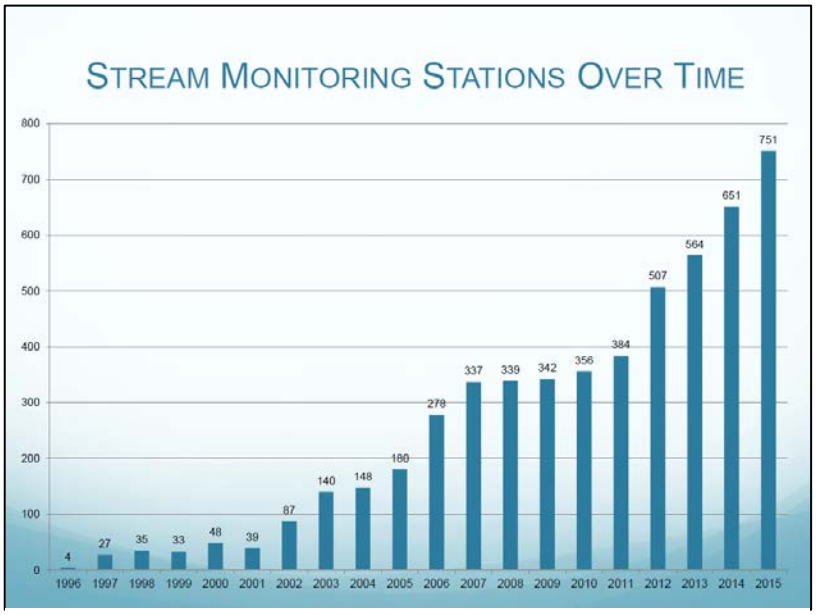


Figure 2. The number of unique river and stream sampling stations visited by WAV program volunteers from 1996 to 2015.

- The 2016 draft 303(d) impaired waters list has 225 waterbody segments newly proposed for listing. There are 10 waterbody segments proposed for removal from the list. There are 70 listed waters that had a pollutant added and 14 listed waters that had a pollutant removed. The number of proposed new listings is higher than in 2014 (192 waterbody segments); this increase is mostly due to the fact that new parameters (temperature and chronic toxicity due to chlorides) were systematically assessed for all waters in the state with available data.

- The EPA recently developed a new Clean Water Act (CWA) 303(d) Program Vision with an emphasis in prioritizing the work that is most important to meet state water quality goals as states, tribes, territories, and EPA implement CWA 303(d) Program responsibilities with existing resources. In addition to Total Maximum Daily Load (TMDL) analyses the new Vision allows for consideration and use of other tools as appropriate to achieve applicable water quality standards, including protection plans and alternatives to TMDLs. WDNR continues to work with EPA to develop alternative restoration plans, such a Nine Key Element Plans. The EPA has identified nine key planning elements that are critical for protecting and improving water quality. Plans that reflect the nine key elements help assess the contributing causes and sources of nonpoint source pollution within a defined watershed area and then prioritize pollutant reduction strategies to restore or protect water quality.

- CWA Section 303(d) requires each state to prioritize waterbodies identified on their impaired waters list for TMDL development. During the 2016 assessment cycle a new prioritization framework was developed. Past priority rankings were evaluated to determine if TMDL development could be completed based on available staff and fiscal resources. The primary change in the prioritization process is the incorporation of a systematic and objective modeling analysis that identifies watershed areas at a 12-digit Hydrologic Unit Code (HUC-12) scale experiencing the most ecological degradation and vulnerability to future degradation. Priority areas identified by the model are further screened by WDNR staff experts to remove areas already addressed by a TMDL or alternative restoration plan. The new approach also focuses planning efforts on the two most commonly identified pollutants on the impaired waters list: total phosphorus and total suspended solids.

- Wisconsin recently released a comprehensive Water Quality Monitoring Framework for 2015 – 2020 (Figure 3). The strategic monitoring plan is designed to guide ambient monitoring through 2020 with an updated framework including media-specific studies, protocol inventory, and field procedures that reflect advances in study designs to answer questions aligned with federal and state program requirements and goals.

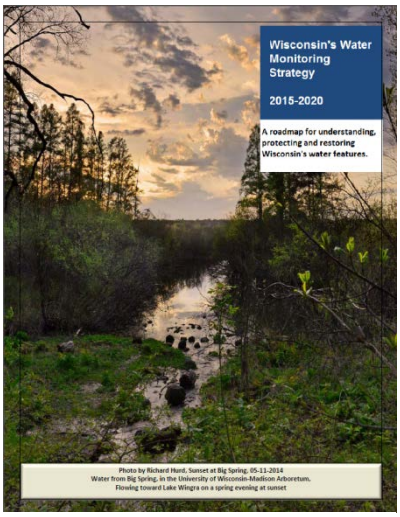


Figure 3. Wisconsin's Water Monitoring Strategy 2015 – 2020. Click to open [PDF].

B. Background Information

B1. Total Waters

There are over five and a half million people in Wisconsin that share the state's bountiful water resources. Wisconsin has approximately 1.2 million lake and impoundment acres and approximately 88,000 river and stream miles. The state's resources also include 1,000 miles of Great Lakes shoreline, 5 million acres of wetlands, and 1.2 quadrillion gallons of groundwater. Despite the abundance of water resources in Wisconsin many are threatened by human-induced stressors.

Wisconsin's Water Resources at a Glance	
Wisconsin Population	5,753,324*
Lakes	
Number of Lakes	15,000
Lake Acres	1.2 million
Stream Miles	88,000
Great Lakes	
Shoreline Miles	1,000
Coastal Beach Miles	192
Wetland Acres	5 million
Groundwater Gallons	1.2 quadrillion

* Wisconsin Department of Administration January 1, 2015 estimate by DOA.

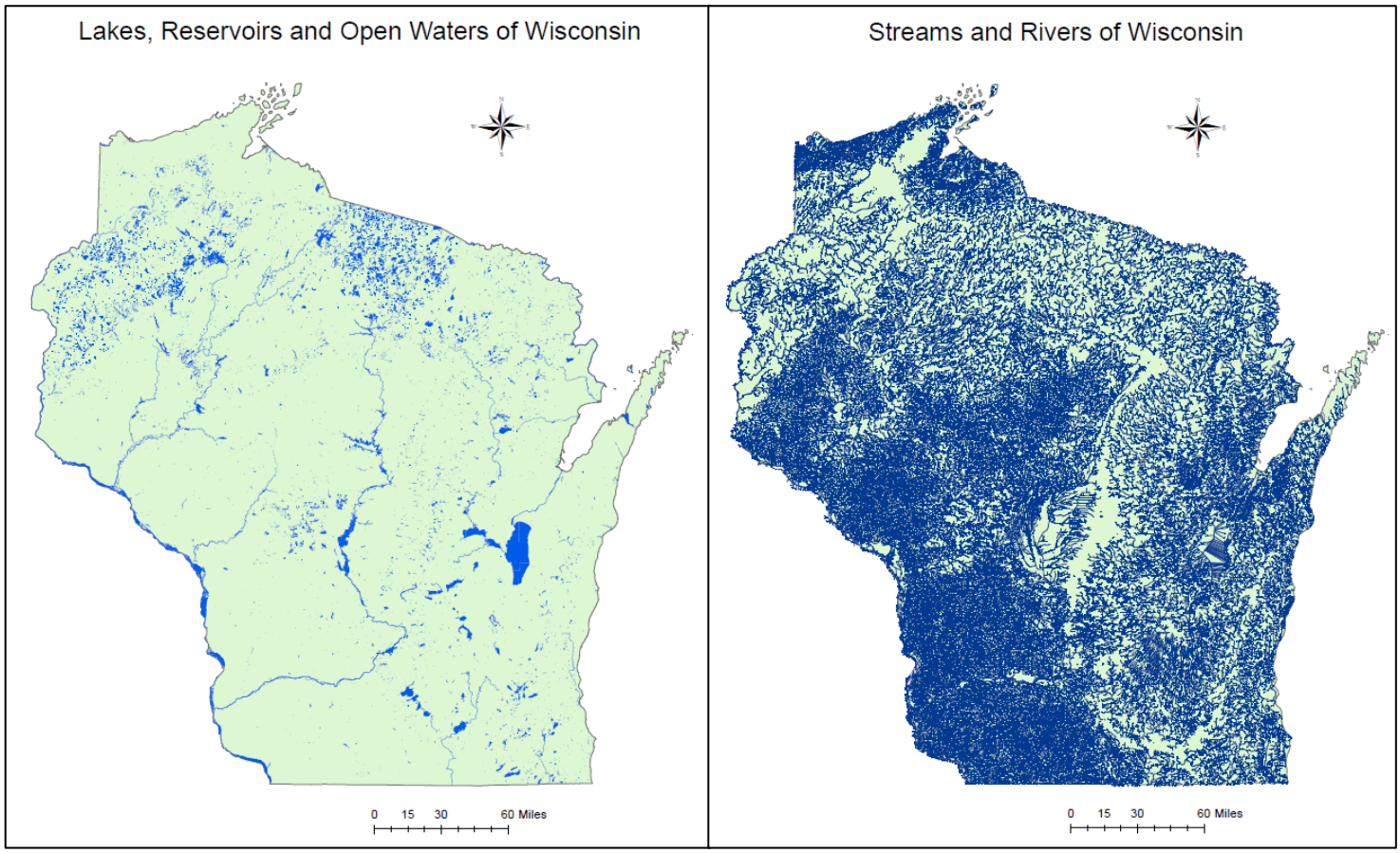


Figure 4. Visual representation of Wisconsin's surface waters; 1:100,000 scale for lakes and 1:24,000 scale for streams.

B2. Water Pollution Control Programs

A broad range of WDNR programs within the Bureaus of Water Quality and Watershed Management contribute to water quality improvements.

Total Maximum Daily Load Program

Under section 303(d) of the CWA, states, territories and authorized tribes are required to submit lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet water quality standards. The law requires that the states establish priority rankings for waters on the lists and develop Total Maximum Daily Loads (TMDL) for these waters. A TMDL is the amount of a pollutant a waterbody can receive and still meet water quality standards. A TMDL serves as a planning tool and potential starting point for restoration or protection activities with the ultimate goal of attaining or maintaining water quality standards. In simple terms, a TMDL is a pollution "budget" for a water body or watershed that establishes reductions needed from each pollutant source to meet water quality goals. While some waters may be restored through alternative projects such as Nine Element Watershed Restoration Plans, many issues are addressed through TMDLs.

The EPA recently developed a new CWA 303(d) Program Vision with an emphasis in prioritizing the work that is most important to meet state water quality goals as states, tribes, territories, and EPA implement CWA 303(d) Program responsibilities with existing resources. It fosters opportunities for collaboration and integration with other CWA programs; with other programs within the agency; with other agencies; and between EPA and the states, tribes, and territories, all of which can help to strategically focus resources. WDNR's prioritization framework continues to evolve; past prioritization schemes have been revamped to address lessons learned, new thinking, and alternative strategies to restoration and protection. There are many ways to prioritize waters and watersheds for restoration and protection, and the WDNR has recently revised its methods to better meet the Vision prioritization goal and allow for more focused utilization of limited staff and fiscal resources. Wisconsin's prioritization framework, used to prioritize the 2016 impaired waters list, is included in Appendix A.

In addition to TMDL analyses the new Vision allows for consideration and use of other tools to achieve applicable water quality standards, including protection plans and alternatives to TMDLs. WDNR continues to work with EPA to develop alternative restoration plans, such a Nine Key Element Plans. Development of watershed–based plans funded with Section 319 funds must be consistent with EPA's nine elements. The elements can be used in watersheds with impaired waters or used to protect watersheds not yet impaired. Watershed plans consistent with EPA's nine key elements provide a framework for improving water quality in a holistic manner within a geographic watershed. The nine elements help assess the contributing causes and sources of nonpoint source pollution, involve key stakeholders and prioritize restoration and protection strategies to address water quality problems.

The following page lists the TMDLs that have been approved by EPA. To see a list of waters that are included in these TMDLs, please use our search impaired waters tool to find waters with the status code of "Approved TMDL." To see a map of TMDL sites, use the TMDL Map Status. The online project search tool can also be used to find more detailed information about a specific TMDL project.

Approved TMDLs

- Rock River TMDL Website, 2012
- Red Cedar River (Tainter Lake, Lake Menomin) TMDL, 2012 || USEPA Decision Document [PDF]
- Lake St. Croix TMDL, 2013 [PDF] || USEPA Decision Document [PDF]
- Lower Fox River Basin and Lower Green Bay TMDL, 2012 [PDF]
- Little Lake Wissota, 2010 [PDF]
- Milwaukee – Cedar Creek, 2008 [PDF]
- Mead Lake, 2008 [PDF]
- Little Willow Creek, 2008 [PDF]
- Otter Creek, 2008 [PDF]
- Dougherty Creek, 2008 [PDF]
- Hardies Creek, 2008 [PDF]
- Stillwell & Squaw Creek, 2007 [PDF]
- Parsons Creek, 2007 [PDF]
- Martin, Martinville, and Rogers Branch, 2007 [PDF]
- Gills Coulee Creek, 2006 [PDF]
- Snowden Branch, 2006 [PDF]
- Waumandee Creek Watershed, 2005 [PDF]
- Becky Creek, 2005 [PDF]
- Sugar Pecatonica River Basin, 2005 [PDF]
- Castle Rock Creek, 2004 [PDF] || USEPA Decision Document
- Carpenter Creek TMDL, 2004 [PDF]
- Gunderson Valley Creek, 2004 [PDF] || USEPA Decision Document
- Halfmoon Lake, 2004 [PDF]
- Silver Lake, 2004 [PDF]
- Trump Coulee Creek, 2004 [PDF]
- Eagle Creek & Joos Valley, 2003 [PDF]
- Sugar–Honey Creeks Watershed, 2003 [PDF]
- Middle Trempealeau River Watershed Sediment TMDL, 2002 [PDF]
- Jug Creek [PDF]
- Cedar Lake, 2003 [PDF]
- Token Creek, 2002 [PDF] || USEPA Decision Document
- Squaw Lake, 2000 [PDF] || USEPA Decision Document

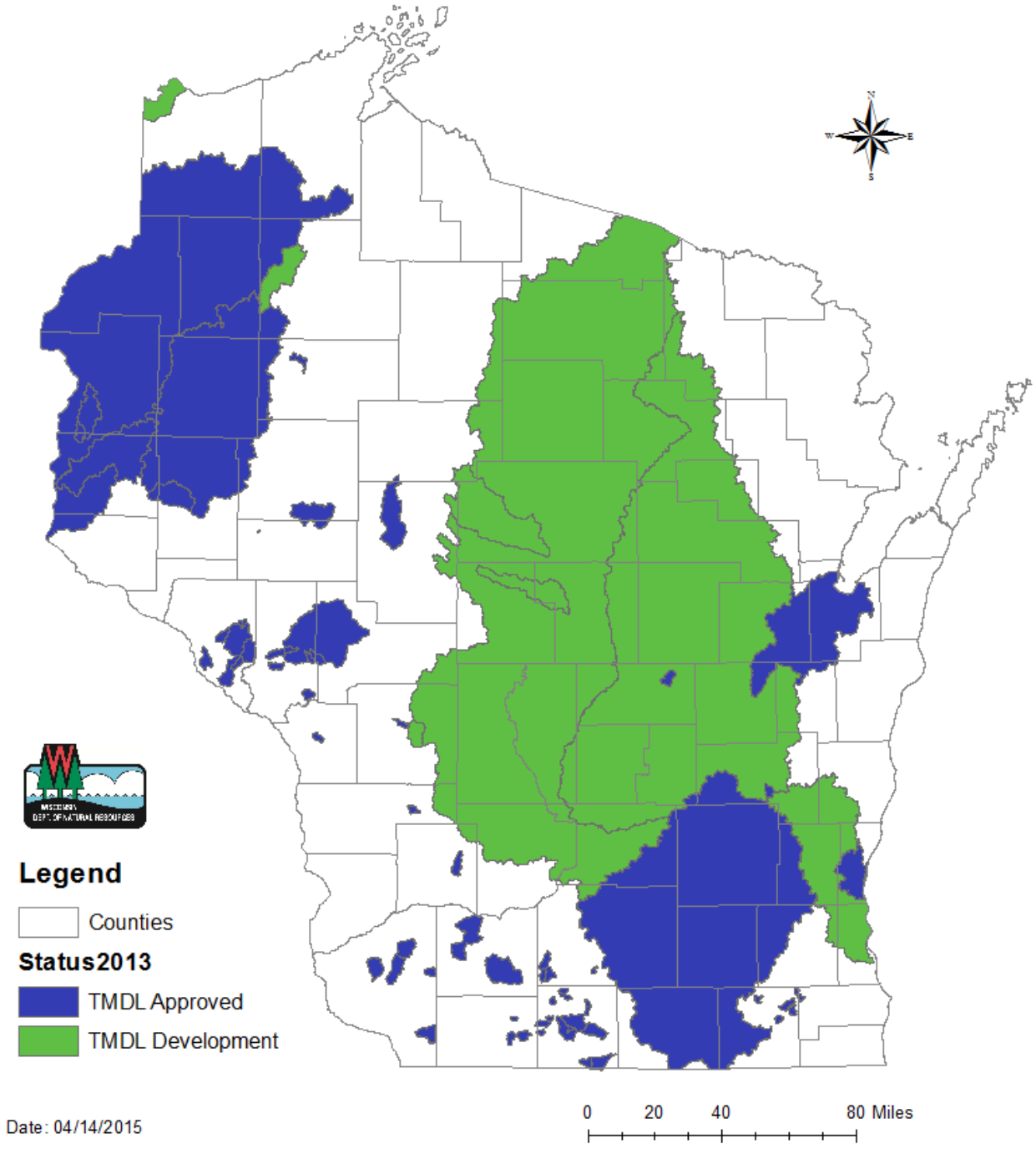


Figure 5. Map of TMDL Approved and TMDL Development areas in Wisconsin. For more information on these TMDL areas visit the online map: http://dnr.wi.gov/topic/tmdls/tmdlMap.asp.

Runoff Management Programs

Nonpoint source (NPS) pollution, unlike pollution from industrial and municipal wastewater treatment facilities, comes from many diffuse sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into rivers, lakes, wetlands, and groundwater. The origins of NPS pollutants are diffuse and often difficult to trace. Human-related origins of NPS pollution that have been identified as most prevalent in Wisconsin include:

- animal production operations and feedlots
- other agricultural activities
- streambank and shoreline erosion
- timber harvesting
- urban land development
- transportation-related facilities.

Potential sources of runoff

Wisconsin has long been recognized as a leading state in the effort to control nonpoint source pollution. Since 1978, the state's NPS Program has made significant progress in addressing runoff-related water quality problems that, in many cases, had existed for decades. In 2015 alone, the WDNR and Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP) allocated nearly $19 million in state and federal funds to counties for nonpoint source pollution abatement activities. Even with this work, runoff management is still one of the largest remaining challenges to improving and protecting the state's water quality.

Wisconsin's NPS Program is implemented through a comprehensive network of federal, state, and local agencies, working in partnership with other organizations and the citizens of Wisconsin to address the significant nonpoint sources in the state, including agriculture, urban, forestry, wetlands, and hydrologic modifications. The core activities of these programs – research, monitoring, data assessment and management, regulation and enforcement, financial and technical assistance, education and outreach, and public involvement – work to address current and prevent future water quality impairments and threats caused by NPS pollution. Wisconsin's success in addressing NPS issues is aided by the partnerships that have been developed and the use of both voluntary and regulatory approaches coupled with financial and technical assistance.

Chapter 4 of the State's *Nonpoint Source Program Management Plan* describes the partnerships, programs and financial resources that work in coordination to decrease NPS pollution and describes how the state has institutionalized its program beyond the annual implementation of Section 319-funded activities and projects.

Runoff Management

Control of polluted runoff continues to be one of the most important challenges in the State's effort to protect Wisconsin's water resources. Urban and rural land use activities are the source of runoff pollutants entering Wisconsin's lakes, streams, wetlands, and groundwater. Common pollutants in runoff include the following:

- Sediment from construction sites, croplands, and other urban and rural sources
- Nutrients and pesticides from both urban and rural sources
- Oil, grease, heavy metals, and other toxic materials from impervious surfaces such as streets, highways, roof, and parking lots
- Farm animal wastes from barnyards and spread on agricultural fields and pet wastes from urban areas

The effects of polluted runoff can be seen in degraded fish habitat, fish kills, nutrient-loaded waters causing heavy weed growth, degradation of drinking water supplies, siltation of harbors and streams, diminished recreational uses, and changes in the natural hydrology of wetlands, streams, rivers, and lakes.

To address these pollutant problems, water quality managers encourage landowners and municipalities to implement and install "Best Management Practices" (BMPs) in rural and urban areas. BMPs, such as grassed waterways, cover crops, nutrient management, manure storage facilities, or detention ponds, help to prevent movement of pollutants to surface water and groundwater.

The State's efforts to restore water resources affected by polluted runoff center around Wisconsin's Runoff Management Program. The program is embodied in nine administrative rules, promulgated in October 2002, to address urban and rural runoff pollution problems statewide; eight are administered by the WDNR, and one is administered by the WDATCP.

Three primary components of the WDNR's Runoff Management Program include implementation of runoff management grant programs, point source discharge permitting of stormwater and agricultural runoff sources, and implementation of state regulatory performance standards.

Wisconsin has been recognized as a leading state in the effort to control polluted runoff. The Runoff Management Program is a joint effort of the WDNR, the WDATCP, county Land Conservation Departments (LCDs), and municipalities, with assistance from a variety of federal, state, and local agencies, particularly the EPA, the USDA Natural Resources Conservation Service (NRCS), and the University of Wisconsin-Extension.

Runoff Management Grant Program

The WDNR's runoff management grant programs include the Targeted Runoff Management (TRM) Grant Program, the Notice of Discharge (NOD) Grant Program, and the Urban Nonpoint Source and Stormwater Management (UNPS) Grant Program. Each of the grant programs offers cost-sharing assistance to local units of government. Counties typically assist landowners in the implementation and installation of agricultural BMPs to control nonpoint source pollution. Municipalities usually directly fund BMP construction and stormwater planning within their boundaries. The programs are described in further detail below. Table 1 shows the amount and types of BMPs funded through these programs in 2013 and 2014, the most recent two years for which records are available. An additional synopsis of grant funding distributed by the WDNR for these programs can be found in the Land and Water Conservation Annual Report.

Table 1. Best Management Practices (BMPs) and planning activities funded through WDNR Runoff Management Grants.

Agricultural BMP Name	Installed in 2013	Installed in 2014
Access Roads and Cattle Crossings	1611 feet	400 Feet
Animal Trails and Walkways	300 feet	NA
Barnyard Runoff Control Systems	17	6
Critical Area Stabilization	10 acres	10 acres
Diversions	2,338 feet	300 feet
Filter Strips	0.5 acres	NA
Heavy Use Area Protection	3,003 acres	1 acre
Livestock Fencing	2,980 feet	NA
Livestock Watering Facilities	8	2
Manure Storage System Closure	4	3
Manure Storage Systems	23	10
Milking Center Waste Control Systems	6	3
Nutrient Management	200 acres	130 acres
Relocating or Abandoning Animal Feeding Operations	NA	1
Roof Runoff Systems	2	3
Roofs	4	2
Sediment Basins	1	NA
Streambank/Shoreline Rip-rapping (incl. associated fencing)	1,190 feet	NA
Underground Outlets	1,101 feet	160 feet
Waste Transfer Systems	11	9
Wastewater Treatment Strips	2 acres	1 acre
Water & Sediment Control Basins	NA	2
Waterway Systems	4 acres	1 acre
Urban BMP/Planning Activity Name	**Installed in 2013**	**Installed in 2014**
Land Acquisition	3 acres	NA
Street Sweeping	1 sweeper	NA
Urban Detention System	2	7
Urban Infiltration System	1	NA
Urban Practice Design	2	NA
Urban Stormwater/Erosion Plan	3	3
Information & Education Activities	NA	1

Targeted Runoff Management Grant Program

The TRM Grant Program provides financial assistance to rural and urban governmental units to control polluted runoff. The maximum cost-share rate available to TRM grant recipients is 70 percent of eligible project costs, up to a maximum of $150,000 (total state share) for Small-Scale projects and up to $1,000,000 for Large-Scale projects. Local governments that are awarded TRM grants may use the funds on lands they control or make the funds available to private landowners. The projects last from two to four years.

During calendar year 2013, the TRM Grant Program awarded $3,832,807 for 25 projects to local units of government. In 2014, $3,551,668 for 22 projects were awarded, and in 2015, $3,153,674 were awarded for 19 projects. TRM grant funds are used to install a variety of agricultural and urban BMPs (see Table 1; BMP implementation data is not yet fully available for 2015).

Additional information about the TRM Grant Program is available on the WDNR web site at: http://dnr.wi.gov/Aid/TargetedRunoff.html.

Notice of Discharge Grant Program

NOD Grants are provided by WDNR and WDATCP to local units of government (typically counties). A combination of state and federal funds is used to support NOD grants. The purpose of these grants is to provide cost sharing to farmers who are required to install agricultural best management practices to comply with NOD requirements. NODs are issued by the WDNR under ch. NR 243 Wis. Adm. Code, to small and medium animal feeding operations that pose environmental threats to state water resources.

Both state agencies work cooperatively to administer funds set aside to make NOD grant awards. Although the criteria for using agency funds vary between the two agencies, WDNR and WDATCP have jointly developed a single grant application that can be used to apply for funding from either agency. The two agencies jointly review the project applications and coordinate funding to assure the most cost-effective use of the available state funds. Funding decisions must take into account the different statutory and other administrative requirements each agency operates under.

Additional information about the NOD Grant Program is available on the WDNR web site at: http://dnr.wi.gov/Aid/NOD.html.

Urban Nonpoint Source & Stormwater Management Grant Program

The UNPS Grant Program focuses on financial assistance to governmental units in urban areas to control polluted runoff. To be eligible for a grant, urban areas should have a population of at least 1,000 people per square mile, have a commercial land use, or include a non-permitted portion of a privately owned industrial site. UNPS Grants can be used to pay for a variety of activities. Eligible planning activity costs for stormwater planning, related informational and educational activities, ordinance development and enforcement, and training and design are cost-shared at 50 percent. Eligible best management practice construction costs may include such projects as stormwater detention ponds, infiltration basins, streambank stabilization, and shoreline stabilization, and are cost-shared at 50 percent. The funded projects last between two and three years.

In 2013, $1,838,788 were awarded for 16 construction projects and $701,187 for 14 planning projects. In 2014, $2,418,711 were awarded for 16 construction projects and $1,089,011 for 18 planning projects, and in 2015, $1,800,147 were awarded to 17 construction projects, and $1,293,781 were awarded to 20 planning projects.

Additional information about the UNPS Grant Program is available on the WDNR web site at: http://dnr.wi.gov/Aid/UrbanNonpoint.html.

Agricultural Runoff

Approximately 14,000 active livestock operations exist in Wisconsin. Manure from livestock operations contains organic materials, nitrogen, phosphorus and other water pollutants. Through Wisconsin Pollution Discharge Elimination System (WPDES) permits issued under ch. 283, Wis. Stats., and ch. NR 243, Wis. Adm. Code, the WDNR has helped to avoid many water quality impacts from larger-scale livestock operations. In addition, the WDNR has used the Notice of Discharge (NOD) Program under ch. NR 243, Wis. Adm. Code, and the agricultural performance standards and prohibitions promulgated in ch. NR 151, Wis. Adm.Code, in October 2002, to address water quality impacts from many smaller-scale livestock operations in the State.

WPDES Permits for Large Operations


Cattle yard

Water quality concerns associated with livestock operations with 1,000 animal units or more (also referred to as Concentrated Animal Feeding Operations, or CAFOs) are addressed through the WPDES permit program. One thousand animal units are approximately equal to 700 milking cows, 1,000 beef cattle, 2,500 swine or 55,000 turkeys. These operations are required to obtain a WPDES permit that addresses storage, runoff, and land application of manure and other process wastewaters from these operations. As of December 31, 2015, there were 278 CAFOs permitted under the WPDES program, and another 17 new permit applications pending. (NOTE: One permit covers approximately 30 poultry operations owned or operated by the same company.) The WDNR has experienced a significant increase in the number of operations applying for permits in recent years, especially in the dairy sector. The WPDES permit program meets or exceeds National Pollutant Discharge Elimination System (NPDES) requirements for livestock operations with 1,000 animal units or more, particularly in the areas of addressing groundwater quality impacts. In 2007, Wisconsin finalized its revisions to ch. NR 243, Wis. Adm. Code, which regulates CAFOs. These revisions reflect changes that were made at the federal level.

Notices of Discharge Address Problem Areas: Increased Funding

NODs may be issued to smaller-scale livestock operations if an on-site investigation reveals the presence of a discharge to waters of the State. Technical assistance to control the discharge is typically available through the county Land Conservation Departments (LCDs), and cost-share financial assistance can be obtained through local, state, and federal cost-share programs. If the water quality impact is not the result of a discharge that meets the federal definition of point source, cost sharing must be provided to cover at least 70% of eligible costs. Throughout the process of addressing impacts identified in an NOD, the WDNR may conduct follow-up investigations to monitor compliance. A livestock operator who fails to implement necessary corrective measures within a specified timeframe is subject to a loss of cost-share funding and may be required to obtain a WPDES permit from the WDNR.

Since the mid-1980s WDNR has used NODs under ch. NR 243, Wis. Adm. Code, to address significant discharges to state waters from small (<300 animal units) and medium (300 – 999 animal units) sized livestock operations. WDATCP engineers and county staff provide technical assistance. Both WDNR and WDATCP provide grant funding to address NOD sites and jointly administer a grant application process that uses a combination of state and federal EPA funding. Additional information about the NOD Grant Program is available on the WDNR web site at: http://dnr.wi.gov/Aid/NOD.html.

Investigation of Spills and Complaints

Where spills and complaints have occurred the WDNR investigates the causes of these instances. Where impacts can be tied to a given farm's practices, the WDNR has pursued enforcement using existing authority to address these events (e.g., WPDES permit enforcement, spills law, citation authority). The result of these efforts range from the payment of a fine to cost-recovery for killed fish to referral to the State's Department of Justice for prosecution and payment of forfeitures. In addition, the WDNR has been able to help some families replace manure impacted wells through the State's Well Compensation Fund.

Stormwater

Since the mid-1990s, WDNR has administered a program under ch. NR 216, Wis. Adm. Code, to address the issue of polluted stormwater runoff. Typical sources for this type of pollution are municipal storm sewers that collect runoff from lawns, streets, and parking lots, and runoff from construction and industrial sites that discharge to surface waters or groundwater without treatment. Research on urban streams in Wisconsin has shown high concentrations of suspended solids, bacteria, heavy metals, oil, grease, and polyaromatic hydrocarbons as a result of stormwater discharges from these sources.

Stormwater drain receiving runoff

WDNR has a permit program to regulate stormwater discharges from municipal, industrial, and construction site sources. The municipal stormwater program addresses stormwater discharges from municipal separate storm sewer systems (MS4s), including large and medium MS4s (those serving a population over 100,000 people), MS4s in designated urbanized areas, and MS4s that serve a population of 10,000 people or more. The industrial stormwater program regulates industrial facilities based upon the type of industrial activity undertaken. The construction site permit program regulates sites where one or more acres of land is disturbed for new construction or redevelopment.

Municipal Permits

As of December 31, 2015, there were 68 municipalities regulated under individual MS4 stormwater permits in Wisconsin. Additionally, there were 177 MS4s covered under a general MS4 stormwater permit. The general MS4 stormwater permit contains six minimum control measures to reduce pollutants in urban stormwater. Some municipalities have implemented stormwater utilities to fund their local programs.

Industrial Permits

As of December 31, 2015, there were over 5,600 industrial facilities covered by a stormwater discharge permit. Industrial permittees must develop stormwater pollution prevention plans to identify sources of stormwater contamination and pollution prevention measures. The Auto Dismantling and Scrap Recycling permittees, 258 and 169 permits, respectively, are offered the option of joining a Cooperative Compliance Program, developed to establish industry-wide approaches to reducing or eliminating stormwater contamination. These programs provide group training, foster information sharing and promote BMPs.

Construction Site Erosion Control

On average, the WDNR confers coverage to nearly 1,500 construction sites annually. Owners of construction sites are required to develop and implement site-specific erosion control and stormwater management plans to prevent pollutants from entering waters of the State.

Performance Standards

The WDNR has made a commitment to performance-based pollution control. Since October 2002, the NPS Program has been in transition from implementing Priority Watershed/Lake Projects to implementing the statewide agricultural, non-agricultural and transportation performance standards, as well as manure management prohibitions. The standards, promulgated in ch. NR 151, Wis. Adm. Code, are intended to be minimum standards of performance necessary to achieve

water quality standards. Implementing the performance standards and prohibitions on a statewide basis is a high priority for the Runoff Management Program.

Wisconsin moved to the use of performance standards rather than requiring prescriptive practices such as buffer strips or tillage practices for a number of reasons. This method allows the affected party, whether a crop, livestock or dairy farmer, or a regulated municipality the ability to use their knowledge of their land, past practices, and resource availability, as well as their short-term goals and long-term plans in deciding how best to meet the standards. Using performance standards recognizes that methods, which work well in one area of the state, might not work in others due to differences in soil, climate conditions, slope or other variables. It also recognizes that technology and management practices continue to evolve and thus a performance standard allows for continued improvement without the need to change the regulations.

The performance standards represent the most integrated standards needed to address the major sources of polluted runoff in rural and urban areas in a cost-effective manner. The performance standards and prohibitions are also designed for a more comprehensive approach to control runoff pollution in Wisconsin and to restore designated uses to waterbodies degraded by polluted runoff. Implementation of the performance standards and prohibitions through local ordinances conveys more implementation and enforcement capabilities to local governments. These standards have become a compliance requirement in other programs, including the WDATCP's Farmland Preservation Program and Livestock Siting Program.

In December 2010, a revised version of NR 151 was published. The rule changes strengthened regulations to control runoff pollution, particularly phosphorus, from agriculture and urban sources and also to fairly balance controlling runoff between urban and agricultural sources. In addition, the revised rule language established a process for addressing the more stringent nonpoint source pollution controls that will likely be needed in TMDL areas. Revisions to ATCP 50 in 2014 added requirements and technical standards to facilitate implementation of the new performance standards.

A brief description of the agricultural and non-agricultural performance standards and manure management prohibitions in ch. NR 151, Wis. Adm. Code, is included here. The full administrative code can be found at: http://docs.legis.wisconsin.gov/code/admin_code/nr/100/151.pdf.

Agricultural Performance Standards and Prohibitions

Tillage setback: A setback of 5 feet from the top of a channel of a waterbody for the purpose of maintaining stream bank integrity and avoiding soil deposits into state waters. Tillage setbacks greater than 5 feet but no more than 20 feet may be required if necessary to meet the standard. Harvesting of self-sustaining vegetation within the tillage setback is allowed.
Phosphorus Index (PI): A limit on the amount of phosphorus that may run off croplands as measured by a phosphorus index with a maximum of 6, averaged over an eight-year accounting period, and a PI cap of 12 for any individual year. The PI will take effect on July 1, 2012 for pastures.
Process wastewater handling: a prohibition against significant discharge of process wastewater from milk houses, feedlots, and other similar sources.
Meeting TMDLs: A standard that requires crop and livestock producers to reduce discharges if necessary to meet a load allocation specified in an approved TMDL by implementing targeted performance standards specified for the TMDL area using best management practices specified in ch. ATCP 50, Wis. Adm. Code. If a more stringent or additional performance standard is necessary, it must be promulgated by rule before compliance is required.
Sheet, rill and wind erosion: All cropped fields shall meet the tolerable (T) soil erosion rate established for that soil. This provision will also apply to pasture lands starting in 2012.

Manure storage facilities: All new, substantially altered, or abandoned manure storage facilities shall be constructed, maintained or abandoned in accordance with accepted standards, which includes a new margin of safety. Failing and leaking existing facilities posing an imminent threat to public health or fish and aquatic life or violate groundwater standards shall be upgraded or replaced.

Clean water diversions: Runoff from agricultural buildings and fields shall be diverted away from contacting feedlots, manure storage areas and barnyards located within water quality management areas (300 feet from a stream or 1,000 feet from a lake or areas susceptible to groundwater contamination).

Nutrient management: Agricultural operations applying nutrients to agricultural fields shall do so according to a nutrient management plan. This standard does not apply to applications of industrial waste, municipal sludge or septage regulated under other WDNR programs provided the material is not commingled with manure prior to application.

Manure management prohibitions:

- no overflow of manure storage facilities
- no unconfined manure piles in a water quality management area
- no direct runoff from feedlots or stored manure into state waters
- no unlimited livestock access to waters of the state in locations where high concentrations of animals prevent the maintenance of adequate or self-sustaining sod cover

Non-Agricultural Performance Standards

New Development, Infill, and Redevelopment

Construction sites with one or more acre of land disturbance shall reduce sediment to the maximum extent practicable in accordance with an erosion and sediment control plan. The performance standard was an 80% sediment reduction until January 1, 2013, after which the standard changed to a maximum discharge of 5 tons per acre per year of sediment.

For post-construction storm water management, a plan is required to be developed and implemented to meet the post-construction performance standards for construction sites with one or more acre of land disturbance (Note: Not all post-construction performance standards apply to infill or redevelopment). The plan shall include best management practices to meet the performance standards for:

- Total suspended solids
- Peak runoff discharge rates
- Infiltration
- Protective areas near waterbodies and wetlands
- Control of petroleum products runoff from fueling and vehicle maintenance

Developed Urban Areas

Municipalities with average population densities of 1,000 people per square mile or greater and contiguous commercial and industrial areas shall meet the following:

- public education promoting proper yard and garden care to minimize polluted runoff
- appropriate leaf management and collection and proper disposal of grass clippings
- nutrient application schedules when fertilizers are applied to its properties over 5 acres (this also applies to privately-owned areas of this size)
- detection and elimination of illicit discharges to storm sewers

In addition to the above, municipalities that are regulated under a municipal separate storm sewer system (MS4) permit pursuant to subchapter I of NR 216, Wis. Adm. Code, are required meet the developed urban area performance standard of a 20% reduction in total suspended solids. Municipalities covered under an MS4 permit prior to July 1, 2011 that

achieved a greater that 20% reduction in total suspended solids as of that date are required to maintain their best management practices to the maximum extent practicable.

Water Quality Standards

The purpose of water quality standards is to maintain and improve the quality of Wisconsin's waters, and to uphold the requirements of the CWA, by:

- Determining the types of activities the water should support, also commonly referred to as a waterbody's "Designated Uses".
- Developing water quality criteria to protect these Designated Uses from excess pollution.
- Establishing an antidegradation policy to maintain and protect existing uses and high quality waters.
- Identifying general policies to implement these protection levels in point source discharge permits and other program areas.

Water quality standards for surface waters are outlined in chs. NR 102, 104, and 105 of the Wisconsin Administrative Code. Water quality standards serve as the benchmark in determining the health of the waterbody, helping to identify a range of conditions from the highest quality waters (Outstanding and Exceptional Resources Waters) to the impaired waters of the State.

Designated Uses

As part of water quality standards, each waterbody is assigned a set of Designated Uses. Wisconsin's Designated Uses are:

Fish and Aquatic Life: All surface waters are considered appropriate for the protection of fish and other aquatic life. Surface waters vary naturally with respect to factors like temperature, flow, habitat, and water chemistry. This variation allows different types of Fish and Aquatic Life communities to be supported. Five subcategories for fish and aquatic life uses are outlined in s. NR 102.04, Wis. Adm. Code. Classifying waters into these subcategories involves science that reflects an evaluation of the resource and its natural characteristics.

Recreational Use: All surface waters are considered appropriate for recreational use, which includes activities that involve contact with water such as swimming, water skiing, canoeing, kayaking, scuba diving, wading, boating, fishing, and hunting.

Public Health and Welfare: All surface waters are considered appropriate to protect for incidental contact and ingestion by humans. All waters of the Great Lakes as well as a small number of inland waterbodies are also identified as public water supplies and have associated water quality criteria to account for human consumption. Fish Consumption Use also falls under this category.

Wildlife: All surface waters are considered appropriate for the protection of wildlife that relies directly on the water to exist, or relies on it to provide food for existence.

Triennial Water Quality Standards Review

Every three years, the WDNR reviews Wisconsin's surface water quality standards and selects specific standards or related guidance for development or revision. This comprehensive evaluation, called the Triennial Standards Review (TSR), is required by the federal CWA and is an essential process to keep Wisconsin's waters swimmable, fishable,

drinkable, and suitable for use by industry, agriculture and the citizens of the State. This review helps focus WDNR efforts to integrate the latest science and technology, and federal requirements into how the State regulates surface water quality. In addition, this process assists the WDNR in its work planning process and in identifying needed actions for moving projects forward.

The public has an opportunity to participate in assigning priorities under the TSR, as well as to provide comments on specific rulemaking that results from TSR priorities. Based on internal and external feedback, WDNR has set priorities for the 2015 – 2017 TSR, and is actively engaged in rulemaking and/or guidance development for these priority topics: updating designated use categories, establishing biocriteria, creating a process for site-specific criteria for phosphorus, revision of bacteria criteria for recreation, and revising antidegradation codes, among others. For more information about the TSR process and for the final 2015-2017 TSR Priorities report visit the TSR website: http://dnr.wi.gov/topic/surfacewater/tsr.html.

Rules in progress:

- **Bacteria criteria for recreational uses:** The WDNR's bacteria criteria are being revised for consistency with EPA criteria. Wisconsin previously used a mix of fecal coliform and E. coli, but will now shift to using E. coli statewide. This will also provide more consistency between parts of the state within the Great Lakes and the rest of the state.
- **Designated Use revisions:** The aquatic life designated use structure is being updated consistent with EPA's concept of Tiered Aquatic Life Uses. The new structure will better reflect both the variety of aquatic life communities and recognize differences in quality within each community type.
- **Biocriteria and bioconfirmation of phosphorus impacts:** Biological metrics are the most direct measure of ecosystem health. Biocriteria are being established to set criteria for biological quality within different types of waterbodies. Similarly, biological metrics that respond to phosphorus are being developed for use in conjunction with the state's phosphorus criteria, to indicate whether a waterbody is experiencing degradation due to phosphorus. The phosphorus criteria and bioconfirmation will be used in conjunction with one another to make impairment determinations.
- **Site-specific criteria for phosphorus:** The WDNR has existing authority to create site-specific criteria for phosphorus; this rule will establish a consistent process for doing so. Site-specific criteria may be developed in cases where the statewide phosphorus criterion is either over- or under-protective of an individual waterbody.
- **Antidegradation:** Antidegradation is a principle applied to prevent degradation of water quality. The WDNR intends to revise the existing antidegradation section of the code, to establish a clearer antidegradation protocol consistent with EPA's regulations.

High Quality Waters: Outstanding & Exceptional Resource Waters

Wisconsin has designated many of the State's highest quality waters as Outstanding Resource Waters (ORWs) or Exceptional Resource Waters (ERWs). Waters designated as ORW or ERW are surface waters which provide outstanding recreational opportunities, support valuable fisheries and wildlife habitat, have good water quality, and are not significantly impacted by human activities. ORW and ERW status identifies waters that the State of Wisconsin has determined should warrant additional protection from the effects of pollution. These designations are intended to meet federal CWA obligations which require Wisconsin to adopt an "antidegradation" policy designed to prevent any lowering of water quality, especially in those waters having significant ecological or cultural value.

Of Wisconsin's 15,000 lakes and impoundments, 114 are designated as ORW (fewer than 1%). For streams, it can be more useful to consider the number of stream *miles* rather than number of streams, since streams can be of widely varying lengths. The State of Wisconsin has a total of approximately 88,000 stream/river miles. Based on the current ORW/ERW list, a total of 3,100 stream miles (3.5%) have been designated as ORW, and 4,613 stream miles (5.2%) have been designated as ERW.

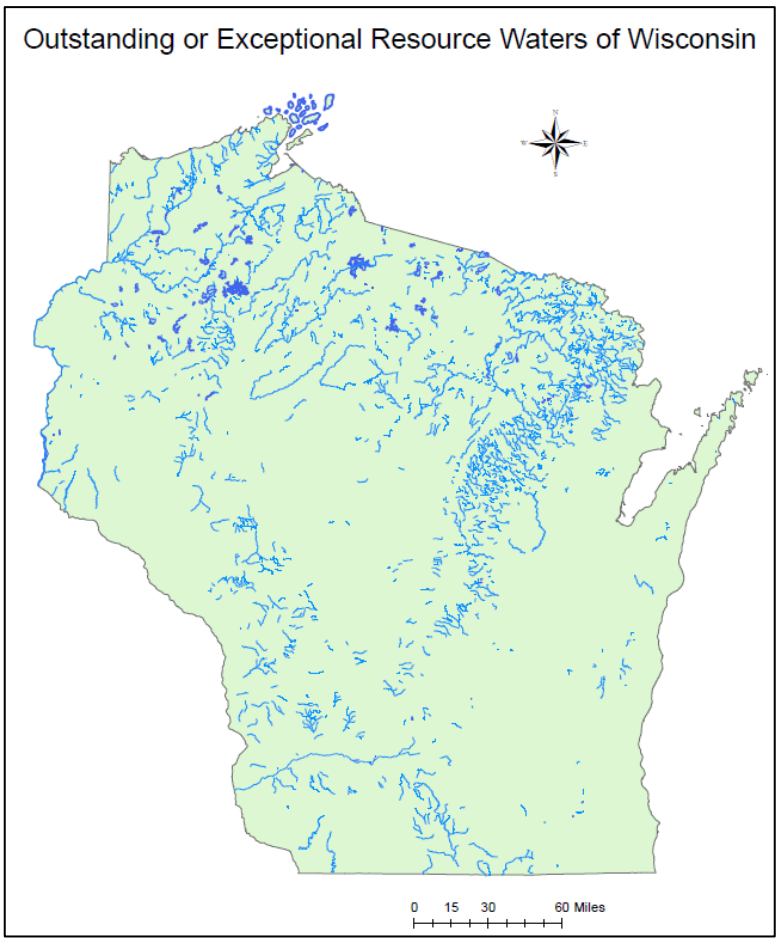


Figure 6. Map of all the Outstanding or Exceptional Resource Waters in Wisconsin.

Wastewater Management

The WDNR regulates municipalities, industrial facilities, and CAFO discharging to surface waters or groundwater of the State of Wisconsin through the WPDES Permit Program (See Runoff Management Section for discussion of WPDES permits for stormwater and CAFO). No person may legally discharge to surface waters or groundwater of the State without a permit issued under this authority. All permits issued under the WPDES permit program are either individual permits or general permits and may contain the following:

- Effluent limits for conventional (BOD, suspended solids, etc.), nonconventional (temperature, etc.), and toxic pollutants (heavy metals, organic chemicals, etc.) in the discharge
- Limitations on the quality and disposal practices for biosolids (or sludge) and by-products solids
- Pretreatment requirements, where applicable
- Compliance schedules for facility improvements
- Monitoring and reporting requirements
- Management practices that minimize the release of pollutants

Individual permits are issued to facilities that have unique, complex issues. WDNR imposes unique requirements where necessary and tailors standard requirements to fit circumstances where appropriate. General permits (GPs) are issued to cover a discharge type (for example, noncontact cooling water) and may be applied to any facility with that discharge type around the State. The WDNR makes a determination whether a particular facility is appropriately covered by an

individual or general permit. Coverage under a general permit is conferred by the WDNR to each individual facility via letter. There are 24 general permits that may be used in the Wastewater program to cover applicable discharges ranging from noncontact cooling water, to land application, to non-metallic mining operations. Approximately 5,500 facilities are covered under all general permits.

Timely Permit Issuance

Timely issuance and reissuance of WPDES permits is an important goal for WDNR. The goal of the WPDES permit program is to ensure that the WDNR does not exceed a statewide backlog of more than 10% at any time.

In some instances staff are not able to reissue permits before the 5-year term expires, because they are awaiting additional data from the permittee, there are public or other concerns necessitating additional review, or a permittee is not in substantial compliance with the terms of their current permit and enforcement action is underway. However, under Wisconsin law any permit that has expired and an application for permit reissuance has been filed 180-days prior to expiration continues in effect until it is reissued or revoked. A facility with an expired permit, therefore, is still restricted in the amount of pollutants that it can discharge and must follow all conditions of its expired permit until a new one is issued for them.

WPDES permits have become more and more complex as the program has matured. Newly emerging environmental concerns and changes in federal environmental laws drive changes to the WPDES program. For example, recent efforts to implement TMDLs, phosphorus criteria, and thermal pollution controls have significantly increased the complexity of WPDES permits. TMDLs create a pollution "budget" for a water body or watershed that establishes the reductions needed from each point and nonpoint source to meet water quality goals. Watershed permitting and other implementation tools are often needed to make TMDLs more successful, but can affect the timing of permit reissuance. Due to the cost of end-of-pipe phosphorus treatment, alternative compliance options such as adaptive management and water quality trading were developed to allow point sources and nonpoint sources to work together to reduce phosphorus loads throughout the watershed. Thermal compliance alternatives such as mixing zone studies and dissipative cooling demonstrations have been developed to help determine the need to control the heat load being discharged from municipal and industrial outfalls. These necessary but multifaceted compliance options have all impacted the permit backlog as individual and general permits have become significantly more complicated and taken more time to reissue. Each new environmental initiative also adds to staff time and effort spent on permit-related activities such as policy development, compliance determinations, review of permit data and report submittals, facility inspections, etc., which in turn slow the reissuance process and impact the permit backlog.

Staff vacancies have also had an impact on WDNR’s permit backlog. Staff hired in the beginning of the WPDES program (1970s and 80s) have begun to retire, necessitating the hiring and training of new staff. It can take several years to train new staff in policy and permit processes, until they can become as efficient and effective as the experienced staff they are replacing.

Despite these challenges, the WDNR’s Wastewater program has reduced its permit backlog over time. On January 1, 2012, the backlog of industrial and municipal permits, including both surface and groundwater discharges, was 34%. On January 1, 2014, it was 29%. On January 1, 2016, the permit backlog was 24%. The WDNR will strive to continue to decrease the WPDES permit backlog as new staff are hired and learn the program.

Effluent Limitations

Each permit contains categorical effluent limitations, based on the type of facility, and/or water quality-based effluent limitations calculated to meet water quality standards. Effluent limitations regulate the amounts of biochemical oxygen demand (BOD), suspended solids, pH, nutrients, chlorine, temperature, toxic substances, or other pollutants of concern, depending on the type of facility and the designated uses of the receiving water to which it is being discharged. The need for whole effluent toxicity testing, used to determine the potential toxicity of the entire effluent matrix, is also evaluated for permits that discharge to surface waters.

Biosolids Disposal

Most municipalities in Wisconsin land apply their wastewater treatment biosolids (or sludge) on agricultural land as a soil conditioner or fertilizer. Biosolids either applied to farmland, or distributed for individual use as an exceptional quality product, are generated from approximately 98 percent of Wisconsin's permitted municipal facilities. In 2014, 213 facilities disposed of solids: 205 of these facilities either beneficially reused the material or hauled the material to a facility that beneficially reused it, one incinerated the material, and seven disposed of the material by only disposing into a licensed landfill. In addition to these facilities that dispose of biosolids annually, there are 368 permitted facilities which treat wastewater in lagoon systems or other systems which only require removal of biosolids on an infrequent basis (10-20 year cycles). Nearly all of the generators that infrequently dispose of their material land apply their biosolids.

Almost 50 percent of the costs incurred to construct, operate, and maintain a municipal wastewater treatment facility are directly related to processing, handling, treating, and recycling biosolids. Phosphorus concentrations in biosolids have increased, and may continue to increase as Wisconsin continues to limit the amount of phosphorus in effluents that is allowed to be discharged to surface waters. Removing the phosphorus in the effluent in wastewater usually transfers that phosphorus to the biosolids. It is, therefore, important that biosolids be managed in ways that keep biosolids on the land and minimize the potential for phosphorus runoff to surface waters. Regulations and permit conditions control the amount of biosolids that may be land-applied depending on the soil, slope, time of year, proximity to residences and wells, and other factors. Current application rates are limited by hydraulic rates and nitrogen agronomic needs of the crop to be grown, using 4-year soil testing results to establish baselines. While phosphorus application rates are not currently required by applicable biosolids code requirements, P-based nutrient management is encouraged and is being promoted as one alternative to more stringent effluent concentrations of phosphorus.

Many industrial facilities such as paper mills and food processors recycle their wastewater and biosolids to reuse nutrients and/or to improve soil conditions. Industrial biosolids, by-product solids, and industrial wastewaters are land applied, providing use of nutrient rich and/or carbon-based additives to improve the fertility of soils. Facilities conduct monitoring of wastewater streams and land apply only after meeting stringent requirements.

Wisconsin also regulates the septage pumped from approximately 700,000 septic systems and approximately 30,000 holding tanks. Approximately 80% of the septic systems currently serviced are maintained pursuant to required maintenance schedules, while the rest of these systems will have required maintenance schedules prior to October of 2019. Septage removed from septic or holding tanks must either be taken to a wastewater treatment plant for further treatment, or directly land applied following stringent treatment or barrier application methods. The same land application site criteria apply to septage as to biosolids. Wisconsin uses a licensing and certification system for 424 septage servicing businesses, 1,815 approved septage vehicles, and 1,078 septic servicing personnel. Servicing businesses are required to maintain service and disposal records. Personnel are required to obtain continuing education credits in order to maintain their certification.

Pretreatment

Industrial facilities that discharge into a municipal treatment plant, rather than discharging directly to the waters of the State, are called indirect dischargers. The WDNR has been federally delegated the authority to administer a pretreatment program. Twenty-six municipal governments in the State are responsible for meeting state and federal requirements for implementation of pretreatment requirements. These "control authorities" regulate indirect dischargers that send waste to their systems from 526 users, through the issuance of permits and other local controls. Industrial discharges that are subject to the pretreatment requirements of the State, but are not within the systems of these municipal control authorities, must obtain permits directly from WDNR. There are a total of 142 facilities that receive permits directly from WDNR.

Compliance Maintenance Program

The Compliance Maintenance program is one of the successful cornerstones of the WDNR's WPDES program. The only program of its kind in the country, the web-based Compliance Maintenance Annual Report (eCMAR) is a self-evaluation report and grading system for Wisconsin's municipal wastewater treatment plants and sanitary sewer systems. Since its beginning in 1987, the compliance maintenance program has been extremely successful in achieving its purpose of "encouraging and, where necessary, requiring owners of publicly and privately owned domestic wastewater treatment works to take necessary actions to avoid water quality degradation, and prevent violations of WPDES permit effluent limits and conditions." Compliance maintenance promotes an owner's awareness and responsibility for wastewater conveyance and treatment needs, maximizes the useful life and performance of treatment works through improved operation and maintenance, and initiates formal planning, design and construction to prevent WPDES permit violations. Through a conventional and readily understandable grading system, the eCMAR brings awareness and understanding to governing officials about wastewater capital and management needs. Most importantly, it fosters communication among governing officials, operators, and the WDNR about the wastewater treatment plant and collection system. Governing bodies must review each year's CMAR and pass a resolution regarding it. Low grades require recommendations or action plans by the community to address the cause of any problems or deficiencies, and improve the wastewater treatment system.

Wastewater treatment plants complete various sections of the CMAR depending on their type of treatment system and their effluent limits. Satellite collection systems complete two sections of the CMAR: Sanitary Sewer Collection Systems and Financial Management. Performance indicators and trend graphs are automatically generated as part of this section of the CMAR to help operators evaluate the success of their Capacity, Management, Operation & Maintenance (CMOM), or Operation & Maintenance (O&M) program. The questions in the collection system sections of the annual report are to guide operators in developing a CMOM program, and in the operation & maintenance, and financial management of their collection system.

Enforcement and Compliance Assistance

The WDNR monitors dischargers to assure they are complying with the terms and conditions of their permits. This "compliance assurance process" takes several forms and includes:

- Compliance maintenance - working with and assisting facilities to remain compliant;
- Compliance assessment - conducting inspections of facilities and on-site assessments, reviews of discharge monitoring reports and other reports for compliance, and follow-up on self-reported violations; and
- Enforcement - formal actions taken when a significant violation is identified, including notification of violation of a permit condition, formal enforcement conferences and/or contacts, and referral to the State Department of Justice.

An inspection checklist and detailed guidance were developed so that wastewater treatment plant inspections are done consistently and documented in the WDNR's database. A special computer program was developed and is being used that allows inspectors to write and package inspection reports including supporting documentation. Once completed, inspection reports are available online to municipal officials and operators.

Waterway Shorelands

The legislature has established four programs to protect our shoreland areas. The WDNR is legislatively mandated to oversee three of these programs, shoreland zoning, shoreland-wetland zoning, and St. Croix Scenic Riverway zoning, which are described below.


Stream with well-vegetated shoreline

Shoreland Zoning

Shoreland zoning has the goal of protecting water quality, fish and wildlife habitat, recreation and natural beauty. To accomplish these goals, the statewide standards for shoreland zoning ordinances attempt to control the intensity and impacts of development around water and to maintain or establish a buffer between development and the waterway. A buffer is a vegetated strip of land that protects water from the impacts of nearby development, provides wildlife habitat and screens buildings when viewing from the water. If properly designed and maintained, a buffer can help protect shorelands and adjacent lakes and rivers from physical, chemical, hydrological and visual impacts. Development and land disturbing activities in shorelands directly affect the quality of our lakes and streams.

The statewide shoreland zoning standards in Chapter NR 115, Wis. Admin. Code are implemented by counties and generally apply only to unincorporated land that is within 1,000 feet of the ordinary high water mark of a lake, pond, or flowage; or within 300 feet of the ordinary high water mark of a river or stream; or to the landward side of the floodplain, whichever distance is greater. Counties are required to adopt and administer shoreland zoning ordinances that address the minimum shoreland zoning standards in ch. NR 115, Wi. Admin. Code. Those shoreland zoning standards are minimum lot sizes; building setbacks; vegetation; filling, grading, lagooning, dredging, ditching, and excavating; impervious surfaces; height and nonconforming structures and uses.

Shoreland zoning when it was adopted in 1966 set minimum standards, and counties could be more protective or restrictive in regulating the above mentioned standards. Based on what scientists learned from their studies of lakes and rivers and waterfront property values in the 30 years after 1966 and based on their own local experience of whether shoreland zoning did or did not effectively protect their lakes, many counties chose more protective shoreland zoning standards for their local lakes and streams which had the greatest potential to be degraded by shoreland development. These were local county board decisions made to protect the lakes, rivers and property values in each county.

On July 12, 2015 Governor Walker signed 2015-17 Budget (Act 55) which modified the shoreland zoning provisions. Act 55 changes the authority counties have in the development of a shoreland ordinance that is more restrictive than the shoreland zoning standards contained in ch. NR 115, Wis. Admin. Code, and changed other shoreland zoning standards dealing with nonconforming structures. As a result, counties can no longer have more protective/restrictive shoreland zoning standards than the minimum statewide shoreland zoning standards.

Counties have until October 1, 2016 to have a certified ordinance that complies with 2010/2013 changes to ch. NR 115 , Wis. Admin. Code, and the statutory changes in Act 55.

Shoreland-Wetland Zoning

Counties, cities, and villages are required to adopt shoreland-wetland zoning ordinances to regulate activities of wetlands within the shoreland zone. The shoreland zone is land located with 1,000 feet of the ordinary high water mark of a lake, pond, or flowage; or within 300 feet of the ordinary high water mark of a river or stream; or to the landward side of the floodplain, whichever distance is greater.

The minimum standards for shoreland-wetland zoning ordinances are found in Chapter NR 115, Wis. Admin. Code for counties and in Chapter NR 117, Wis. Admin. Code, for cities and villages. While the standards vary slightly between Chapters NR 115 and NR 117, the standards for shoreland-wetland zoning in Chapters NR 115 and 117 establish uses that may be permitted within a shoreland wetland and any uses that are not listed in zoning ordinance, are prohibited.

Lower Saint Croix National Scenic Riverway Zoning

Counties, cities, and villages are required to adopt ordinances that conform to the minimum standards found in Chapter NR 118, Wis. Admin. Code for lands within the Lower St. Croix National Scenic Riverway boundary. The Lower St. Croix National Scenic Riverway extends 52 miles from St. Croix Falls to the confluence of the Mississippi River at Prescott. Towns may, but are not required, to adopt an ordinance under Chapter NR 118, unless the town is located in a county which has not adopted a local zoning ordinance that applies to the town. The development standards established in Chapter NR 118 and administered by local governments, guide development away from sensitive areas such as shorelines, wetlands, steep slopes and unstable soils. At sites suitable for development, the regulations promote natural scenic beauty and protect water quality and property values. Development standards for lands in the Lower St. Croix Riverway apply at four points in the development process: land division, permitted uses, design and construction.

Saint Croix River

The Riverway is jointly managed by the National Park Service, Minnesota DNR and the WDNR in accordance with a Cooperative Management Plan that was signed by the three agencies. The standards in ch. NR 118, Wis. Admin. Code, reflect the principals and goals agreed to in the Cooperative Management Plan.

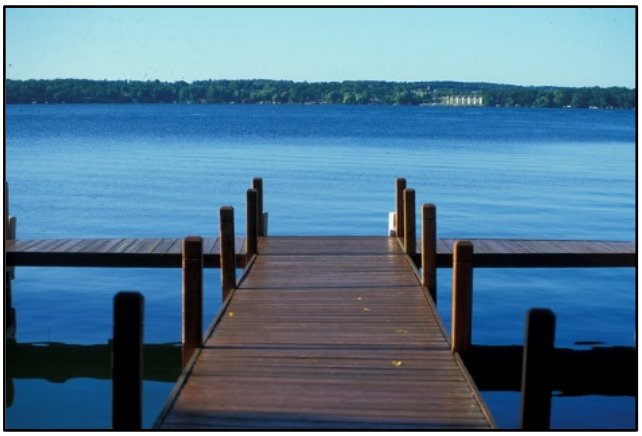
Waterways & Wetlands

Waterway Regulations and Protection

The job of water regulation programs is to protect public rights and interest in our waterways, and to allow projects that will not cause harm. Water regulation means the protection of your water rights. Consider the ways in which water regulations work for the citizens of Wisconsin:

- If you enjoy fishing or boating on Wisconsin's lakes and streams, water regulations work for you. Maintaining water levels and flows, protecting habitat, and keeping streams free of obstructions help provide top quality water recreation.

- If you farm, you might use Wisconsin's waterways for irrigation or drainage. Water regulations help make your water supply and drainage capacity more reliable while protecting the water rights of others.
- If you own waterfront property, water regulations work for you. Regulating erosion control projects and dam or pier construction are a few of the programs which help people avoid dangers and unnecessary costs to themselves or other water users.


Lake pier

Water regulations are needed because:

- Conflicts often arise between the many different users of Wisconsin's waterways.
- Water regulations are an alternative to going to court whenever we affect or are affected by our neighbors' water related activities.
- Clear lakes and free-flowing streams are necessary for healthy fish, wildlife and human populations.

Changing Protection for Changing Water Needs

Since 1787, when the Northwest Ordinance was adopted to govern the Wisconsin Territory, the State's navigable waterways have been considered public - for the use of all citizens. Article IX of Wisconsin's Constitution provides that navigable waters are held in trust, and "forever free."

When most Wisconsinites' nearest neighbors were wolves and deer, small dams or bridges on streams had little effect on other water users. As lumbering, milling, and farming drew settlers to Wisconsin, the variety of water uses and the number of users grew. By the 20th century, recreational hunting, fishing, boating, and swimming increased the variety of water needs.

Over the years, the courts and state legislature have developed laws and rules for protecting the rights of waterfront property owners, as well as public rights. This body of law is known as the Public Trust Doctrine. First the Railroad Commission, then the Public Service Commission, and finally the WDNR have been charged with the duty to protect the public trust in our navigable waters.

Today, the state helps protect your water rights as well as public safety by ensuring adequate planning and design of projects that may affect public waters. This is done through permit and plan approval requirements for individual projects. Wisconsin Statutes, Chapter 30, "Navigable Waters, Harbors and Navigation" and Chapter 31, "Regulation of Dams and Bridges in Navigable Waters" establish the permit programs.

Sharing Responsibility for Water Protection

The WDNR has Water Management Specialists in Service Centers around the state, whose job is to help people understand their water rights, and to administer and enforce the laws which protect them. The Bureau of Watershed Management in Madison provides policy development and technical support for the field staff.

The U.S. Army Corps of Engineers (USACE) may require permits for dams, dikes, and other structures in federal navigable waters and for the discharge of dredged or fill material into waters and wetlands. The U.S. Coast Guard regulates the construction of bridges and causeways over federal navigable waters.

Local governments use floodplain and shoreland zoning to control development along lake shores and streams. Local zoning officials administer permit programs for buildings, land disturbance and other activities in shoreland and floodplain areas.

We are all responsible for water rights protection. You can protect water rights by following proper procedures and obtaining needed permits for activities in public waters. You can also report activities which may be in violation of laws so that damages can be avoided or corrected, and voice your opinions to state and local governments to help keep water rights protection up to date.

Permits or Approvals for Shoreland Alterations

Many activities affecting navigable waters require permits or approvals from WDNR. Most of the physical alterations to navigable waters which require permits are listed in Table 2. Information and permit application materials are available online.

Table 2. Types of waterway alterations that require permits

Construction	***Recreation***	***Shoreline & Habitat***	***Water Levels & Crossings***
• Dredging • Dry Hydrants • Cranberry Projects • Grading • Intake/Outfall Structures • Miscellaneous Structures • Nonmetallic Mining • Pilings • Ponds	• Beach Maintenance • Boathouse Repair • Boat Ramp (landings) • Boat Shelter • Buoys • Pea Gravel Blanket • Piers, Docks, Wharves • Swimming Rafts • Water Ski Platforms	• Aquatic Plant Control • Beaver Damage • Cranberry Projects • Fish or Wildlife Habitat • Lake Shore Erosion Control • Streambank Erosion Control • Stream Realignment • Wetlands	• Bridges • Culverts • Dams • Fords • Diversions & Irrigation • Lake Levels • Temporary In-Stream Crossing • Utility Waterway Crossing

Wetland regulatory programs

With the historic loss of wetlands in the state, people who work in wetlands recognize the increasing importance of protecting them. WDNR's Waterway and Wetland Program provides more information about Wisconsin laws that protect wetlands and other water resources.

State wetland permits

Anyone planning a project that proposes wetland impacts will need a permit from the WDNR approving the proposed wetland impact before proceeding with the project. The WDNR has both general permits and individual permits available. Recent changes allow the WDNR to issue general permits for new categories of activities. General permits are currently available for wetland restoration activities and wetland discharges up to 10,000 square feet as a result of industrial, commercial or residential development. The WDNR permits website and application materials will be updated as other general permits are issued.

General permits

General permits are currently available for wetland restoration activities, and wetland discharges up to 10,000 square feet as a result of industrial, commercial or residential development. General Permits are granted for projects that meet all of the design, construction, and location specifications set by the statewide general permit. To qualify for a general permit,

all required application items need to be submitted elements. WDNR reviews general permit applications within 30 days and notifies an applicant if any required items are missing. Once all required items have been submitted, WDNR checks to see that the plans and location match the general permit specifications, and if so grants the permit in 30 days. In special circumstances where the review shows that the general permit conditions are not sufficient to ensure the wetland discharge will cause only minimal adverse environmental effects, WDNR may inform an applicant that an individual permit is needed to allow detailed review.

Individual permits

For wetland disturbance activities where no exemption or general permit is available an individual permit is required. Because these projects are not pre–approved designs, a more detailed application is required. As part of the individual permit process applicants are **required** to have a pre–application meeting with the WDNR to discuss the purpose and scope of the proposed project and the preliminary scope of alternatives the applicant must consider that will avoid and minimize wetland impacts. Compensatory wetland mitigation is **required** for all individual permits. Individual permits require a 30–day comment period of which people are notified by the WDNR website, a newspaper notice, and mailing to interested parties. During the comment period an informational hearing may be requested. WDNR staff conducts the informational hearing to gather observations and facts from others to consider in addition to its own data in making a decision. A permit is granted for projects when the WDNR concludes from this process that no significant adverse impacts to wetlands will occur. WDNR staff routinely advise applicants on project modifications to reduce impacts and gain approval. Permit decisions are subject to appeal for review by an administrative law judge within 30–days of the decision.

Wetland rules

- Section 281.36. Wis. Stats. establishes the state authority for granting wetland permits.
- NR 103 establishes the water quality standards for wetlands.
- NR 299 explains the procedures for certifying projects that impact wetlands.
- NR 300 describes the time limits and fees for waterway and wetland permits.
- NR 350 describes the requirements for the wetland compensatory mitigation program.
- NR 353 establishes a streamlined process to review regulated activities associated with the restoration of former wetlands, the enhancement of degraded wetlands, and the maintenance or management of existing wetlands.

Wetland Functional Values

Until recently wetlands were often viewed as wastelands, useful only when drained or filled. Now, we know that wetlands benefit people and the natural world in remarkable ways. They provide critical habitat for wildlife, water storage to prevent flooding and protect water quality, and recreational opportunities for wildlife watchers, anglers, hunters, and boaters. These are known as “wetland functional values.” Different wetlands perform different functions.

Every wetland is unique. One wetland on the north edge of town may perform different functions than another on the south edge – even though they may appear at first glance to be very similar. A bog in northern Wisconsin may be valued for different reasons than a bog in southeastern Wisconsin. Wetland functional values are determined by a variety of different parameters including physical, chemical and biological components.

Floral diversity

Wetlands can support an abundance and variety of plants, ranging from duckweed and orchids to black ash. These plants contribute to the earth’s biodiversity and provide food and shelter for many animal species at critical times during their life cycles. Many of the rare and endangered plant species in Wisconsin are found in wetlands.

The importance of floral diversity in a particular wetland is usually related to two factors. First, the more valuable wetlands usually support a greater variety of native plants (high diversity), than sites with little variety or large numbers of non–native species. Second, wetlands communities that are regionally scarce are considered particularly valuable.

Fish and wildlife habitat

Many animals spend their whole lives in wetlands; for others, wetlands are critical habitat for feeding, breeding, resting, nesting, escape cover, or travel corridors. Wisconsin wetlands are spawning grounds for northern pike, nurseries for fish and ducklings, critical habitat for shorebirds and songbirds, and lifelong habitat for some frogs and turtles. Wetlands also provide essential habitat for smaller aquatic organisms in the food web, including crustaceans, mollusks, insects, and plankton.

Some of the most valuable wetlands for fish and wildlife provide diverse plant cover and open water within large, undeveloped tracts of land. This function may be considered particularly important if the habitat is regionally scarce, such as the last remaining wetland in an urban setting.

Flood protection

Due to dense vegetation and location within the landscape, wetlands are important for retaining stormwater from rain and melting snow rushing toward rivers and lakes. Wetlands slow stormwater runoff and can provide storage areas for floods, thus minimizing harm to downstream areas.

Preservation of wetlands can prevent needless expenses for flood and stormwater control projects such as dikes, levees, concrete–lined channels, and detention basins.

Wetlands located in the mid or lower reaches of a watershed contribute most substantially to flood control since they lie in the path of more water than their upstream counterparts. When several wetland basins perform this function within a watershed, the effect may be a staggered, moderated discharge, reducing flood peaks.

Flooded properties

Flood protection may be especially important in cities, where pavement contributes to runoff, and in areas with steep slopes or other land features which tend to increase stormwater amounts and velocity. These functional values can provide economic benefits to downstream property owners and taxpayers.

Water quality protection

Wetland plants and soils have the capacity to store and filter pollutants ranging from pesticides to animal wastes. Calm wetland waters, with their flat surface and flow characteristics, allow particles of toxins and nutrients to settle out of the water column. Plants take up certain nutrients from the water. Other substances can be stored or transformed to a less toxic state within wetlands. As a result, our lakes, rivers, and streams are cleaner and our drinking water is safer.

Larger wetlands and those which contain dense vegetation are most effective in protecting water quality. If surrounding land uses contribute to soil runoff or introduce manure or other pollutants into a watershed, the value of this function may be especially high.

Wetlands that filter or store sediments or nutrients for extended periods may undergo fundamental changes. Sediments will eventually fill in wetlands and nutrients will eventually modify the vegetation. Such changes may result in the loss of this function over time.

Shoreline protection

Shoreland wetlands act as buffers between land and water. They protect against erosion by absorbing the force of waves and currents and by anchoring sediments. Roots of wetland plants bind lakeshores and streambanks, providing further protection. Benefits include the protection of habitat and structures, as well as land which might otherwise be lost to erosion. This function is especially important in waterways where boat traffic, water current and/or wind cause substantial water movement that would otherwise damage the shore.

Trout streams and other high quality waterways often depend on shoreland wetlands to protect their characteristic clear, cold waters. Without this wetland buffer, the shoreline becomes undercut and collapses. When this happens, streams often become wider, shallower and turbid. Water temperatures rise and habitat quality deteriorates.

A wetland that reduces erosion can also reduce sedimentation to nearby waterways. If the waterway is a navigational channel the reduction in sedimentation can help reduce the frequency of dredging to maintain the channel.

Groundwater recharge and discharge

Groundwater recharge is the process by which water moves into the groundwater system. Although recharge usually occurs at higher elevations, some wetlands can provide a valuable service of replenishing groundwater supplies. The filtering capacity of wetland plants and substrates may also help protect groundwater quality.

Groundwater discharge is the process by which groundwater is discharged to the surface. Groundwater discharge is a more common wetland function and can be important for stabilizing stream flows, especially during dry months. Groundwater discharge through wetlands can enhance the aquatic life communities in downstream areas. It also can contribute toward high quality water in lakes, rivers, and streams. In some cases, groundwater discharge sites are obvious, through visible springs or by the presence of certain plant species.

Aesthetics, recreation, education and science

Do you like to canoe or cross–country ski? Watch birds or listen to bullfrogs? Wetlands are some of our favorite places to study, hike, or just drive by. They provide peaceful open spaces in landscapes that are under development pressure and have rich potential for hunters and anglers, scientists and students.

Wetlands provide exceptional educational and scientific research opportunities because of their unique combination of terrestrial and aquatic life and physical and chemical processes. Many species of endangered and threatened plants and animals are found in wetlands.

Wetlands located within or near urban settings and those frequently visited by the public are especially valuable for the social and educational opportunities they offer. Open water, diverse vegetation, and lack of pollution also contribute to the value of specific wetlands for recreational and educational purposes and general quality of life.

B3. Cost/Benefit Analysis

The CWA requires states to report to Congress on the social costs and benefits of actions necessary to achieve the objectives of the CWA. WDNR believes that while cost benefit assessments can inform the decision making process, this type of analysis should not override the goals of environmental or ecosystem health as a single dominant decision point.

The complex and multi-jurisdictional nature of environmental protection and water quality regulation and restoration precludes a precise analysis of fiscal outlays in the context of this biannual report. In addition, rapid change in our understanding of the complexity of environmental systems, as well as evolving knowledge of precise endpoints for environmental damage exerted by a single contaminant, further complicate our ability to assess potential benefits of specific actions or regulations. Thus, this section of the report assessment is limited to a brief discussion of some of the major financial outlays related to water quality, including the Environmental Improvement Fund (with special emphasis on the Clean Water Fund Program and the Safe Drinking Water Loan Program), the State's Stewardship Program (Land Acquisitions and Easements) and the State's Runoff Management Program.

Environmental Improvement Fund

Wisconsin's Environmental Improvement Fund (EIF) consists of two separate financial assistance programs: the Clean Water Fund Program for wastewater treatment and urban runoff projects, and the Safe Drinking Water Loan Program for drinking water projects. The EIF directs limited financial resources to projects with the highest environmental priority score. The programs are administered jointly by WDNR and the Department of Administration.

The EIF is an excellent tool for Wisconsin in meeting its responsibilities under both the CWA and the Safe Drinking Water Act (SDWA). EIF programs provide financial assistance to local units of government in the form of subsidized loans and, in some cases, grants, principal forgiveness, or interest subsidy payments.

Clean Water Fund Program

The Clean Water Fund Program (CWFP) is the larger of Wisconsin's two revolving loan programs. The CWFP uses funding from the capitalization grant authorized by the CWA, repayments from previous loans, and supplemental funding from state borrowing, to help achieve state water quality goals and the objectives under the CWA.

Repayments of principal and interest from CWFP loans will make up the primary source of funding for future CWFP projects. The CWFP provides financial assistance to municipalities for planning, design, and construction of surface water and groundwater pollution abatement facilities to process municipalities' wastewater and urban runoff. Projects typically are constructed to maintain compliance with existing permit limits, achieve compliance with new limits, or provide wastewater treatment in areas previously not served. Financial assistance is administered by the CWFP through: 1) a federal leveraged program, 2) a state direct loan and hardship program, and 3) an interest rate subsidy program for small projects. The State programs are a commitment made by the Wisconsin Legislature to exceed the federal funding for surface water pollution abatement.

From 1991 through June 30, 2014, the CWFP entered into 870 financial assistance agreements with Wisconsin municipalities totaling $4.0 billion—$3.8 billion in loans and $234.9 million in grants and principal forgiveness. In

addition, the CWFP has executed 86 agreements with municipalities to subsidize interest payments on wastewater treatment project loans made to the municipalities by a state program other than the CWFP. The amount of financial assistance provided for individual CWFP projects ranges from $22,000 to over $138 million.

The CWFP provides financial assistance for the following types of projects:

- Compliance maintenance projects – These wastewater projects are necessary to prevent a municipality from exceeding effluent limitations contained in their WPDES permit.
- New or changed limits projects – These wastewater projects are necessary for a municipality to meet effluent limitations contained in its WPDES permit which were newly established or modified after May 17, 1988.
- Unsewered projects – These wastewater projects provide treatment facilities and sewers for unsewered or partially unsewered municipalities.
- Urban runoff projects – These stormwater/nonpoint source projects are necessary to meet WPDES permit requirements, meet non-agricultural performance standards, or control urban stormwater problems under WDNR-approved plans.

The CWFP may provide financial assistance to municipalities in the following ways: provide loans at or below market interest rates, provide grants under a state hardship assistance program, purchase or refinance the debt obligations of municipalities incurred for CWFP-eligible water pollution control projects, and make subsidy payments to municipalities to reduce interest on loans made by the Board of Commissioners of Public Lands for CWFP-eligible projects. For the past several years, the CWFP has also provided principal forgiveness to some municipalities to meet federal requirements regarding additional subsidization.

Each CWFP project is prioritized using a system established by Wisconsin Administrative Code. The criteria used to evaluate projects are based on human health, regionalization, water quality impacts (based on a facility's discharge permit limit), and the population served by the project. The priority system assigns a score to every project based on these criteria. Projects are ranked numerically, so in the event funding is not available for all requested projects in a given year, awards will be made by the order in which they are ranked. Funding each biennium has been sufficient to fund all eligible CWFP projects, except for those projects requested under the financial hardship assistance program.

Safe Drinking Water Loan Program

The Safe Drinking Water Loan Program (SDWLP) was enacted in 1997 to provide financial assistance to municipalities for the planning, design, construction, or modification of public water systems. The SDWLP uses funding from the capitalization grant authorized by the SDWA and repayments from previous loans.

From the beginning of the program in 1998 through June 30, 2014, the SDWLP entered into 246 financial assistance agreements with Wisconsin municipalities totaling $488.8 million—$431.6 million in loans and $57.2 million in principal forgiveness. To be eligible for SDWLP funding, a project must have one of the following purposes:

- Address SDWA health standards that have been exceeded, or prevent future violations of health standards and regulations. This includes projects to maintain compliance with existing regulations for contaminants with chronic health effects.

- Replace infrastructure, if necessary, to maintain compliance with or further the public health protection goals of the SDWA. This includes projects to rehabilitate or develop sources, install or upgrade treatment facilities, install or upgrade storage facilities, or install or replace transmission and distribution pipes.
- Consolidate existing community water systems that have technical, financial, or managerial difficulties. These projects are limited in scope to the service area of the systems being consolidated.
- Purchase a portion of another public water system's capacity, if it is the most cost-effective solution.
- Restructure a public water system that is in noncompliance with the SDWA requirements or lacks the technical, managerial, and financial capability to maintain the system if the assistance will bring the system back into compliance.
- Create a new community water system or expand an existing community water system that, upon completion, will address existing public health problems with serious risks, caused by unsafe drinking water provided by individual wells or surface water sources. These projects are limited in scope to the specific geographic area affected by contamination.

Public drinking fountain

The SDWLP may provide financial assistance to municipalities as loans at or below market interest rates, or may purchase or refinance the debt obligations of municipalities incurred for SDWLP-eligible projects. In recent years, the SDWLP has also provided principal forgiveness to some municipalities to meet federal appropriation requirements.

Each SDWLP project is prioritized using a system established by Wisconsin Administrative Code. The criteria used to select projects include: risk to human health of acute and chronic contaminants, financial need based on population and median household income of the municipality served by the project, secondary contaminant violations or system compliance with regulations, and system capacity.

The priority system assigns a score to every project based on the criteria. Projects are ranked numerically, so in the event funding is not available for all project applicants in a given year, awards will be made by the order in which the projects are ranked.

Land Acquisitions and Easements

The Warren Knowles-Gaylord Nelson Stewardship Program provides funding for a variety of fee simple and easement acquisition programs that protect natural resources and increase public recreational opportunities. Land acquisition is the tool for effective conservation of green space for recreation and provides opportunities for the protection of species and habitats. In Wisconsin, land acquisition leads to creation and expansion of wildlife management areas, fishery areas, natural areas, state parks, state forests, and habitat restoration areas. Where possible, the WDNR looks for opportunities to stretch state Stewardship Program funds using federal programs such as the Land and Water Conservation fund (LAWCON), United States Fish and Wildlife Service (USFWS) grants, and USDA Natural Resources Conservation Services (NRCS) Farm Land Protection Grants. Additionally, the WDNR accepts gifts of land from landowners and various non-governmental organizations.

Annually funding for the Knowles Nelson Stewardship Program is $54.5 million dollars in fiscal year 2015-16 and not more than $50 million dollars in each year from 2016-17 through 2019-20 (actual bonding allotment-Legislative Fiscal Bureau Informational Paper 62). The funding can be used for both land acquisition and property development. Examples of projects funded by the Stewardship program in the past several years include acquisition of the Willow Flowage Scenic Water area, the Rainbow Flowage, the Peshtigo River State Forest, Capitol Springs State Park, the Lower Chippewa River State Natural Area, Brule-St. Croix Legacy Forest and Paradise Valley Wildlife Area. In addition, substantial expansions to several water-based properties have occurred, including the Turtle Flambeau Scenic Waters Area and the Lower Wisconsin State Riverway. Additionally, WDNR looks for opportunities to partner with other organizations or to cost-share project costs with federal dollars available for acquisition of lands protecting wildlife, fishery, or water quality.

Runoff Management Programs

Implementation and enforcement of the runoff management Performance Standards contained in ch. NR 151, Wis. Adm. Code, require a significant expenditure to realize significant reductions in polluted runoff. WDNR's Runoff Management Program has numerous grant opportunities for communities to implement runoff management practices. Information regarding costs and benefits of these programs is provided in the Runoff Management Section in this report.

Expenditures for polluted runoff that are described in that chapter include:

- Targeted Runoff Management (TRM) Grant Program
- Urban Nonpoint Source and Stormwater Management (UNPS) Grant Program
- Notice of Discharge (NOD) Grant Program

B4. Special State Concerns & Recommendations

Great Lakes

Wisconsin DNR's Office of the Great Lakes provides leadership for addressing important Great Lakes issues and facilitates project development for the restoration and protection of the Great Lakes in Wisconsin, as well as supports the efforts of others to accomplish projects. Effective protection and restoration of these complex, multi-jurisdictional systems requires collaboration among a wide variety of partners and stakeholders as well as cross-program project collaboration within the agency. For a full review of the responsibilities and objectives of the WDNR's Office of the Great Lakes see our Wisconsin's Great Lakes Strategy available at dnr.wi.gov search "Great Lakes Strategy."

Great Lake shoreline. Photo by Chris Gaziano.

Lakewide Management

The development of Lakewide Action and Management Plans (LAMPs) is required under Annex 2 of the Great Lakes Water Quality Agreement Protocol of 2012. The LAMP provides the framework for prioritizing issues, defining lakewide objectives, and identifying the need for action for each of the five Great Lakes. The LAMP is comprehensive and Wisconsin's Great Lakes restoration and protection projects contribute to meeting LAMP goals for Lake Michigan and Lake Superior.

Lake Superior Management

Wisconsin is included in a partnership with the U.S. and Canada to share responsibility for Lake Superior management. The Lake Superior Partnership is currently developing a five-year LAMP which will lay out the binational strategy for taking action to restore and protect the Lake Superior ecosystem. The plan will support the development and implementation of lake-specific strategies and initiatives including biodiversity, cooperative science and monitoring, and nutrient management strategies. This plan is being prepared in accordance with Annex 2 of the Great Lakes Water Quality Agreement. Lake Superior will be the first of the Great Lakes to complete the 5-year plan.

Lake Michigan Management

Wisconsin achievements continue to contribute to the Lake Michigan LAMP goals. A large-scale habitat restoration project is being completed on Ulao and Kaul creeks within the Milwaukee River Watershed. The project will improve aquatic habitat for fish in the Milwaukee River Watershed and Lake Michigan Basin by reestablishing meanders in over 5,760 feet of Ulao Creek and reconnecting nearly 330 acres of wetlands and floodplains as well as constructing two wetland/pond areas. In 2015, the Door Peninsula Coastal Wetlands complex, an 11,443-acre site, was designated a Wetland of International Importance under the Ramsar Convention, an international treaty for protection of exemplary wetland systems around the world. This designation will protect some of the most biologically diverse habitat in the region. (Ramsar Convention: http://www.ramsar.org/)

Areas of Concern

Forty-three Areas of Concern (AOCs) were designated by the U.S. and Canada under the Great Lakes Water Quality Agreement in 1987. The Great Lakes Water Quality Agreement Protocol of 2012 incorporates AOCs in Annex 1, which defines them as "geographic area[s] designated by the Parties where significant impairment of beneficial uses has occurred as a result of human activities at the local level." Wisconsin has five AOCs: St. Louis River (shared with Minnesota), Lower Menominee River (shared with Michigan), Lower Green Bay and Fox River, Sheboygan River, and Milwaukee Estuary. Each AOC includes significant sediment remediation activities, which are summarized in the Sediment Management section of this report.

St. Louis River AOC

A milestone was reached in 2014 when the "Degradation of Aesthetics" beneficial use impairment (BUI) was removed from the St. Louis River, the first BUI to be removed for the AOC. A variety of projects are currently being implemented to meet BUI removal targets. A two-year semi-aquatic mammal survey is underway to assess the status of wildlife populations in the St. Louis River AOC. The survey is being conducted using wildlife cameras within the AOC and two reference sites, as well as aerial surveys. An AOC-wide beach monitoring project began in 2015 at six beaches to determine if pathogen sources are of human origin. This project will provide data to determine if any additional beach restoration actions are necessary and for BUI removal. Projects are underway in the Nemadji River watershed to assess the status of the excessive loading of sediment and nutrients impairment in the watershed. This includes fish, macroinvertebrate, and water quality monitoring in the lower Nemadji; a sediment loading assessment by United States Geological Survey (USGS); and modelling of historic and modern sediment loading scenarios. In addition, Douglas County has initiated outreach and implementation planning efforts in the Nemadji Basin. The St. Louis River AOC sediment database is being incorporated into the NOAA Great Lakes Data Integration Visualization Exploration and Reporting (DIVER) system. This data system will house multiple data types that are being collected for BUI removal targets and provide a web-based data viewer and query tool.

Lower Menominee River AOC

With the completion of all known contaminated sediment site cleanups in 2015, the Lower Menominee River AOC is now focusing on habitat restoration projects. Through a partnership between the WDNR and the City of Marinette, habitat restoration at Menekaunee Harbor began in August of 2014 and is expected to be completed in spring 2016, followed by three years of invasive plant monitoring and control. In 2015, the EPA approved over $600,000 in funds for restoration of the South Channel area of the Lower Menominee River, just upstream of Menekaunee Harbor, by implementing a design provided by the USFWS. In 2014, the U.S. Army Corps of Engineers (USACE) funded a three-year project to improve habitat on four islands in the river for island-nesting birds. State, federal, local, and private partners are also working to move lake sturgeon around two hydroelectric dams to their ancient spawning territory in the Menominee River. In 2015, the first successful passage of Lake Sturgeon through a newly constructed fish elevator was completed. All four of these habitat projects were identified as priorities for restoration in the 2013 Fish and Wildlife Population and Habitat Management and Restoration Plan Update.

Lower Green Bay and Fox River AOC

Great Lakes Restoration Initiative (GLRI) funding was secured for 2015-2016 to assess fish and wildlife habitat and populations in the AOC. The project is assessing baseline fish and wildlife habitat conditions and documenting potential habitat restoration opportunities in the Lower Green Bay and Fox River Area of Concern and its immediately contributing watershed. Results from this assessment will be used to identify a list of necessary projects to address habitat and population deficiencies. With the completion of the Cat Island Chain wave barrier construction project in 2013, plans are also underway to determine the best long term management of this unique opportunity for habitat restoration, as the islands will continue to be filled in by beneficial reuse of clean dredge material from the maintenance of the Green Bay Harbor over the next 20 to 30 years.

Sheboygan River AOC

In 2015, the first two beneficial use impairments were removed from the Sheboygan River AOC following public input and agreement from the EPA. The “Restrictions on Dredging Activities” removal represented more than 25 years of identifying, planning, and completing four major sediment projects which removed harmful polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), heavy metals and other contaminants. In total, approximately 400,000 cubic yards of contaminated sediments were removed from the river from 2011-2013. The “Eutrophication or Undesirable Algae” BUI removal was the result of dramatic water quality improvements in the past several decades as a result of numerous efforts, including wastewater treatment plant upgrades, agricultural practices to reduce soil erosion and nonpoint pollution runoff, storm water permits to control urban runoff, and reduced phosphorus content in detergents and lawn applications. The focus is now on improving habitat in the area. Through a strong partnership with the City of Sheboygan, over $5 million was invested in habitat restoration design and implementation projects within the Sheboygan River AOC. The projects, which included shoreline, wetland, and island restorations, were substantially completed in 2012. Maintenance will be on-going through 2016, to ensure the successful establishment of native plantings.

Milwaukee Estuary AOC

The Milwaukee Estuary AOC received nearly $1.25 million from the EPA in 2013, to conduct assessments related to benthos and plankton, recreational restrictions, and fish and wildlife populations. Through partnerships with the City of Milwaukee, UW-Milwaukee, Milwaukee County Parks, and other organizations, several projects are underway or have been completed. Wildlife and fish population assessments are entering their third and final year. A nearly $500,000 project to identify and quantify sources of bacterial sanitary sewage contamination within the estuary is also underway. Assessments of benthos and plankton were completed in 2015, as well as the restoration of grassland habitat at Little

Menominee Parkway, 32.5 acres along the Little Menominee River which provide critical habitat for breeding and migratory birds and wildlife.

Great Lakes Special Interests

Coastal Wetlands

Wisconsin was one of three states invited by the EPA to submit project proposals for coastal wetland restoration and protection using federal GLRI funds. Wisconsin has been working with program staff and local partners to identify projects that will help reach the GLRI goal of 60,000 acres of coastal wetland protected or restored by 2019. Successful project proposals put forth in 2015, have secured over $1.1 million dollars in GLRI funds, with nearly $1 million in additional funds requested so far for projects in 2016. The diverse set of projects include land acquisition for coastal wetland protection along Lake Superior and Lake Michigan shorelines, restoration design plans for future work to hydrologically reconnect and improve 60 acres of wetland habitat in Bayfield County, invasive species control in various locations and wild rice restoration in the St. Louis River.

National Marine Sanctuaries

In December of 2014, Wisconsin submitted a nomination for an 875 square mile area off Lake Michigan's Wisconsin coast to be added to NOAA's inventory of National Marine Sanctuaries. This significant designation would be the first time in nearly 20 years since such a sanctuary was designated and would be one of the first in the Great Lakes. The proposed sanctuary would stretch from Two Rivers, WI on the north to Port Washington, WI on the south and protect a collection of 38 known shipwrecks including several with national significance. The designation has strong community support and a management team has been assembled to develop more detailed plans for protecting the area. The recognition of Great Lakes waters as potential sanctuaries has also spurred strong interest and public support for a similar designation along the Wisconsin coast of Lake Superior, based on its ecological and cultural significance. Planning is still in the early stages, but a core group has been formed and is currently in the process of putting together an application to be considered in the near future.

Ballast Water

Wisconsin has required a ballast water discharge permit for commercial cargo vessels operating in its waters since 2010. This permit program was developed to address aquatic invasive species (AIS) introductions into the Great Lakes, the spread of AIS within the Great Lakes, seawater discharges, and any potential biocides that may be used to treat ballast water discharges.

Ship leaving the Duluth-Superior harbor. Photo by Ashley Beranek.

A new version of the permit was reissued in May, 2015. It retained much of the earlier language, but it also requires the installation of ballast water treatment systems on both ocean-going vessels (first dry dock after 2016) and inter-lake vessels (first dry dock after 2018) if technology is available and compatible with that ship. The WDNR conveyed coverage under the new permit to over 80 ship-owning companies

covering a total of 287 vessels during fiscal year 2015.

WDNR field staff continue to conduct an average of 50 on-board ship inspections each year in support of the program. After an inspection, each vessel receives a follow-up letter, which often includes recommendations to improve ballast water management plans or best management practices relevant to AIS issues. At the end of the shipping season, inspectors review arrival logs and send Notices of Noncompliance to all companies that operated without permits to assist bringing them into compliance.

The WDNR continues to participate in the Ballast Water Collaborative with the U.S. Saint Lawrence Seaway Development Corporation, International Joint Commission, the shipping industry, and other state and federal regulators on regional ballast water and invasive species issues. As has been the case throughout, WDNR staff will remain available to assist with local and regional research efforts aimed at characterizing AIS in ballast water, identifying AIS release risks, and developing ballast water treatment technologies such as those in progress at the Great Ships Initiative in Superior, WI. The WDNR also continues to support peer projects related to ship mediated invasive species.

The Wisconsin State Legislature recently showed its support for the Wisconsin Ballast Water Program by removing a state statute sunset clause which would have eliminated permit fees for ships discharging ballast water into Wisconsin's surface waters. This action ensures that Wisconsin will be able to continue implementing this important program into the foreseeable future.

Monitoring and Special Projects

Data is needed to inform decision making for Great Lakes policy development and program implementation. The Office of the Great Lakes works closely with many other agency programs in areas of special concern to the Great Lakes including aquatic invasive species, fisheries management, and nutrient loading and helps to oversee projects in support of Great Lakes management. See pertinent sections of this report for specific information about Wisconsin's efforts in these areas.

WDNR routinely supports projects in areas of special interest to Great Lakes protection and restoration. In 2014, WDNR partnered with UW-Green Bay on a multi-year study of lake whitefish in the Menominee River in Green Bay. Habitat degradation from pollution and logging destroyed the population in the late 1800s, but there is evidence of substantial spawning in the area in recent years. The Menominee River is likely contributing significantly to Lake Michigan's whitefish population and impacts both commercial and sport fishing industries. The study will provide key information in proper management and protection of lake whitefish populations for restoration efforts in other rivers where whitefish populations existed historically.

Collaboration on Great Lakes Policies and Priorities

WDNR provides leadership for addressing important Great Lakes issues. Wisconsin and its partners integrate and implement priorities of the LAMP, Great Lakes Regional Collaboration, internal program priorities, and the priorities of internal and external Wisconsin Great Lakes partners. Wisconsin brings its voice to regional Great Lakes discussions by participating in Great Lakes Water Quality Agreement (GLWQA) subcommittees as assigned and ensuring participation and engagement in regional activities related to the International Joint Commission, Great Lakes Commission, Council of Great Lakes Governors, the Great Lakes Protection Fund, and other Great Lakes forums to ensure Wisconsin's perspective is considered in regional policy-making. The WDNR Office of the Great Lakes, also, manages Wisconsin's allocation of the Great Lakes Protection Fund, the Great Lakes Harbors and Bays funds, EPA grants for the Great Lakes, and other Great Lakes funds.

Beaches

The Beach program oversees beach monitoring, manages BEACH Act funds from the EPA, and collaborates with coastal communities to carry out beach monitoring and restoration projects. Beaches are a critical resource for Wisconsin tourism and bring vitality to the communities they are located in. The Beach program works to ensure continued safe use of public beaches while contending with issues including aging sewerage infrastructures, agricultural impacts, fluctuating water levels, and increasingly limited budgets.

Beach recreation

Communicating Health Hazards to the Public

The EPA's national BEACH Act applies to coastal beaches which include the Great Lakes freshwater beaches. Approximately 180 identified beaches or roughly 50 miles of Wisconsin coastline are accessible to the public for recreational access. For the 2015 season, a $217,000 BEACH Act grant supported monitoring at 101 beaches, a beach health website for reporting data and notifying the public of swimming advisories, and limited operational costs. Inland beaches along Wisconsin's thousands of lakes and rivers are not covered by the BEACH Act grant so monitoring for fecal bacteria and public health notifications are entirely voluntary.

As a result of feedback on the effectiveness of beach signage, the program redesigned its signs in 2015, to incorporate multi-lingual messages about the advisory levels and include a link to the beach health website that can be accessed via smartphone. The beach health website lists up to date beach advisory and water quality data for monitored beaches and includes an interactive map.

Monitoring Strategy Improvements

The Beach program has invested in cost-effective and time-saving technologies to provide more accurate and immediate public notification on beach health hazards. Wisconsin continues to partner with USGS and Wisconsin Sea Grant to create automated systems for retrieving National Weather Service and National Oceanic and Atmospheric Administration (NOAA) data into Virtual Beach, an application used to predict water quality exceedances at beaches. To date approximately 20 Wisconsin beaches have operational Nowcasts. In 2015, funding was provided to help ensure that the streamlined data retrieval of Nowcast modeling is sustainable at the local level, including the development of online training, supporting materials, and a Virtual Beach Users Group. The same 'big data' systems and modeling tools that are routinely used for Nowcasting are also being applied to the longer-range problem of bacterial source identification and remediation of problem beaches. Analytical models have been used to inform remediation planning at two beaches, with plans to expand this practice to a possible 10 additional sites in 2016-2017.

Beach Restoration Projects

Two recent Great Lakes Restoration Initiative grants focused on identifying sources of fecal pollution and developing redesign plans to improve water quality at beaches that are listed on the impaired waters list in both the St. Louis River and Milwaukee Estuary Areas of Concern. Nearly $600,000 has been allocated in these areas to determine if bacterial contaminants, which are currently causing impairments at these beaches are of human origin and, if necessary, identify restoration options. These multi-year monitoring projects using DNA analysis will continue into 2016. By having redesign plans in place, both large and small communities are able to secure funding to begin restoring their beaches and give an economic boost to the surrounding area. A similar project is underway near a somewhat rural state park, where identifying

the specific locations where bacteria is being discharged into drainage ditches is a necessary first step in addressing them. In Green Bay, there is strong public interest in re-opening Bay Beach, which has been closed since the 1940's because of poor water quality.

Sediment Management

WDNR's Sediment Management Unit has statewide responsibilities for developing and implementing strategies leading to contaminated sediment cleanup. Sediment Management Unit staff also assess non-contaminated dredge sites for sediment monitoring and analysis under Chapter NR 347, Wisconsin Administrative Code.

Great Lakes Area of Concern Sediment Cleanups

Fox River Cleanup (Lower Green Bay and Fox River AOC): Summer of 2016 will mark the 12th consecutive year for remedial actions at the Fox River PCB site. During the 2015 field season, remediation of contaminated sediments took place in Operational Unit 4 (OU-4), the Lower Fox River beginning at the North Western Railroad Bridge and continuing downstream to the junction with the East River. High-volume dredging and capping took place simultaneously throughout the 1.75 river miles comprising the above described work area, as well as finishing 2014 cover/capping work upstream of Fort James. A total of 514,750 cubic yards of sediment were dredged during this season. Hydrocylonic separators removed 65,848 tons of sand from dredge spoils and this sand, having an average PCB concentration less than 0.24 ppm, was beneficially incorporated into the reconstruction of Hwy. 41 in Green Bay. The remaining spoils were mechanically dewatered and resulted in 295,000 tons of dry sediment cake that was hauled by truck to the Advanced Disposal Landfill in Chilton. Filtration and treatment of interstitial and carriage water resulted in 859 million gallons of clean water returned to the Fox River. Clean sand and armoring gravel were once again used to create single and multi-layer residual sand covers and isolation caps. Residual sand cover was placed over 80 acres, and 38 acres of armored caps were created. This season, heavy-armor "quarry spall" was placed over 8 acres of contaminated sediment in the Federal Navigation Channel upstream of the Fort Howard turning basin, and adjacent to the Hwy. 172 bridge. Dredge and capping performance during the 2015 calendar year served as assurance to the WDNR/EPA Agency Oversight Team that the project will meet its goal of completion by 2017.

Ansul/Tyco Arsenic Contaminated Site (Lower Menominee River AOC): Tyco International, owners of Ansul Incorporated, completed implementation of the EPA approved work plan to remediate arsenic contaminated sediments to 50 ppm in 2013. A total of over 250,000 cubic yards of contaminated sediment was removed from the river and confirmation sampling determined that the remedial action goals for 2013 were reached. A Great Lakes Legacy Act (GLLA) Betterment Agreement between TYCO, the EPA, and the WDNR was signed in May 2014. The agreement calls for additional dredging of all soft and semi-consolidated sediments that have arsenic concentrations greater than 20 ppm remaining after the 2013 completion of the Resource Conservation and Recovery Act (RCRA) component of the project. This agreement acts to speed recovery of the aquatic ecosystem and delisting of the Menominee River AOC. The Betterment Action was completed in mid-November 2014, with 42,000 additional yards of arsenic contaminated sediments removed from the river. In 2015, a 6" covering of carbon-enhanced sand was placed in those deep-water areas where excavation activities had exposed glacial till with arsenic concentrations >20 ppm at the surface. This cover will attenuate any remaining arsenic that might migrate vertically through the dense till material, and ensure water quality limits are not exceeded in the over lying water column. As part of the RCRA 5-yr review, surficial sediment samples will be collected over the remedial footprint and used to verify the deposition of clean material over the site.

Menekaunee Harbor (Lower Menominee River AOC): The City of Marinette and WDNR began restoration activities at Menekaunee Harbor with financial support from the EPA Great Lakes National Program Office via a GLRI grant. 2014

activities included removal of failing seawall and removal of 27,100 cubic yards of contaminated sediment and 31,900 cubic yards of navigational sediment. A small area (12,500 square feet) of residual contaminants was covered with a 6-inch sand cover to allow for benthos recovery. Habitat restoration activities were substantially completed in 2015. Restoration activities included the following: control and removal of invasive species; establishment of diverse and native plant communities; improvement of fish spawning, feeding, and cover areas with installation of fish sticks and deep water log structures; and restoration of wetland and upland habitat for use by invertebrates, amphibians, reptiles, mammals, and birds through diverse plantings, nesting platforms and boxes, bat houses, and finally, rock and brush piles. Invasive plant monitoring and control will begin in 2016 and conclude in 2018 to ensure successful establishment of native plantings.

WPSC former MGP Site (Lower Menominee River AOC): Wisconsin Public Service Corporation, EPA, and WDNR oversaw the removal of 15,000 cubic yards of coal tar wastes during 2012 and 2013. Follow-up sediment monitoring and bathymetry occurred during 2013-2014 to determine if a 10-inch sand cover and reactive core mat are effective measures to address residual contaminants that were not removed during dredging due to bedrock configuration and to address upland migration of contaminants to the river. The monitoring showed that all surface sand cover results were below the 22.8 ppm total Polycyclic Aromatic Hydrocarbons (the remedial action objective), and that overall, sand cover thickness is greater than 10 inches, indicating new depositional material over the cover. Sampling is now complete until the 5-year review in 2018.

Lincoln Park (Milwaukee Estuary AOC): The EPA, WDNR, and Milwaukee County completed remediation work on the Lincoln Park EPA Great Lakes Legacy Project Phase II in 2015. The Lincoln Park project addresses significant deposits of harmful polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs) in the Milwaukee River. Implementation of Phase II began in December of 2014 and is the final phase of the three part project which began with the cleanup of Blatz Pavilion in 2008 and Phase I in 2012. Overall the project partners have spent about $50 million over the past 8 years on this cleanup. Phase II was a highly choreographed and technical operation with cofferdams temporarily blocking water flow for dry removal, an on-site mobile lab, and its own wastewater treatment system and decontamination area. Remediation was completed in 2015 with a total of approximately 52,000 cubic yards of contaminated sediment removed from the Milwaukee River in a county park located about 7 miles upstream from Lake Michigan. Restoration work, which includes placement of boulders and root wads for fish habitat as well as native plantings, has begun and will continue into 2016 followed by several years of maintenance. The cleanup of this area is expected to result in significant long term reductions of PCBs within the Milwaukee River and harbors by eliminating the source of 75% of the PCBs transported by the river.

Lincoln Park remediation photo. Photo by Emily Punke, DNR.

Lincoln Park remediation. Photo by Duane Thomas, EA Engineering, Sci. and Tech., Inc.

Kinnickinnic River (Milwaukee Estuary AOC): Contaminated sediment between Becher Street and Kinnickinnic Ave. was cleaned up in 2009 under the GLLA. According to the remedial action plan, additional sediment quality assessment was conducted for the Municipal Mooring in 2015 under the GLRI administrated by the EPA GLNPO. Also downstream of Kinnickinnic Avenue, sediment is impacted by the former coke and gas production. The Milwaukee Solvay Coke &

Gas Site Remediation Investigation/Feasibility Study Group completed a remedial investigation in 2015 and will move to the feasibility study phase. The investigation was overseen by the EPA under the Superfund Alternative program in cooperation with the WDNR.

Howard's Bay (St. Louis River AOC): Howards Bay is an industrial embayment which is important for Great Lakes commerce. The only U.S. shipyard above the Soo Locks and largest grain elevator in Duluth-Superior harbor are located here. Industrial pollutants in sediment, including high levels of lead, organotin, mercury, and polycyclic aromatic hydrocarbons (PAHs), restrict dredging activities in the bay. Remediation of contaminated sediment will result in a channel deep enough to accommodate large vessel access to the shipyard and grain elevator. To reduce costs, the WDNR, EPA, and Fraser Shipyards, Inc. are collaborating to address environmental problems and meet maritime needs with a single project. The USACE and City of Superior are also participating in project design and planning. The USACE is also conducting a parallel effort for "Strategic Navigation Dredging" of the federal channel in Howards Bay. Sediment sampling was done in 2010, 2013, 2014 and 2015 to identify the degree and extent of contamination. A project agreement was signed in 2014 for a Great Lakes Legacy Act project to complete a feasibility study and remedial design to address sediment contamination. The feasibility study was completed in 2015 and identified a preferred alternative that consists of a combination of dredging and enhanced natural recovery. The remedial design will be completed in 2016 and implementation of this design is expected to occur later this year or in 2017, contingent on availability of funds. Once cleaned up, restrictions on dredging can be removed and the bay will be improved for maritime uses while improving habitat for fish like musky and northern pike and for migratory waterfowl.

Statewide Sediment Cleanups

Ashland MGP Site (Ashland, Wisconsin): The Ashland EPA Superfund Site is split into two Phases (I and II), representing the land and off-shore remediation, respectively. The on-land portion is nearing the end of the implementation phase, which started in 2013. For the upper bluff and filled ravine portions of the site, 80,000 tons contaminated soils from the former Manufactured Gas Plant where excavated, and 65,000 tons were thermally desorbed and placed back on-site, the balance was landfilled. For the Kreher Park portion of the site, 3,400 lineal feet of slurry and sheet pile walls where installed to contain the shallow contaminated groundwater. Fifteen wells were installed in the deep aquifer to recover free product and the on-site wastewater treatment plant will be constructed and the pump and treat system online by the end of 2016. To date, over several years, 15,000 gallons of free product have been recovered from a low-flow pilot system. For the Phase II offshore remedy, the Record of Decision allowed a Pilot Study option to determine the efficacy of wet dredging in the near shore area. The Pilot Study design was performed in 2014 with mobilization starting in the fall of 2014. However, dredging was never attempted because the barge based wave attenuation system capsized during a fall storm event on Lake Superior. The following year, 2015, a significantly more robust wave attenuation system in the form of a 900-foot long rubble mounded breakwater was designed, permitted, and constructed. This was noteworthy considering the State of Wisconsin had not permitted a breakwater on the Great Lakes in the last decade and construction occurred 24-hours per day. The Pilot Study is currently being redesigned for the changes due to the breakwater and is intended to be implemented during the construction season of 2016. Additionally, all Superfund liability litigation was settled following the Federal Case that was heard by Judge Crabb in 2015. Many issues on this longstanding site have been or are currently being resolved with all parties working cooperatively.

Hayton Area Remediation Project (Tecumseh Products): Tecumseh Products contractors are continuing cleanup work to address PCB contaminated sediment in tributaries of the South Branch of the Manitowoc River, Calumet County. In 2014 and 2015 11,700 tons of PCB impacted sediment and soil were removed from the site. Removal work will continue in 2016.

Portage Canal (Portage, WI): The WDNR has prioritized internal funding to document and summarize the many previous sediment investigations in a Remediation Investigation report and perform a subsequent Feasibility Study to determine the cost to remediate the 2-miles of contaminated sediment. These reports are expected to be completed in 2016 with the intent that they can be used to assist in acquiring funding. Concurrently, WDNR is working with the City and County to dredge and cap the contaminated sediment in the small portion of the canal that the County is developing around. The County contractor will be implementing a WDNR design in 2016 as part of the development work.

Ripon MGP site (Alliant Energy): Alliant Energy's contractors continue to monitor the 2014 cleanup in the Ripon Millpond at Selfridge Park. The engineered cap placed during the dredge and cap cleanup continues to function as designed. Contaminant levels in the pond sediment indicate the system is in recovery and the sediment is not a risk concern. Yearly monitoring will continue to verify the performance of the remedy.

Stevens Point MGP (WE Energies): WE Energies contractors performed a sediment cleanup at the site of a former manufactured gas plant (MGP) on the Wisconsin River in the fall of 2015. The site of the old gas plant is now a city park and the sediment cleanup addressed human health and ecological risk at this popular local location. 2,300 cubic yards of MGP waste and contaminated sediment were removed and the site was capped with sand and activated carbon to manage dredge residuals. The work was overseen by the EPA under the Superfund Alternative program in cooperation with the WDNR.

Aquatic Invasive Species

The Wisconsin DNR aquatic invasive species program participated in several programs in 2015 which aided water quality:

- Ballast water permit program
- Boat, Gear, and Equipment Decontamination and Disinfection Manual Code 9183.1
- Asian carp
- Great Lakes and Mississippi River Interbasin study
- Aquatic Invasive Species Monitoring
- Emerging challenges

Decontamination/Disinfection Manual Code

The WDNR updated and revised its own internal "Manual Code" which directs WDNR staff on how to clean their boats and equipment prior to moving between water bodies. An internal comment period was completed in 2015. Affected agents, contractors and permittees will be provided an opportunity to comment in early 2016. A copy of this guidance can be found here: http://intranet.dnr.state.wi.us/int/mb/codes/MC9183-1.pdf.

Asian Carp

Invasive Silver Carp could negatively impact Wisconsin water quality. In 2014, the USFWS collected 100 water samples in June and July from both the Fox and Milwaukee Rivers and tested them for Asian carp eDNA. The June samples all came back negative while one sample from the Fox River tested positive for silver carp eDNA. After notifying the WDNR of this finding, the USFWS agreed to collect an additional 100 samples from the Fox River to determine if eDNA for silver carp

Asian Carp

could be located again. Two additional sampling rounds of 100 samples were completed in October 2014. No additional Asian carp eDNA was detected.

Great Lakes and Mississippi River Interbasin Study (GLMRIS)

The movement of AIS between waterbodies can happen in any number of ways. In Wisconsin boaters are the number one mechanism for AIS dispersal between inland waters. Canals and diversions are an important pathway for AIS movement between the Great Lakes and the Mississippi River and the number one location where this occurs is located in Chicago. Congress authorized the USACE to study potential connections between the Great Lakes and Mississippi River basins and to present a range of options and technologies to prevent the transfer of aquatic nuisance species (ANS) between the Great Lakes and Mississippi River basins through aquatic pathways.

Using the GLMRIS report the Chicago Area Waterway System (CAWS) Advisory Committee has been working to find a two-way, long-term solution that prevents the inter-basin transfer of AIS while also maintaining or enhancing transportation, maritime commerce, water quality, recreation, and flood protection in the region. The CAWS Advisory Committee developed consensus recommendations on a long-term solution and sent them to Congress and requested the President to provide sufficient funds in the 2017 federal fiscal year to implement the recommendations. As a member of the Great Lakes Panel of the Aquatic Nuisance Species Taskforce, Wisconsin is represented on the CAWS Advisory Committee and participates in these discussions.

Aquatic Invasive Species Monitoring Program

WDNR has been implementing AIS monitoring since the early 1990's. Prior to our initial Great Lakes Restoration Initiative grant from the EPA and USFWS in 2010, this monitoring was not a strategic and coordinated effort. In 2015, a 5 year project was completed to evaluate the rate of spread of AIS within the state to determine whether AIS outreach efforts were effective. Over half the state's ~1,800 lakes with public access were surveyed during this project. Results from this project indicate that rate of spread is not increasing, but staying the same. This suggests that outreach efforts are slowing the spread, but there is room for improvement. Also in 2015, a pilot project was implemented on 100 stream/road crossings in the Lake Michigan Basin to develop a protocol for stream AIS monitoring and also identify whether land use or recreation were related to AIS presence. The protocol was field tested and improvements were made. Results suggest that land use was related to the presence of riparian species, but not in-stream AIS. Moving forward, protocols for lakes and stream are being integrated with routine water quality monitoring.

Aquatic plant removal sign.

AIS Grants

Federal

The GLRI program has funded a variety of clean up, restoration and protection activities including fighting invasive species. The Lakes and Rivers Section of the WDNR has received over $6 million from GLRI since 2010 to fight aquatic invasive species. These funds increase Wisconsin's capacity to educate boaters about the harmful effects of AIS such as zebra mussels, Eurasian water milfoil, or spiny water fleas, and conduct early detection monitoring and response actions to find AIS quickly and contain or control them. Funds are distributed through a variety of federal agencies but the USFWS and EPA are the two primary agencies distributing funds for AIS activities.

Wisconsin receives federal funding to implement its statewide AIS Plan. While these funds are important in implementation of the plan they fall far short of what is needed to sustain an effective AIS effort in the state.

State

In 2015, the Wisconsin lake grants program, including grants for aquatic invasive species, shifted to a single application period designed to reduce workload on field staff. With minor growing pains, the new process went relatively smoothly. Additional changes are planned as the WDNR anticipates revising ch. NR 198, Wis. Adm. Code. The WDNR provides over $4.0 million annually to eligible applicants to fight AIS.

Emerging Challenges

New Zealand Mud Snail

Following the discovery of New Zealand mudsnails (*Potamopyrgus antipodarum*) in Black Earth Creek, Dane County in October 2013, the WDNR implemented a response project to determine their distribution and prevent their spread. Monitoring included statewide winter benthic sampling, an eDNA pilot project, and multistate surveillance using the validated eDNA method. New Zealand mudsnails were not observed outside Black Earth Creek and benthic and eDNA surveillance will continue. Prevention efforts included partnering with the River Alliance of Wisconsin, Trout Unlimited, and multiple organizations to sponsors grants to engage wading angling outreach, construct wash stations, post signs, and provide presentations.

Faucet Snail

Faucet snails (*Bithynia tentaculata*) infected with a parasitic flatworm (*Sphaeridiotrema globulus/pseudoglobulus*) that is harmful to waterfowl, were identified in Elton Creek, Langlade County in December 2014. Following the initial discovery and verification, WDNR staff conducted reconnaissance and did not observe faucet snails outside Elton Creek. Continued monitoring will include routine benthic sampling and Snapshot Day volunteers. The discovery was communicated to stakeholders and partners like Trout Unlimited and the Menominee Tribe and actions were initiated to contain and control the population. The WDNR is now working to identify the snails' distribution in the area.

Previously found in the Great Lakes, the Mississippi River and the Wolf River system, this is the first known occurrence of the snail in a small, cold water stream in the region. While the faucet snail was likely introduced into the Great Lakes through ship ballast, its spread may be occurring by transport on watercraft, recreational gear and even waterfowl.

Starry Stonewort

Starry stonewort (*Nitellopsis obtusa*) was discovered in Little Muskego Lake, Waukesha County in September 2014 by WDNR staff. Following the discovery and verification, WDNR staff delineated the population in Little Muskego and also surveyed 13 other proximal lakes. Starry stonewort was observed in two other Waukesha County lakes, one in Racine County and one in Washington County. Lakes with starry stonewort are applying for early response grants for Clean Boats Clean Waters inspectors and manual control. Three informational workshops were held to provide information on species biology, impacts, prevention, management and the response actions.

Water Quantity Issues

While Wisconsin generally has abundant water resources over most of the state, there are isolated areas where excessive groundwater pumping has resulted in impacts to surface water bodies and springs and has reduced the availability of good

quality drinking water. Concern over impacts to springs and valuable surface water resources as a result of a proposed water bottling operation in central Wisconsin led to the 2004 adoption of comprehensive groundwater quantity legislation (2003 Wisconsin Act 310). Under that law, proposed high capacity wells that are within 1200 feet of trout streams and other designated high quality waters, wells that could have significant impacts on a spring, and wells with a high water loss, are all subject to more rigorous evaluation by the WDNR using the Environmental Impact Statement process. Since the 2004 adoption of Act 310, as a result of the July 2011 Wisconsin Supreme Court decision in the Lake Beulah case and a September 2014 administrative law decision in the Richfield Dairy case, the scope of the WDNR's review of proposed high capacity wells has expanded significantly. When reviewing high capacity well applications, WDNR staff now considers impacts to all waters of the state including streams, lakes, wetlands, municipal wells, and private wells, cumulative impacts of the proposed well along with other wells on the same property and water withdrawals on other nearby high capacity well properties. If significant impacts are predicted, the well application may be modified or the approval may be denied.

The Wisconsin legislature has considered multiple bills to modify the high capacity well review process and groundwater management approaches since 2009. The effect of the bills would be to modify, expand, or reduce the scope of WDNR authority over high capacity well reviews and the procedures for those reviews and also would establish mechanisms to designate and manage groundwater use in areas of the state which have experienced significant cumulative impacts due to groundwater withdrawals. To date none of these bills have passed, but this continues to be an active area of legislation.

Climate Change

Regional Monitoring Network for Streams and Lakes

The EPA is working with its regional offices, states, tribes, and other state and federal agencies to establish regional monitoring networks (RMNs). The primary goals are to monitor and quantify changes in baseline conditions over time, including responses to changing climatic conditions. RMNs have been established on streams in the northeast (Region 1), Mid-Atlantic (Region 3), and the southeast (Region 4), and efforts are expanding into the Upper Midwest (Region 5). Although the focus has been on streams, EPA is now attempting to develop RMNs for lakes in Region 5 as well.

The need for RMNs stem from the lack of long-term, biological, thermal, and hydrologic data across state boundaries, particularly at minimally disturbed sites to track long-term environmental changes. Data collected at RMNs will be used to quantify temporal variability and trends; investigate relationships between physical, chemical, and biological data; separate natural climatic changes from human disturbances; explore ecosystem responses to and recovery from extreme weather events; and test hypotheses and predictive models related to climate change. The goal is to collect comparable data that can be effectively pooled and analyzed at regional and national levels while also tying in with baseline monitoring efforts that meet individual state needs.

For streams, each EPA region should try to establish a minimum of 30 monitoring sites on minimally-disturbed cold or cool headwater streams within each EPA region. The WDNR is partnering with the USGS, USFWS, the University of Wisconsin, and colleges to take advantage of and collaborate on long-term continuous stream monitoring already being conducted in Wisconsin. A key criterion is to select catchments with low levels of human disturbance. Streamflow and water and air temperature will be monitored continuously, aquatic invertebrates will be sampled annually, and fish and habitat biannually.

EPA Region V is the first region to consider a RMN for lakes, and a monitoring design is still under development. The Lake RMN may result in expanding the parameter list and sampling a handful of WDNR Long Term Trend Lakes at higher frequency. The 2015 monitoring strategy for WDNR suggests establishing a "sentinel lakes" monitoring program on a subset of the lakes that have been monitored for 20+ years.

Table 3. EPA Site Selection Criteria

Consideration	Desired characteristics at primary sites
Existing monitoring network	Located in **established long-term monitoring networks** to **build upon data already being collected** by states, tribes, RBCs, and others.
Disturbance	**Low level of anthropogenic disturbance**.
Potential for future disturbance	Located in watersheds that are **protected from future development**.
Sampling record	**Lengthy historical sampling record** for biological, thermal or hydrological data.
Equipment	Co-located with **existing equipment** (e.g., USGS gage, weather station).
Broad-scale classification	**Freshwater wadeable streams** with **rocky substrates and riffle habitat**. At least 30 sites (within or across regions) should fall within US EPA's broad-scale colder temperature, faster water class (US EPA, unpublished).
Sustainability	**Accessible** (e.g., day trip), opportunities to **share the workl**oad with outside agencies or organizations.
Climate change vulnerability	Rated as **moderately or most vulnerable** to at least one of the exposure scenarios: increasing temperatures, increased frequency and severity of extreme precipitation events, and increased summer low flow events (US EPA, unpublished).

Mississippi River

The Long Term Resource Monitoring Program (LTRMP) was authorized by Congress in 1986 as part of the U.S. Corps of Engineers' Environmental Management Program on the Upper Mississippi River (UMR). This program is being implemented by USGS with assistance and field support by the five UMR States (MN, IA, WI, IL and MO). It has been in place since 1988 and provides information on water quality, vegetation, fisheries and land-cover/land-use and other resource information used to assess the trends and ecological health of the Upper Mississippi River System (UMRS). The WDNR's LTRMP field station at La Crosse, WI carries out this monitoring program on navigational Pool 8 of the Mississippi River.

The ***Pool 8 State of the Ecosystem Report*** [PDF] provides a summary of water quality, fisheries and vegetation monitoring data collected by the LTRMP field station for years 1993 to 2014. Pool 8 underwent a change from a turbid, low submersed aquatic vegetation (SAV) system to one with greater water clarity and SAV frequency. This change was associated with notable changes in the fisheries community during the monitoring period.

Studies of ecological shifts during a transition from a turbid to clear water state

Water clarity is a keystone variable in aquatic ecology. The positive relationship between water clarity and aquatic plants is well understood and the prevalence of aquatic plants drives a variety of ecological processes in aquatic ecosystems. Proliferation of aquatic plants has been shown to drive a variety of feedback mechanisms including reduced sediment resuspension, reduced phytoplankton, increased invertebrate biomass, increased refuge for zooplankton, increased denitrification, production of allelopathic substances, and increases in waterfowl abundance.

Water clarity and aquatic plant abundance are among the major factors driving fish community characteristics across the Upper Mississippi River. Widespread landscape disturbance, resulting in increased sediment loading, has been identified as driving declines in aquatic plant abundance. This results in declines of backwater specialists and predators with plant-dependent life cycles. Clear, vegetated systems tend to be dominated by visual predators such as yellow perch (*Perca flavescens*), northern pike (*Esox lucious*), and largemouth bass (*Micropterus salmoides)*. Predatory fishes such as northern pike, bowfin (*Amia calva*), largemouth bass and longnose gar (*Lepisosteus osseus*) are often able to substantially reduce recruitment among planktivorous fishes. This reduction in planktivorous fish can alter food webs and result in further increases in aquatic vegetation and water clarity. Alternatively, benthivorous fish such as common carp (*Cyprinus carpio*) tend to be abundant in turbid systems and can keep these systems in a turbid state due to resuspension during their feeding and spawning activities. Once substantial populations of common carp and other benthivores are high, establishing aquatic plants can become difficult due to poor water transparency.

Over the past 20+ years, WDNR has observed an ecological shift from a turbid to clear water state on the Mississippi River. WDNR has observed significant, synchronous changes occur in total suspended solids concentration, aquatic macrophyte abundance, native and non-native fish biomass, fish functional feeding guild patterns, fish habitat guild assemblages, fish spawning guild assemblages, and upper trophic level biomass. Environmental variables driving fish assemblage changes were identified (total suspended solids and aquatic vegetation coverage) and management relevant thresholds were identified to prevent the river from moving to a degraded state characterized by high non-native fish abundance and low predatory fish species abundance.

Manuscripts and Reports:

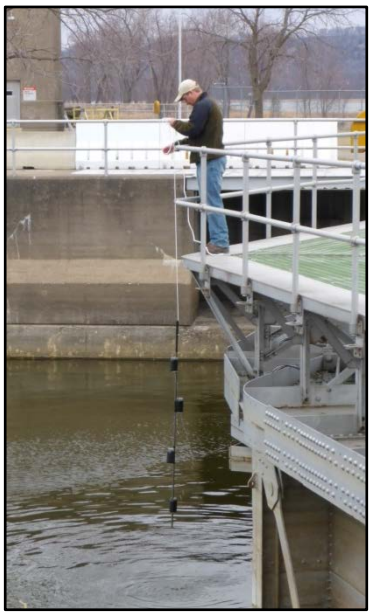
Giblin, S.M., Ickes, B.S. and Drake D.C. Evidence of Ecological Thresholds in a Large Floodplain River during a Transition from a Turbid to Clear Water State. In Review.

Giblin, S.M. Let There Be Light: Making the Case for Improved Water Quality and Targeted Restoration. UMRCC Winter Newsletter.

Studies of duckweed and other free-floating plants (FFP)

These plants can form dense surface mats that reduce ecosystem health, and can impair public use of aquatic resources. The UMR has experienced an increase in free-floating plants comprised of duckweeds and filamentous algae in recent years. Dense mats of FFP have been shown to create low oxygen conditions, reduce fish and invertebrate biomass, and decrease property values. During many years, a large proportion of backwater habitat is covered by these mats resulting in poor fish and wildlife habitat and reduced recreational opportunities. While much of the emphasis regarding excessive phosphorus and nitrogen loading to the UMR has focused on “The Dead Zone” in the Gulf of Mexico, it is becoming increasingly evident that high nutrient concentrations can have effects on the local ecosystem as well. The objective of these studies was to better understand the factors that are associated with the formation of dense surface mats of these plants. Favorable environmental conditions for FFP include abundant nitrogen and phosphorus, warm water temperature, shallow water depth, and low water velocity. Additionally, the presence of rooted aquatic plants (submersed, rooted floating-leaved, and emergent), which act as a substrate to hold FFP in place, has been associated with high FFP biomass. Studies indicated that relatively small changes in drivers such as water velocity, rooted aquatic plant cover, water depth, and nitrogen and phosphorus concentrations can produce relatively large changes in FFP biomass. The study also estimated thresholds of causal factors that were important in influencing FFP abundance. These factors included nutrient concentrations, water depth, current velocity, and rooted aquatic plant abundance.

Management actions on the Upper Mississippi River are often designed to alter water velocity and hydraulic connection between channel and off-channel areas. (e.g., constructing islands to reduce wind fetch and create shallow, sheltered areas). Factors influencing FFP development, along with observed patterns in nitrogen and phosphorus limitation, will help managers and project planners understand likely effects of rehabilitation project design on FFP abundance. Furthermore, the estimated phosphorus threshold is consistent with the numeric phosphorus criterion of < 0.1 mg/L total phosphorus for Wisconsin non-wadeable rivers (Wisconsin Administrative Code, section NR 102.06(3)); achieving this value may reduce the frequency of occurrence of large FFP mats in the UMR.



Example of sediment trap deployment at Lock and Dam 3. Photo from Shawn Giblin.

Recent published manuscripts and other reports evaluating duckweeds and free-floating plants prepared by LTRMP and Mississippi River Unit water quality staff include:

- Giblin, S.M., Houser, J.N., Sullivan, J.F., Langrehr, H.A., Rogala, J.T., and Campbell, B.D. 2014. Thresholds in the Response of Free-Floating Plant Abundance to Variation in Hydraulic Connectivity, Nutrients, and Macrophyte Abundance in a Large Floodplain River. Wetlands 34:413-425
- Houser, J.N., Giblin, S.M., James, W.F., Langrehr, HA., Rogala, J.T., Sullivan, J.F., and Gray, B.R. 2013. Causes and consequences of abundant duckweed and filamentous algae in backwater lakes of the Upper Mississippi River near La Crosse, Wisconsin. River Systems 21:71-89
- Sullivan, J. and S. Giblin. 2012. Growth, Tissue Composition and Stoichiometry of Duckweed Growth in Low Nutrient Backwaters of the Upper Mississippi River [PDF]. Wisconsin Department of Natural Resources, La Crosse, Wisconsin.
- Sullivan, J. and S. Giblin. 2011. Continuous Dissolved Oxygen and Water Temperature Monitoring in Pool 8 Backwaters of the Upper Mississippi River May-September, 2010. Wisconsin Department of Natural Resources, La Crosse, Wisconsin. [PDF]
- Upper Mississippi River Restoration – Environmental Management Program – Habitat Rehabilitation and Enhancement Program (HREP)

Studies of sediment contamination using sediment traps

The WDNR has been conducting long term monitoring of suspended sediment contaminant concentrations in the Mississippi River at Lock and Dam 3 (Red Wing, MN) and Lock and Dam 4 (Alma, WI) since 1987. Suspended sediment is collected passively through the deployment of glass sediment traps for about 60 days in a low velocity area immediately upstream of both lock and dams during spring, summer and fall. The primary purpose of this monitoring has been to assess long term trends and to provide an estimate of whole-water particulate-phase concentrations. Suspended sediment or particulate matter in river water represents a major portion of contaminant transport, especially in turbid rivers like the Mississippi River. PCB and mercury concentrations in suspended sediments are normally higher in samples collected from Lock and Dam 3 than at Lock and Dam 4. This is due to the closer proximity to the Twin Cities Metropolitan Area, a major source of these contaminants. In addition, Lake Pepin, a natural riverine lake located in Pool 4, acts as a natural sediment trap, which results in decreased transport of these contaminants downstream. Temporal trends indicate a decrease in PCB and mercury concentrations at both monitoring sites. PCB concentrations are presently one-third to one-fourth that observed in the late 1980s, while present mercury concentrations are roughly one-half of

concentrations during the late 1980s. Pollution abatement efforts to reduce the use or discharge of these contaminants have led to these reductions in contaminant concentrations.

Manuscripts and Reports:

Giblin, S.M. Mississippi River Long Term Sediment Trap Contaminant Trends: Lock and Dam 3 and 4 (1987-2015)

Site-level water quality evaluations

Water quality evaluations were conducted at a variety of locations to inform management decisions related to: increasing or decreasing hydraulic connectivity to improve water quality, habitat project evaluation, long term trend evaluation, data gathering in areas proposed for habitat projects and data gathering in areas of special interest. Locations sampled in 2014-2016 include: Spring Lake (Pool 5), Whitman Bottoms (Pool 5A), Johnson Island (Pool 6), Lake Onalaska and Trempealeau Lakes (Pool 7), Goose Island, Pettibone Lagoon and Stoddard Bay (Pool 8), Capoli Slough, Cold Springs and Blackhawk Park (Pool 9), and Sunfish Lake (Pool 11). Reports related to these evaluations are available by request.

Upper Mississippi River Basin Association (UMRBA) Water Quality Task Force Activities

The UMRBA Water Quality Task Force provides a forum for water resource management program coordination and consultation among the five state (IA, IL, MN, MO, and WI) water quality management agencies and EPA Regions 5 and 7. The focus of the Task Force's activities in the past two years has been on the development of Clean Water Act Strategy and Recommended Monitoring Plan for the UMR [PDF]. The plan has been approved by the UMRBA Board and was endorsed by the UMRBA Water Quality Executive Committee. The plan provides a consistent and coordinated interstate monitoring approach for assessing the water quality of UMR including the use of new biological assessment methods. This new monitoring initiative would enhance states' ability to track changes in water quality, provide consistency in identify water quality problems, help track nutrient reduction strategies and provide information assessing attainment of designated uses. Current efforts are now focused on the development of an assessment methodology which will provide guidance for evaluating attainment of the four major CWA designated uses for the UMR including: aquatic life, drinking water, human health (fish consumption) and recreation.

A field pilot of the UMR CWA Monitoring Plan will be conducted in the states of Minnesota and Wisconsin on a subset of the UMR's upper reaches, beginning in May 2016. A *UMR CWA Pilot Monitoring Project Field Operations Manual* is being developed to provide the technical and procedural detail necessary for the states of Minnesota and Wisconsin, as well as other partners, to implement UMR CWA pilot monitoring. While it will inform sampling procedures UMR-wide, the nature of the pilot is such that changes and improvements are expected to be made as a result of this initial effort.

Mississippi River. Photo credit WDNR.

C. Surface Water Monitoring & Assessment

C1. Monitoring Program

Rivers / Streams

Baseline Monitoring – Statewide

The 2015 strategy update supports continuation of ongoing studies described below.

- Trends sites (Lakes, Rivers) – Long Term Trend Projects (ongoing)
- Probabilistic surveys (streams, AIS, NARS (coastal condition and wetlands))
- Reference sites (wadeable streams, macrophytes, large river macroinvertebrates)

Black Earth Creek. Photo credit WDNR.

WDNR will work to continue collection of ambient water quality data such as dissolved oxygen, pH, temperature, hardness, heavy metals, and pesticides important in understanding the assimilative capacity that is appropriate for specific receiving waters under its Long-Term Trend Rivers and Wadeable Streams Programs. There is an important emphasis on collection of phosphorus and stream base flow data statewide, as the issues of phosphorus permit issuance, site specific permit issuance, and high capacity well permit reviews are conducted. The emphasis on biological data and background information needed to create assessment parameters to support the creation of updated designated uses and biocriteria for the state's water quality standards will precipitate new and additional monitoring requirements in the current and future work plans.

Prescribed Monitoring – Statewide and District Collaboration

Prescribed Monitoring includes directed monitoring activities with common purpose and a suite of standard monitoring procedures. A major goal of this monitoring effort is to coordinate water selection across disciplines (e.g., more integration between streams and lakes, water resources and fisheries) to obtain diverse data sets from the same water body (e.g., water chemistry, physical habitat, and biological data on a single lake). However, the field sites will vary from year to year and will be selected jointly by District and Central Office staff. In some cases Prescribed Monitoring projects may be used for stream, river and/or lake monitoring waterbodies individually for whole watersheds.

For those areas in the state where protection is warranted or pollutant problems are known, such as an impaired water or an existing listed watershed where a TMDL is needed, more intensive sampling will occur to verify the cause, extent, or loading rates of the pollutant or problem. Prescribed monitoring is designed to meet statewide data needs through consistent data collection schemes and generalized site selection priorities, however watershed/site selection and monitoring designs are developed by Districts.

Four examples of this type of work include:

- Targeted Watershed Assessments

- Directed Lake Assessment (including APM and Critical Habitat)
- 319 (Non-point) Project Evaluation
- Follow-up for Impaired Waters

"Local Needs" - District Initiated

Local needs monitoring are designed to address specific data gaps for closing up open questions related to attainment decisions, permit evaluation or other pressing needs.

This strategy is designed to be a dynamic document, with continuing investment in research to better understand our aquatic resources and timely update of when and how gaps are addressed as documented online and as amendments to the state's Water Quality Monitoring Strategy. This 2015-2020 Monitoring Strategy is formally the 4th Water Program update of previous versions in 2008, 2006, and 2004. This strategy will be advanced as a formal amendment to the state's Areawide Water Quality Management Plan.

Natural Community Stratified Random

To assess the condition of all of Wisconsin's 45,000 miles of perennial streams a probability based stream monitoring program was developed. Probabilistic survey designs provide statistically-valid estimates of conditions large, hard to sample resources with a known confidence.

In 2010-2013 the WDNR began a monitoring program to assess the condition of wadeable streams across the State using a probabilistic design called the Natural Community Stratified Monitoring program (NCSR). The Wisconsin monitoring design included sampling 550 sites over four years that were spatially stratified to cover the entire stream, geographic and Natural Community types found throughout the State.

Monitoring Objectives

By using a probabilistic design the State was able to determine the condition of Wisconsin's wadeable streams in a statistically valid manor. The results of this analysis provide an assessment of the physical, chemical & biological quality of the overall population of wadeable, perennial streams across the State. From the results of the 2010-13 NCSR program future versions of the project will consist of 50 sites per year and data will be analyzed every two years (100 sites per cycle starting 2014 & 2015).

Monitoring Design

Stream monitoring locations were selected using a probability based random selection stratifying by WDNR District and Natural Community type.

Table 4: Natural Community Stratified Random Monitoring Program Indicators

Parameter	Analysis Location	Database	Assessment Indicator
Chemistry Data	State Laboratory of Hygiene	Horizon (SLOH) to LDES to SWIMS	TP Package, chlorides package, other (WisCALM Assessments)
Macroinvertebrate Substrate Sample	UW Stevens Point Entomology Laboratory	UWSP to SWIMS	Wadeable Macroinvertebrate Index (WisCALM Assessment)
Fish Electroshock – Fish species present, count	In Field and Fish DB	Fisheries Database	Fish IBI (dependent on natural community) (WisCALM Assessment)

Physical parameters	In Field	Fish DB or SWIMS	Physical (flow) Data
Habitat (qualitative) Metrics	In Field	Fisheries Database	Qualitative Physical Habitat Index

Long Term Trend River Water Quality Monitoring Network

The Long Term Trends (LTT) Rivers monitoring program is a baseline monitoring activity conducted by the WDNR Water Quality Bureau. The LTT Rivers program was developed to track and analyze water quality trends over time in Wisconsin's rivers. The current version of the network, initiated in 2001, now consists of 43 sites, with a minimum of one site per major river basin, generally located near the mouth of each river located at or near a USGS stream flow gauge. Most of these sites are part of an earlier trend monitoring efforts that contribute historic record of water quality data tracing back to the 1970s and 80s.

Monitoring Objectives

- Collect basic water quality information on Wisconsin rivers.
- Establish long-term trends in ambient water quality across the state.
- Provide program-specific water quality data at a large river sites where the combined watersheds drain the majority of the state to track and document changes in water quality over time.
- Provide water quality information to support 305(b) reporting and the TMDL/303(d) program.

Monitoring Design

The general stream monitoring strategy limits sampling to streams that are larger, mostly nonwadeable Rivers. These rivers are generally more likely than smaller streams to receive full body contact recreational use, have a WPDES discharge, and provide at least some information as down gradient indicators of water quality for upstream land and water management practices. Sample sites are identified to incorporate as many of the data needs of the monitoring objectives as possible.

Site Selection

There are 43 LTT Rivers sites located throughout the state, generally at the mouth of larger rivers within and bordering the State. Some sites are located upstream from the mouth on some of the larger rivers (i.e. Wisconsin River) as one location at these rivers would not adequately capture the general condition of those rivers.

Table 5: River Monitoring Study Water Quality Indicators

Parameter	Analysis Location	Database	Assessment Indicator
Field Data – Dissolved Oxygen, Temperature, pH, Conductivity and Transparency Tube	In-field analysis	SWIMS – Data Entry	DO daily mean, max, min Temp Daily mean max min Conductivity, Transparency graphs (WisCALM Assessment)
Nutrients – Ammonia, Nitrate + Nitrite, Total Kjeldahl Nitrogen, Total Phosphorus and Diss Ortho Phos Sediments – Total Suspended Solids, Turbidity Algae – Suspended Chlorophyll-*a* Other – Chloride and Alkalinity	State Laboratory of Hygiene	Horizon (SLOH) To LDES to SWIMS	Total phosphorus package with WisCALM documented thresholds. (WisCALM Assessment)

E. coli Low Level Metals – Cadmium, Copper and Mercury Hardness Dissolved Silica Triazine	State Laboratory of Hygiene	Horizon (SLOH) To LDES to SWIMS	Pathogen contamination (EPA criteria exceedance) and E. coli package threshold exceedance. (WisCALM Assessment)

Wadeable Trend Reference Streams

Monitoring Objectives

The major goal of this monitoring program is to track long term variation in biological indices over time at reference sites to understand natural variation and broad scale impacts of climatic extreme events on biologic communities. Secondarily, a suite of physical and chemical parameters are monitored over time to understand natural variation.

Monitoring Design

The Wadeable Trend Reference Sites monitoring program samples 44 regionally based, least-disturbed (hereafter, reference) stream locations distributed throughout the State. Stream locations were selected from a combination of the 2008-2009 reference stream project and best professional judgment based on regional expectations of reference condition and stratified among natural communities.

Site Selection and Design

Stream monitoring locations were selected from a dataset of previously monitored reference sites and by best professional judgment. Although sites are meant to represent least-disturbed conditions because of the non-uniform distribution of land uses within the State the amount of agriculture and urban land uses in a specific reference watershed may vary across the State.

Monitoring for the Wadeable Trend Reference Sites requires multiple site visits to sample during the appropriate index periods. Temperature loggers should be deployed in spring as soon as the water levels are safe to work and removed in fall. Fish, chemical, physical habitat and flow monitoring should take place during the fish sampling summer index period avoiding recent rainfalls. The macroinvertebrate monitoring should occur during the fall sampling index period.

Table 6: Wadeable Trend Reference Streams Indicators

Parameter	Analysis Location	Database	Assessment Indicator
Chemistry Data	State Laboratory of Hygiene	Horizon (SLOH) to SWIMS	Total phosphorus (TP) analysis against WisCALM Assessment thresholds.
Macroinvertebrate IBI Substrate Sample	UW Stevens Point Entomology Laboratory	UWSP to SWIMS	Wadeable Macroinvertebrate Index (WisCALM Assessment)
Fish Electroshock – Fish species present, count	In Field and Fish DB	Fisheries Database	Fish IBI (dependent on natural community). (WisCALM Assessment)
Habitat (quantitative) Metrics; quantitative for trend reference sites	In Field and Fish DB	Fisheries Database	Qualitative physical habitat

Lakes

Table 7. Lake Monitoring Studies		
Study Name	**Purpose**	**Supports: Fish and Aquatic Life Uses and Recreational Uses**
Probabilistic Surveys (National Lakes Assessment)	Determine lake health and how lake characteristics are changing over time statewide	National surveys and provides single point data with national methods for further analysis. Single point data *may* be used toward attainment decisions.
Long-Term Trend (LTT) Lakes	Document long-term trends in lakes, provide context for other lakes, answer questions from the public, and evaluate long-term effectiveness of management actions	Overall state lake trend data for condition statements regarding Wisconsin's lakes; used for attainment decisions.
Aquatic Plant Reference Lakes	Monitor natural variability in healthy aquatic plant communities	Aids lake biocriteria development including minimum data requirements and thresholds.
Citizen Lake Monitoring Network (CLMN)	Determine lake trophic status and monitor trends in trophic status over time; citizen engagement and education	Provides the primary source of data for site specific data statewide in conjunction with satellite imagery modeling, resulting in over 6,000 lakes assessed.
Satellite Secchi Monitoring	Infer lake water quality for assessment from satellite data	In conjunction with the CLMN program site specific data statewide resulting in over 6,000 lakes assessed
Directed Lake Surveys	Collect lake information needed for assessment (e.g., 303(d) reporting) and lake management (e.g., aquatic plant management, shoreland zoning, restoration projects, and critical habitat designations) and survey lakes in Targeted Watersheds.	New category of lake monitoring to directly address attainment / condition questions for a host of parameters specific to lake ecosystems. Supports attainment, as well as biocriteria development and implementation.
Lake Level Monitoring	Long-term monitoring to understand natural fluctuations in lake levels and guide lake management, particularly on lakes impacted by drought or groundwater withdrawals.	Addresses management questions regarding lake levels and supports the groundwater program (well permits, etc.).

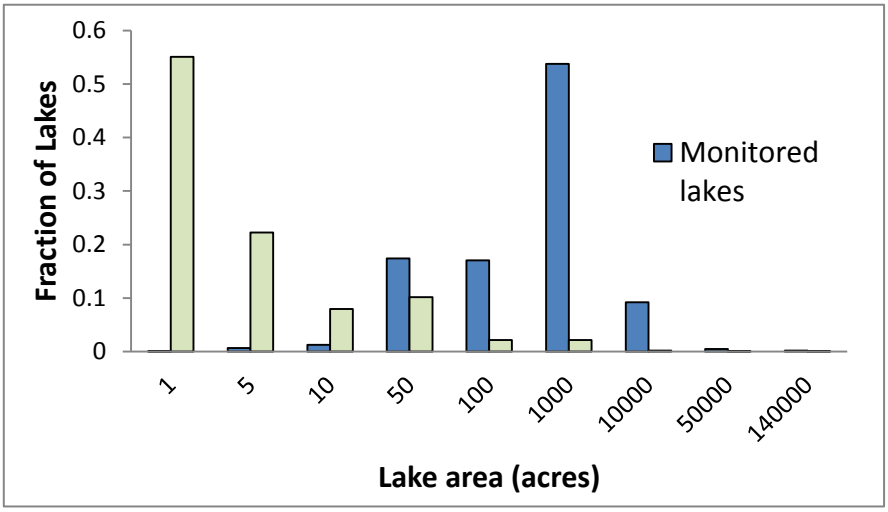


Figure 7. Chart of lake size versus lakes monitored. WDNR monitors lakes that range in size from 1 to 132,000 acres. The majority of lakes in the state are <10 acres, but most monitored lakes are >50 acres. Here, "monitored lakes" had Secchi depth readings in 2014 or 2015.

Probabilistic Survey (National Lakes Assessment)

Monitoring Objectives

The objective of the probabilistic survey is to determine statewide lake condition across all lake types and sizes. By repeating the survey over time, changes in statewide lake condition over time will also be determined.

Monitoring Design

The probabilistic surveys will be completed in conjunction with the National Lakes Assessment (NLA), a monitoring effort led by the EPA. The NLA is conducted once in a 5-year period. Fifty lakes will be sampled once within a single summer field season, which is a sufficient sample size for a statewide assessment. Lakes > 1 meter deep and > 2.5 acres area are randomly selected from a sample stratified by ecoregion and weighted by lake size. NLA surveys were conducted in 2007 and 2012; the next survey will be in 2017.

If additional funding is secured, the WDNR's goal is to sample a total of 100 lakes within a 2-year period on the NLA cycle in order to characterize lake condition in northern and southern Wisconsin.

Water Quality Indicators

At the deepest point in the lake, samples are collected for a wide variety of parameters: depth profiles of temperature, pH, and dissolved oxygen (DO), Secchi depth, water chemistry (NH_4, NO_3, major anions and cations, alkalinity, dissolved organic carbon, total suspended solids, silica, conductivity), chlorophyll-*a*, nutrients, phytoplankton assemblage, zooplankton assemblage, triazine pesticide screen, and algal toxins. In addition, a sediment core is taken, dated, and analyzed for diatoms and mercury. At ten littoral sites located equidistantly around the lake, benthic macroinvertebrates and shoreline habitat are sampled. Aquatic macrophytes are also surveyed at five of the littoral sites. At a single littoral site, chlorophyll-*a*, algal toxins, and phytoplankton are collected.

Given funding to monitor an additional 50 lakes, WDNR will scale back the NLA protocol to do fewer metrics at more sites, omitting the triazine pesticide screen, benthic macroinvertebrate, zooplankton, and sediment mercury sampling from analysis. Instead of following the NLA macrophyte protocol, WDNR will do full aquatic macrophyte point-intercept surveys on all lakes. Monitoring will be conducted by a centralized crew based at the Science Operations Center in Madison.

Data Management

To date, data has been collected on tablets and given directly to EPA. EPA screens the data and then sends back to WDNR after approximately two years. The data are then stored on personal computers of the WDNR research staff.
In the future, the NLA data should also be stored in SWIMS. Data from the additional 50 lakes will be entered directly into SWIMS. The SWIMS database will need to be set up for new types of data (e.g., lakeshore habitat inventories).

Reporting

EPA releases a nationwide report following each NLA survey. WDNR researchers present Wisconsin-specific results in the form of oral presentations and posters at statewide meetings and national conferences. NLA results are also included in the Integrated Report. In the future, NLA results shall also be reported on the WDNR website. These data not used for statewide assessments, but trigger further monitoring and assessment when SWIMS capture EPA data.

Programmatic Evaluation

Apart from EPA evaluations, WDNR will assess probabilistic monitoring every five years.

Long Term Trend Lakes (LTT Lakes)

Sixty-two lakes have been monitored annually as part of the LTT Lakes program since approximately 1986. Some lakes have records dating back to 1968 whereas others were added more recently (as late as 2000).

Monitoring Objectives

The primary objective of LTT Lakes monitoring is to document long-term trends in water chemistry within lakes. This data set also provides context for water chemistry in other lakes in terms of intra and inter-annual variability. These lakes help regional lake biologists answer questions from the public. Finally, given that each lake was included in the program due to a management action, data may evaluate management action effectiveness.

Monitoring Design

These lakes are distributed across all four ecoregions, all five WDNR management regions (west central, south east, south central, north, northeast), and most lake natural communities. “Small lakes” (< 10 acres area) are not represented. The smallest, median, and largest LTT lakes are 38, 382, and 132,000 acres in area, respectively. The LTT lakes were not chosen to be reference lakes with minimal human disturbance. In fact, most lakes had been chosen based on societal value and management actions taking place. Currently, an evaluation of the LTT Lakes monitoring program is underway. Lake selection can be improved by including reference lakes from each ecoregion and small lakes.

Water Quality Indicators

Long Term Trend Lakes are sampled annually for water quality. During spring turnover, temperature and dissolved oxygen profiles are taken along with Secchi depth and an epilimnetic Total Phosphorus sample. Three times during the summer index period (15 July - 15 September), the following parameters are collected: temperature, dissolved oxygen, and possibly conductivity profiles, Secchi depth, epilimnetic Total Phosphorus and chlorophyll-*a*. In addition, conductivity, pH, alkalinity, color, nitrate+nitrite and Total Kjeldahl Nitrogen are collected from the epilimnion once each summer. Every five years, calcium and magnesium are sampled. On some lakes in the west and north, aquatic plant point-intercept surveys are conducted every three years. Fifty-five of the LTT lakes are also on the fisheries management rotation. These lakes are sampled for the abundance and size of game fish every 1 – 12 years depending on the lake.

The LTT protocol is currently under revision. Proposed changes include: adding a June sampling event, collecting hypolimnetic samples for nutrients and related parameters, changing Total Kjeldahl Nitrogen to Total Nitrogen, and sampling additional parameters: NH4, chloride, Soluble Reactive Phosphorus (SRP), Sulfate, Iron, Dissolved Organic Carbon (DOC). Other surveys under consideration include: aquatic plant point-intercept surveys on all LTT lakes at least once every five years, shoreland habitat every five years, rapid assessments of Aquatic Invasive Species (AIS), lake levels (survey gage in spring and fall and record lake level at each sampling event), water budgets, three phytoplankton surveys per summer including tests for blue green algae, microcystin, and phycocyanin, three zooplankton samples per summer, and beach seines for fish species. More frequent monitoring of temperature profiles on select lakes as indicators of climate change has also been suggested. Given limited resources, a handful of “sentinel lakes” may be selected among the LTT lakes for expanding indicators and frequency of sampling.

Table 8. Long Term Trend Lakes (LTT Lakes) Indicators			
Parameter	**Analysis Location**	**Database**	**Assessment Indicator**
Chemistry Data	State Laboratory of Hygiene	Horizon (SLOH) To LDES to SWIMS	Trophic Status Index (TSI) (WisCALM Assessment)
Game fish*	In Field and Fish DB	Fisheries Database	TBD (WisCALM Assessment)
Aquatic Plant Surveys*	In field and Herbarium for validation	Bureau of Research, SWIMS	Aquatic Macrophyte Community Index (AMCI)

*A subset of LTT lakes are surveyed for these parameters.

Quality Assurance

- Field protocol including duplicate and replicate samples
- LTT Lakes Field Sampling Procedures

Data Management

Water chemistry samples are analyzed at the State Laboratory of Hygiene and then uploaded to the SWIMS database. WDNR field staff writes additional lake data (sample depths, thermal profiles, etc.) on the lab slips, which are then entered by State Laboratory of Hygiene into SWIMS. In some instances, field staff enter data directly into SWIMS.

Reporting

Collected data are summarized in the SWIMS database and the WDNR's website where summary reports and graphs from SWIMS are available for downloading and review. These data are also summarized for this report. The data will also be used for key parameter package analyses and statewide condition summaries. There is a need to routinely analyze and report long-term trends in these lakes.

Programmatic Evaluation

The LTT Lakes program is currently under review (2014), and will continue to be evaluated every five years.

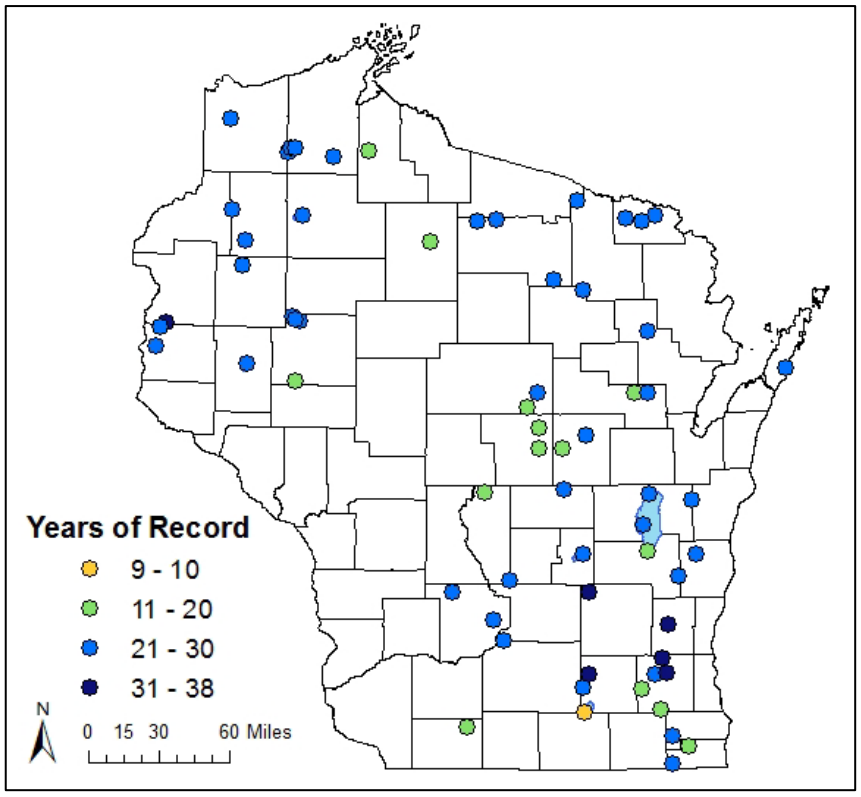


Figure 8: Distribution of LTT Lakes including the number of years of record.

Aquatic Plant Reference Lakes

Aquatic plants, similar to biological data for streams and rivers, integrate a variety of ecological signals, providing an indicator of stressors in the micro-system in which the plants are found.

Monitoring Objectives

The objective of Aquatic Plant Reference Lakes is to document the variability in healthy aquatic plant communities in the absence of management actions. This information will then be used to refine the new aquatic plant biocriteria for lakes and will also serve as a benchmark as we begin assessing aquatic plant communities in lakes.

Monitoring Design

Three lakes will be selected in each of four lake categories for which a distinct biocriteria has been developed. The categories include: northern seepage lakes, northern drainage lakes, southern seepage lakes, southern drainage lakes. The break between north and south occurs at 44.84707°N. Each lake will be sampled annually. An effort will be made to select LTT Lakes, but only a handful of LTT lakes have plant communities in the best possible condition and do not have ongoing aquatic plant management. Monitoring began on some lakes in 2015. Final lake selection needs to be completed and staff capacity needs to be built before we are able to monitor all 12 lakes.

Water Quality Indicators

A plant point-intercept survey will be conducted on each lake annually. If not an LTT lake, efforts will be made to initiate water chemistry monitoring on the lake following WisCALM guidance (perhaps by initiating citizen-based monitoring on these lakes).

Quality Assurance

- Field Protocols
- Herbarium voucher specimens
- Field survey trainings (annual training exists, but more in-depth training is needed for select WDNR staff)

Data Management

Plant Point Intercept data are currently stored on individual desktop computers. An effort to build the capacity to house plant data in SWIMS has been initiated and must be completed. Second, there is a need to develop a program that will calculate plant biocriteria from raw plant point-intercept data.

Reporting

Reporting templates need to be developed. Eventually, plant point intercept data will be reported on the Lakes pages and will be incorporated into this report.

Programmatic Evaluation

This program will be evaluated annually as it is being developed.

Satellite Monitoring - Secchi

Monitoring Objectives

The monitoring objective is to assess lake water quality on approximately 8,000 lakes in Wisconsin by inferring water clarity from satellite imagery on an annual basis. This information is freely available to the public as well as the scientific community for understanding lake dynamics.

Monitoring Design
This effort has been built on a successful collaboration between UW-Madison, WDNR, and the Citizen Lakes Monitoring Network. Landsat satellite imagery is used in conjunction with citizen-collected Secchi depths to develop models that estimate water clarity in lakes > 5 acres statewide. This WDNR-Science Services activity, performed annually, now has 25 years of record. At least two water clarity values from within a 3-year period in summer are averaged to determine lake trophic status.

Water Quality Indicators
Secchi depth and Trophic State Index are inferred from the LANDSAT imagery. These parameters are used in WisCALM assessments.

Data Management
All database records and image files are archived at the WDNR Science Operations Center. A file containing the Secchi estimates is sent annually to the lakes program. Data are also stored in the SWIMS data base.

Quality Assurance
- Field Protocols & Training
- Data and Image processing
- SWIMS Data flow QA checks
- SWIMS Data Management Checks

Reporting
Generated data are summarized through the SWIMS database and the WDNR's website (http://dnr.wi.gov) where summary reports and graphs from SWIMS are available for downloading and review. These data are also summarized for this report. The data will be used for key parameter package analyses and statewide condition summaries.

Programmatic Evaluation
This monitoring is funded, and hence evaluated, annually by the Lakes program. This effort has proved to be an extremely cost effective (12K annual) and efficient method to produce a sizable database for the agency as well as the public and scientific community. In addition, General Purpose Revenue is funding a project position from 2014-2016 that focuses on this work.

Directed Lake Surveys

Monitoring Objectives
The objective of directed lake surveys is to strategically collect holistic lake information needed for assessment (303d reporting) and lake management needs on a two-year planning cycle. The focus of this work is to collect biological, physical, and chemical data on lakes with a statewide perspective, but also to address local lake management issues including: aquatic plant management, shoreland zoning, high capacity wells, lake restoration projects, dam regulations, and blue green algae blooms. Lakes shall be selected both for protection and restoration.

Monitoring Design
Lakes will be selected on a 2-year cycle by regional biologists and the statewide lake monitoring coordinator to balance local and statewide needs. For assessment purposes, lakes are prioritized if trophic status indicators (from satellite

imagery or initial water chemistry) suggest impairment but data for impairment listings are insufficient. Lakes are revisited to obtain sufficient data for listing purposes. All lakes targeted for lake management purposes must have public access. Specific management objectives determine which lakes are targeted. Lakes are further prioritized for monitoring if they are on the fisheries management monitoring rotation and if they are vulnerable to aquatic invasive species.

Water Quality Indicators

At a minimum, monitoring surveys will include: water chemistry samples for the Trophic Status Index, an aquatic plant point-intercept survey, and a shoreland habitat survey. The water chemistry group of parameters follows WisCALM guidance at a minimum. This includes Secchi depth, water temperature and dissolved oxygen profiles, and an epilimnetic sample of total phosphorus and chlorophyll-*a* taken three times during the summer index period (July 15 – September 15) for two years. If lakes are targeted for blue green algae management, then blue green algae counts, microcystin, and phycocyanin are also sampled.

Aquatic plant point-intercept data are collected according to protocol drafted by WDNR. Aquatic plant management relies heavily on this data. Plant-based biocritera metrics and rules are currently in development and will hopefully be codified by 2017. Thus, lake condition assessments will soon rely on plant point-intercept data in addition to the Trophic Status index and shall become a routine monitoring parameter.

Littoral and riparian habitat degradation is one of the major stressors to Wisconsin lakes. A shoreland habitat monitoring protocol was developed by the National Lakes Assessment, and will be used more broadly in Wisconsin lakes. Because the NLA shoreland habitat method can be implemented in a short period of time, the future goal is to routinely conduct one survey on all lakes that are monitored, independent of the monitoring objective. WDNR developed a more detailed shoreland habitat survey for lake-specific management actions (e.g., zoning permits, critical habitat designations, habitat restoration efforts, dam regulation, high capacity well permits, etc.). One of the two protocols will be used depending on lake-specific needs and planning stage.

Data Management

As with the LTT Lakes and CLMN programs, water chemistry data are stored in SWIMS. Plant point-intercept data are currently stored on individual computers and in SWIMS. Further capacity for collecting and storing plant and habitat data in SWIMS is underway.

Reporting

Water chemistry data are summarized from the SWIMS database and the WDNR's Lakes website, where summary reports and graphs from SWIMS are available for downloading and review. The data collected for lakes is also summarized on a biennial basis for the purpose of reporting on the status of the state's waters for this report. The data will also be used for key parameter package analyses and statewide condition summaries. New reports need to be developed for plant and habitat surveys and water level data.

Programmatic Evaluation

Directed Lake Surveys will be re-evaluated each work planning cycle.

Lake Level Monitoring

Monitoring Objectives

The objective is to monitor statewide lake-levels over time to address growing concern for health of aquatic life in surface waters due to drought, changing climate, and groundwater withdrawals. Record low water levels in some areas of the state affect both the health of aquatic life and designated use of lakes. As water levels decline, critical littoral habitat for fish and aquatic life is stranded above water in lakes. In some lakes, low water levels have left piers hundreds of feet from shore and rendered boat landings unusable. Although long-term water level records exist, monitoring efforts do not cover all areas of the state.

Monitoring Design

In 2015, WDNR added lake level monitoring to the Citizen Lake Monitoring Network. Professionals (e.g., county surveyors) survey and install staff gages to lakes shortly after ice-out in spring and then survey and remove staff gages in late fall. Citizen volunteers record and report lake levels preferably weekly, but at least monthly. Seventeen lakes began monitoring water levels in summer 2015 as a pilot, and WDNR plans to expand the program. Lakes were prioritized for lake level monitoring based on the following criteria: 1. seepage lakes, 2. regions with little to no existing lake level monitoring data, 3. regions vulnerable to groundwater withdrawal (deep layers of sand and gravel), and 4. lakes monitored by volunteers or WDNR for other parameters. Lake levels have been monitored separately by a variety of entities, including: CLMN, University of Wisconsin (UW) Long Term Ecological Research Program, USGS, USGS index lakes (seepage lakes chosen to represent different regions of the state), county-led projects in the Central Sands area, and monitoring led by the North Lakeland Discovery Center in Vilas County (Figure 9).

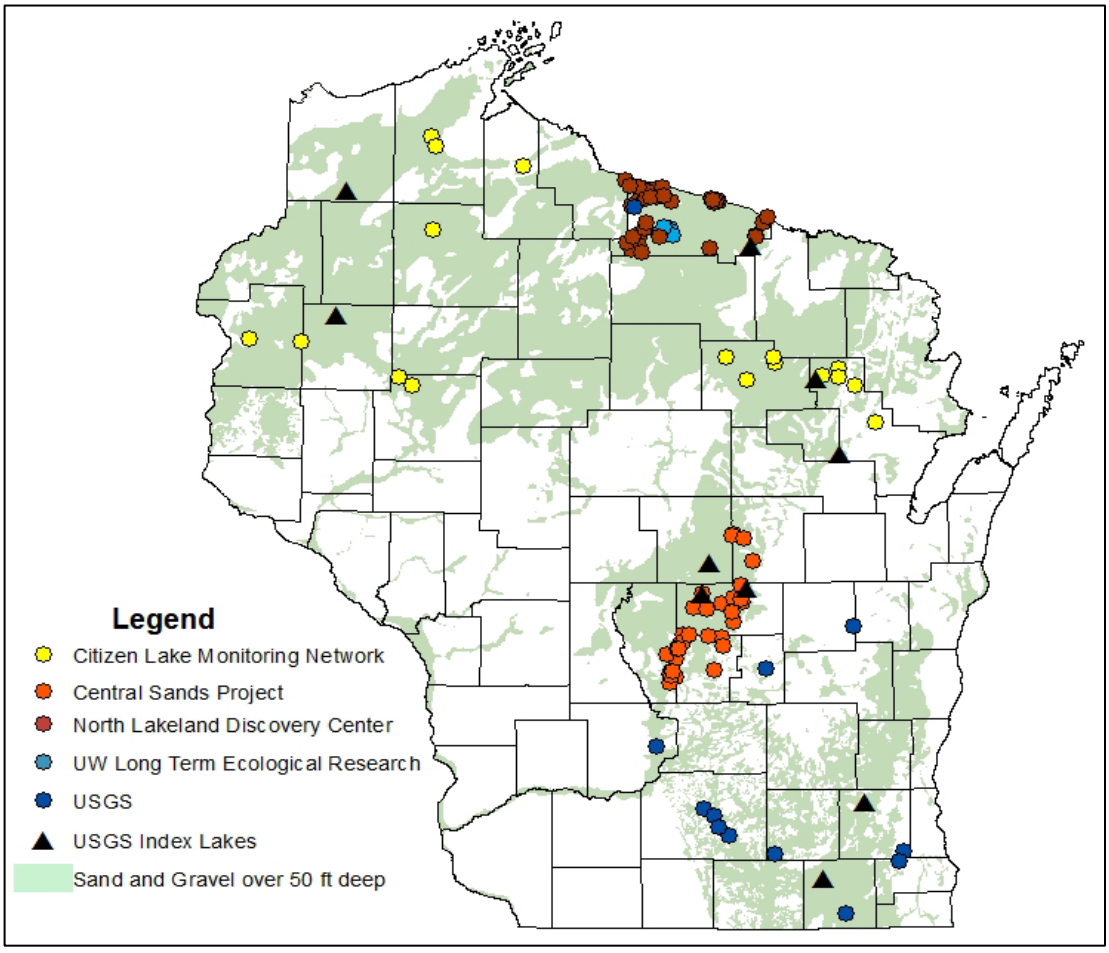


Figure 9. Lake Level Monitoring Sites

Water Quality Indicators

The sole indicator of water quality in this project is the water level reading from the staff gauge.

Quality Assurance

All staff gauges will be surveyed to at least three reference marks and tied to a datum. This ensures that the data record may continue long into the future even if all reference marks are lost. Water level readings from the staff gage will be converted to feet above sea level to ensure that data are comparable between years. Other elements of the quality assurance plan include:

- Minimum concordance measures when surveying in the staff gauges
- Repeat staff gauge surveys on 10% of lakes by a qualified WDNR staff member
- Verification of citizen-reported water level data (which may entail side-by-side readings, photos of the staff gauge and associated water level, independent water level readings by WDNR staff)
- Trainings for surveying and installing staff gauges
- Trainings for reading water levels on staff gauges
- Data analysis in SWIMS

Stranded woody habitat due to low water levels in Fallison Lake, Vilas County. Photo from WDNR, R. Lathrop.

Data Management

Metadata and water level data will be documented in SWIMS. Metadata will include survey information, GPS locations and datum of reference marks, contact information for surveyors and volunteers, maps, and calculations to convert to feet above sea level. Water level data will be entered into SWIMS by volunteers or by regional coordinators. One challenge will be automating the conversion of raw water level readings to standardized feet above sea level.

Reporting

Water level graphs will be added to the individual lakes pages, and a WDNR water level monitoring webpage will be created. We will also tie our data into a webpage hosted by UW-Madison that graphs and maps lake level data collected by all entities (https://lter.limnology.wisc.edu/lakeinfo/lake-levels-WI).

Programmatic Evaluation

The first program evaluation of lake level monitoring will be in spring of 2016.

Citizen Involvement in Water Monitoring

The WDNR is committed to engaging citizens in helping meet its water monitoring needs. This interest in building information resources through citizen volunteers is shared by DNR's nonprofit partners, local units of government, community-based water management organizations, and citizens across the State.

Citizen Stream Monitoring Network (Water Action Volunteers)

The Water Action Volunteers (WAV) Program involves citizen monitors in the collection of stream water quality data that may be used by the WDNR and their partner organizations. Objectives of the program are to educate and empower citizens, to obtain high quality data useful for WDNR decision-making, and to encourage data and knowledge sharing. WAV has three levels. Monitoring responsibilities and quality assurance and control measures are more intensive, and data uses shift from educational to addressing management and research needs at higher levels. Program administration comes from UW-Extension and WDNR Statewide Coordinators with support from local program coordinators who are often affiliated with other agencies or non-profit organizations.

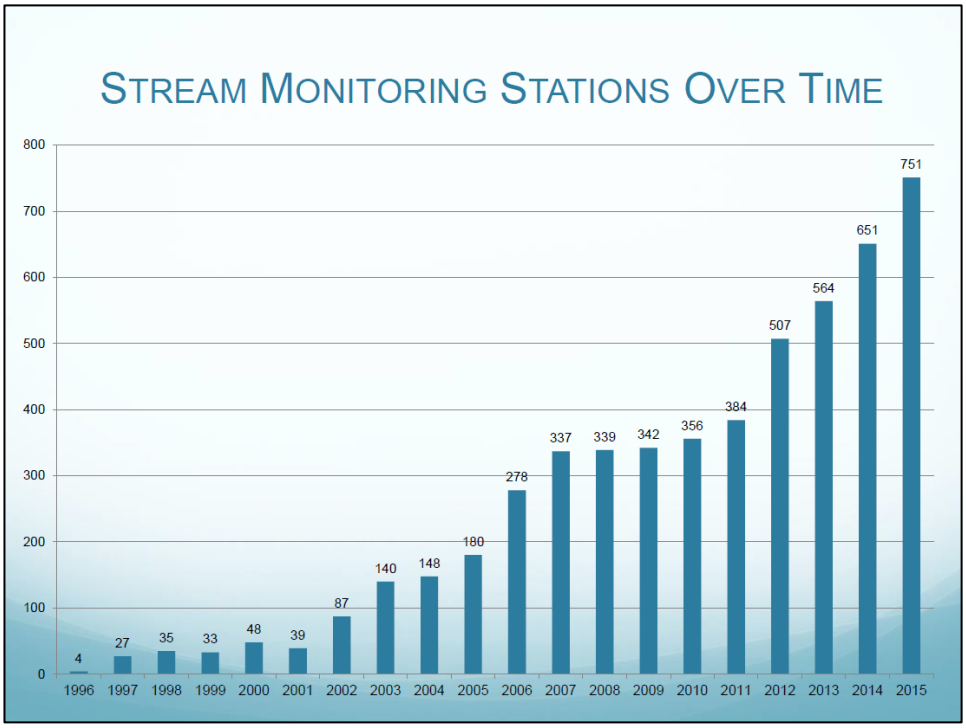


Figure 10. Number of unique stream sites visited by volunteers from 1996 to 2015.

Volunteer stream monitors assess water quality parameters identified in the WDNR's Water Resources Monitoring Strategy for Wisconsin. While volunteers may identify their own sampling locations, in many instances WAV Coordinators, WDNR biologists, or county staff recommend sites based on the need to acquire status or trends information, or other data needs. Volunteers enter their data into the Surface Water Integrated Monitoring System (SWIMS) database by the end of each month and are instructed to immediately report extreme conditions that may be hazardous to aquatic life to their local WDNR or county biologist.

The WAV program has grown steadily throughout its 20 year history (Figure 10). In 2015, volunteers monitored a record 751 unique stream sites (making 4500+ site visits) in 59 counties across the three levels of the WAV program (Figure 11).

Volunteer monitoring of total phosphorus in streams is an example of a very successful Level 3 program. In 2011, the WAV program developed and vetted standardized sampling methods following WDNR guidance, and developed stringent quality assurance protocols. In 2012, WAV partnered with WDNR biologists to pilot the methods with seasoned WAV stream monitors at 12 sites where additional total phosphorus data was needed to confirm impaired waters listings. WAV volunteers completed their total phosphorus monitoring tasks with 100% success (six samples collected according to protocols at every site). The program was expanded in 2013 with continued success, so that in 2014 the WDNR opted to have all total phosphorus monitoring completed by volunteers, thus freeing up WDNR staff-time for other monitoring and data analysis work. A list of about 100 stream sites was developed by WDNR biologists. Experienced WAV volunteers were then matched to 98 of those sites, and carried out monthly monitoring May-October with 99.5% success. In 2015, 150 new volunteers were trained in total phosphorus monitoring protocols. These new monitors, along with returning volunteers, monitored 198 unique stream sites at a 99.7% success rate.

The WAV total phosphorus monitoring and data collection is among the first in which citizens took on stream monitoring tasks that otherwise would have been carried out by WDNR staff. It is estimated that this monitoring resulted in a savings of over $93,000 from the inception of the program in 2012 through the 2015 monitoring season.

WAV is strengthened and has grown with assistance from partner organizations that help train, equip and support volunteers to monitor streams in Wisconsin. In a 2015 survey, partner organizations (35 of 50 organizations responding) estimated contributions of $69,500 in 2014 to support WAV monitoring efforts. This is in addition to the estimated value of their time commitment (an additional $126,000). On average, for every dollar WDNR and UW-Extension spent to support volunteer stream monitoring, external partners and external competitive grants contributed $1.12.

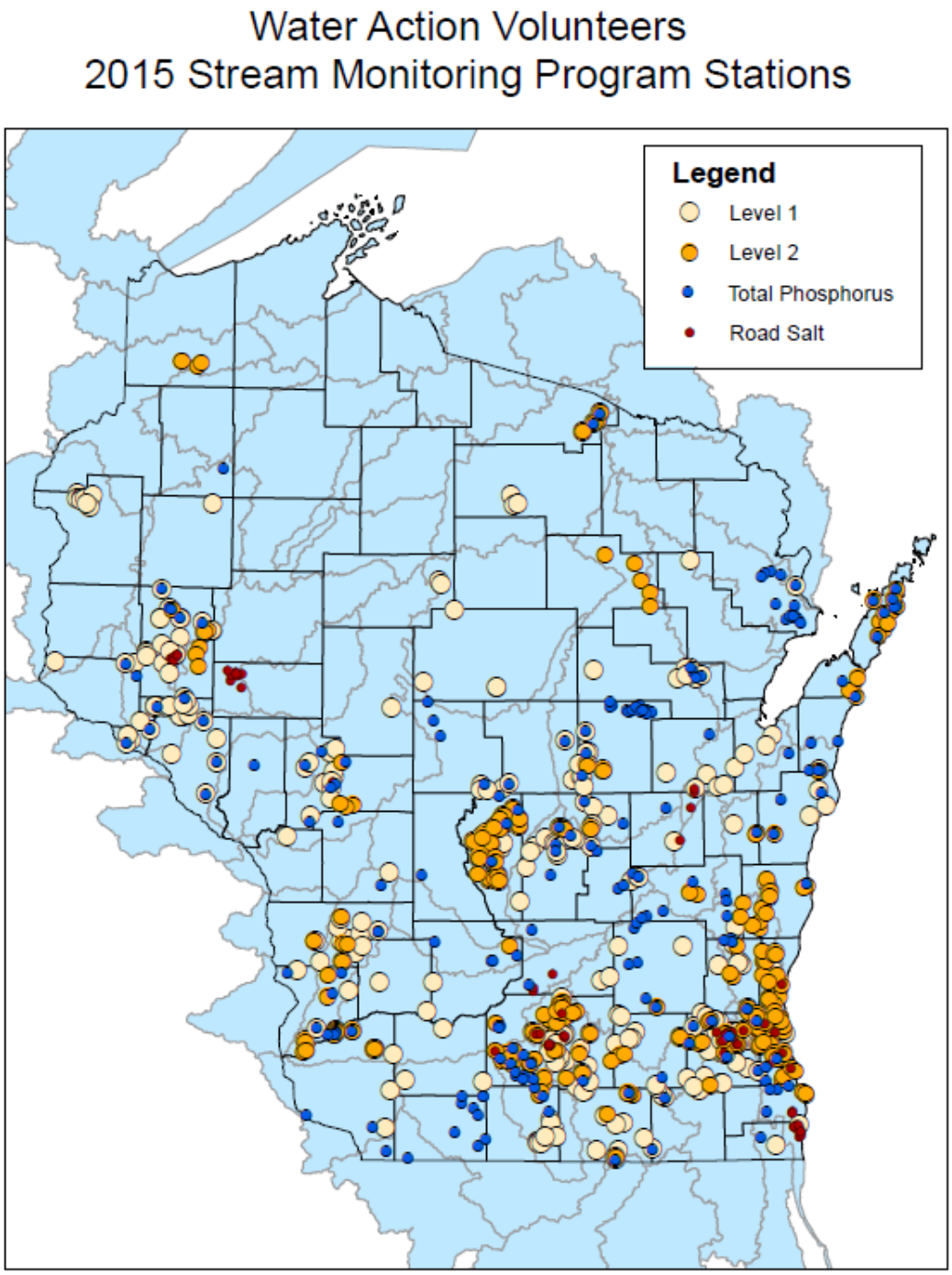


Figure 11. Water Action Volunteer sample sites statewide.

Citizen Lake Monitoring Network

Monitoring Objectives

The Citizen Lake Monitoring Network, the core of the Wisconsin Lakes Partnership, creates a bond between over 1000 citizen volunteers statewide and the WDNR. The goals are to collect high quality trophic status data, to complete water quality assessments on lakes, to educate and empower volunteers, and to share this data and knowledge. 2016 is the 30th anniversary of the CLMN.

Monitoring Design

Lake selection has primarily been driven by volunteer interest. Approximately 900 lakes are monitored each year for Secchi depth, and the number of "Secchi lakes" continues to increase. Approximately 550 lakes are sampled for water chemistry, and 360 lakes for dissolved oxygen. Water chemistry lakes range in area from 6 – 23,000 acres, with a median area of 213 acres.

Given the costs associated with water chemistry analysis, lake selection for water chemistry is under review. Currently, once a lake begins monitoring water chemistry, it continues indefinitely. Although long-term data are useful, WDNR recommends freeing up resources to allow water chemistry sampling on more lakes. A subset of lakes will be retained for long-term records and the remaining lakes will be committed for 2 years of sampling (minimum needed for assessment) with the possibility to extend monitoring for more years. This will enable WDNR to assess more lakes and align CLMN more closely with other lake monitoring activities (e.g., Directed Lakes and Targeted Watersheds Assessments). Capacity to train and coordinate new volunteers, volunteer satisfaction, record length, and management activities on individual lakes must be considered to decide how many lakes will be monitored short-term. For example, 277 of CLMN lakes with at least 10 years of data could be retained for long-term monitoring (Figure 12). All volunteers collecting Secchi data should continue their efforts as long as possible.

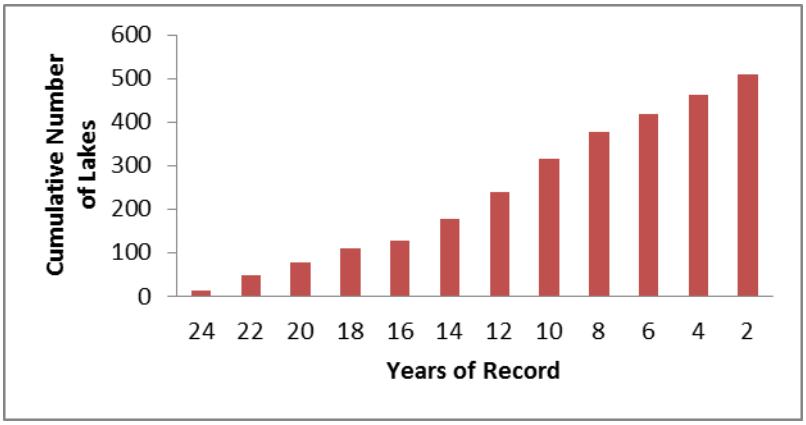


Figure 12. Cumulative number of CLMN lakes that have been monitored for Total Phosphorus. This distribution may be used to determine how many lakes to retain for long-term water chemistry monitoring.

Water Quality Indicators

Volunteers measure water clarity using a Secchi disk. This information is then used to determine the lake's trophic state. A subset of volunteers also collects water temperature and dissolved oxygen profiles, and total phosphorus and chlorophyll-*a* from the epilimnion. They adhere to the same protocols as the LTT Lakes program, but do not collect a spring water sample. In addition, volunteers on approximately 300 lakes watch for the first appearance of AIS such as Eurasian Water Milfoil and zebra mussels.

Quality Assurance

- Field Protocols can be found in the following links:
  - Wisconsin Citizen Lake Monitoring Manual - Water Quality (3rd Edition revised 2009)
  - Wisconsin Citizen Lake Monitoring Manual - Chemistry Procedures (3rd Ed revised 2013)
  - Wisconsin Citizen Lake Monitoring Manual - AIS monitoring (revised 2014)
- Replicates and blanks on 10% of samples
  - Quality Assurance Sampling Protocol – CLMN – 2013
- Volunteer Training by WDNR staff
- SLOH QA Processes
- SWIMS Data flow QA checks and Data Management

Targeted Watershed Assessments

Targeted Watershed Assessments monitoring provides a targeted watershed framework for baseline data collection that blends baseline work with targeted and effectiveness monitoring.

Monitoring Objectives

The goal of targeted watershed assessments is to identify attainment status and changes in water quality in response to land management practices. Initially, the focus of monitoring will be on streams, but lakes and wetlands will also be monitored in some targeted watersheds. The Targeted watershed approach aligns resource monitoring by watershed at HUC 12 or HUC 10 scale. An additional value of this type of monitoring is the prospect of aligning volunteer monitoring with staff work to fill in gaps (spatial, temporal), conduct follow-up monitoring (TP sampling, AIS monitoring), collect strategic data (such as near permit outfalls, etc.) and to gather data that results in prioritization of new sites based on results. This approach can involve alignment and sequencing of monitoring, assessment, planning, implementation (i.e. watershed planning framework).

Monitoring Design

The TWA design involves monitoring at the HUC 12 scale (~29-mi^2). Approximately five to seven sites may be sampled per watershed (HUC 12) (1 site/5-mi^2), at which chemistry, macroinvertebrates, fish, habitat, and flows/water levels. These core indicators will be supplemented by intensification areas at pour point including six grabs samples, one per month from May through October. Lakes will also be monitored in the Targeted Watershed when nutrient loading is a concern and/or when land management practices are in play. Water quality issues in lakes will often drive the interest in monitoring the condition of streams in the watershed and TWAs will integrate these two waterbody types.

Water Quality Indicators

Table 9: Targeted Watershed Approach Indicators

Parameter	Analysis Location	Database	Assessment Indicator
Chemistry Data	State Laboratory of Hygiene	Horizon (SLOH) To LDES to SWIMS	TP Package, chlorides package, and others. (WisCALM Assessment)
Macroinvertebrate IBI Substrate Sample	UW Stevens Point Entomology Laboratory	UWSP to SWIMS	Wadeable Macroinvertebrate Index (WisCALM Assessment)
Physical parameters	In Field	Fish DB or SWIMS	Physical (flow) Data
Fish Electroshock – Fish species present, count	In Field and Fish DB	Fisheries Database	Fish IBI (dependent on natural community). (WisCALM Assessment)

Habitat (qualitative) Metrics	In Field and Fish DB	Fisheries Database	Habitat Suitability Index

Other water quality parameters are collected based on situational factors, such as discharges, site specific pollutants or other factors. Additional parameters commonly collected include conductivity, pH, alkalinity, color, low level metals and the nitrogen series. Given resources in-stream permit compliance, and intermittent/ephemeral stream will be sampled.

Follow-up Monitoring

Project Description

Follow-Up monitoring is a "placeholder" monitoring program that reserves project funding in order to monitor for 303(d) assessments. Many of Wisconsin's water quality standards (WQS) require multiple visits (multiple days, months or years) to make an assessment decision. Every year sites are monitored, through a variety of monitoring programs, with minimal data collection that is used to "flag" problem waters. Hence, some staff time and project funding are required every year to follow up on "flagged" waters where the data suggest there is an impairment but there are insufficient data to make that determination based on the State's minimum data requirements. Follow Up monitoring project funds may be used to 1) meet minimum data requirements for "flagged" parameter or 2) used to monitor and identify possible stressors when biology is "Poor".

The process for Follow-Up monitoring includes Central Office staff members developing an initial priority list of sites and parameters to be monitored by field staff. Field staff review the list every winter and prioritize among the sites in their area as "high", "medium" or "low" priority. Field staff make these determinations based on data representativeness (flood sample, gear breakdown, etc.), data appropriateness (IBI applied to wrong Natural Community, etc.) and their own scheduled work (are staff conducting other work the area, etc.). Central Office staff release the final site list to Field staff through the Monitoring Activity Sheets.

Project History

Follow-Up monitoring was historically driven by the "Local Needs" (or Competitive Projects) process where District staff identified waters needing additional data for impairment decisions. In 2013, a program was supported by an EPA Monitoring Initiative Grant to fund additional data collection at a number of stream sites. These sites were identified as phosphorus 5P "Watch Waters" where either TP and biology data were not representative of the site (i.e. flooding issues) or biologic data were missing for bioconfirmation of a TP impairment (see Section 7.4 of WisCALM). In 2014, the Follow-Up monitoring program was deployed as an extension of the 5P monitoring project, with many of the same parameters monitored. The future of Follow-Up monitoring will likely include total phosphorus and biology monitoring, but will also be expanded to other parameters based on assessment needs. In past iterations of this program WDNR and Water Action Volunteers (WAV) have been able to cooperatively sample a single site. This may be a possibility in the future as well. For example, WAV members may be able to collect monthly TP while WDNR biologists collect fish and/or macroinvertebrate samples.

C2. 2016 Assessment Methodology

Data Used for Assessments

Data used for assessment include quality assured data submitted by the public and from WDNR's monitoring program. All data used for assessment must meet WDNR's quality assurance requirements. WDNR also determines whether available data are representative of the conditions.

WDNR data

WDNR created and manages two databases that house WDNR monitoring data and other information to be used for assessment and impairment decisions. The Surface Water Integrated Monitoring System (SWIMS) database contains chemical (water, sediment), physical (flow), and biological (macroinvertebrate, aquatic invasive) data collected for CWA programs. Data in SWIMS are shared through the federal Water Quality Exchange Network, which is an online federal repository for all states' water monitoring data.

The second WDNR database is the Water Assessment, Tracking and Electronic Reporting System (WATERS) database, which was implemented in 2004 and contains:

- Program Objectives, Goals, Performance Measures, and Success Stories;
- CWA Use Designations and Classifications (NR102, NR104);
- Outstanding and Exceptional Resource Waters Designations (NR102);
- CWA assessment data, including decisions regarding a waterbody meeting its attainable use or whether or not the waterbody is considered "impaired";
- Impaired waters tracking information, including the methodology used for listing, the status of the TMDL development, and restoration implementation work;
- Fisheries Trout Classifications (Administrative Code, NR 1.02(7)); and
- Watershed planning recommendations, decisions, and related documents.

The WATERS and SWIMS databases are closely integrated. Within WATERS, summary values and specific information behind the assessment decisions are linked directly to the monitored waters. Data to be used in assessment and impairment decisions are pulled from the SWIMS and WATERS databases, according to the period of record and minimum data requirements that are outlined in WisCALM.

Public data

In addition to WDNR's monitoring data described above, public data are also gathered and considered for use in assessments through an active data solicitation process. Every two years, the WDNR requests that citizens and interested groups submit their surface water data (biological, chemical, and physical). Data meeting specified requirements were evaluated, along with WDNR-collected data, to assess the quality of the state's water resources. Data were accepted from the public from December 16, 2014 – January 15, 2015, and WDNR received information / data submittals from nine entities during the data solicitation period:

Capital Area Regional Planning Commission

Submitter provided a map of satellite imagery of Beaver Lake in Waukesha County showing what appears to be eutrophic conditions, significantly more so that neighboring lakes, based on the green color of the lake in the image. WDNR reviewed available data for this lake and noted the waterbody is not currently considered impaired. Only satellite-derived Trophic State Index (TSI) data were available it was included in the 2014 Integrated Report assessments (TSI=34, Oligotrophic). Historic phosphorus data was available (from 1995), but not considered to be representative of current conditions. Local biologists were contacted to inquire about any additional information they had regarding the lakes trophic status. WDNR may pursue monitoring of this lake for TSI parameters in the future.

Green Lake Sanitary District

Submitted data was a copy of the lake association's newsletter. Additional water quality data was not provided in required format or readily available. Green Lake is currently listed as impaired for the following pollutants: polychlorinated biphenyls (PCBs) and total phosphorus (TP). This lake was assessed during the 2014 assessment cycle; TP sample data exceeded 2014 WisCALM listing thresholds, but chlorophyll data did not. Dissolved oxygen levels were also assessed and determined to be an impairment in 2014. Because water quality data was not provided in the required format in the submittal, WDNR considered this information supplementary for assessments of water quality of Green Lake for the 2016 IR.

Rock River Coalition

The submitted dataset was total phosphorus sample data analyzed by the Madison Metropolitan Sewerage District. WDNR found that it meets our data requirements for assessment and for uploading to our Surface Water Integrated Monitoring System (SWIMS) database, and included this data in our assessments.

Kewaunee CARES

Analytichem LLC, registered in Wisconsin thru 12/31/2014 as WDATCP No. 115205-D3, conducted the analyses and provided reports to the Kewaunee CARES organization. Nitrate, Total Phosphorus (TP), and *E. coli* / Total Coliform data collected from streams/rivers were submitted; however, only TP data were assessed due to lacking assessment methods or criteria for other parameters.

Lac Courte Oreille Lake Association

Submitter provided analytical and profiling data for Whitefish Lake, Sawyer County (WBIC 2392000; station number 583088) for the period 2010-2014 and for Lac Courte Oreilles-Sawyer County (WBIC 2390800) for years 2010 and 2011. This monitoring work was completed by the Lac Courte Oreilles Band of Lake Superior Chippewa Conservation Department (LCOCD) as part of LCOCD's routine monitoring of reservation waters and was conducted in accordance their provided Quality Assurance Project Plan. The submittal met WDNR data requirements for assessment and for uploading to our Surface Water Integrated Monitoring System (SWIMS) database, and was included in our 2016 assessments.

Northland College

With the data and quality assurance documentation submitted during the impaired waters list public comment period by Northland College for South Fish Creek and other tributaries to Chequamegon Bay, WDNR was able to assess these waters. South Fish Creek, Bay City Creek, and the Unnamed Tributary to South Fish Creek exceeded total phosphorus (TP) criteria of 75 µg/L. Associated biology (macroinvertebrate and/or fish indices of biological integrity) were not impaired for South Fish Creek and the Unnamed Tributary so these waters were proposed for listing based on TP alone

(Category 5P). Bay City Creek had a macroinvertebrate index of biological integrity score in the "poor" condition category, so this water was proposed for a TP/Degraded Biological Community listing (5A).

Bad River Watershed Association

Dissolved oxygen, pH, and water temperature data were submitted. Temperature data met data requirements and were assessed.

River Alliance of Wisconsin

The River Alliance of Wisconsin submitted a letter jointly with Friends of the Tomorrow-Waupaca River and Trout Unlimited's Frank Hornberg Chapter, providing suggestions about data for use in assessments and updating the impaired waters list. The data sources were reviewed and used in several stream temperature assessments.

Cheryl Elkinton

Submitter provided several comments regarding the type of assistance or additional support needed to assess water quality. No water quality data were submitted for specific waterbodies.

Assessment Methodology

Once WDNR gathers existing and readily available data for assessments, those data are summarized and compared to components of the water quality standards. Wisconsin Statutes Chapter 281 authorized WDNR to establish water quality standards that are consistent with the CWA. Wisconsin's water quality standards include designated uses, numeric/narrative criteria, and antidegradation provisions, which are contained in Wisconsin Administrative Code Chapters NR 102, 103, 104, 105, 207, and 217. The state is responsible for assigning designated uses and conducting periodic assessments of these uses on individual waterbodies. Implementation of our surface water quality standards is described in various guidance documents, including guidance on assessment of surface water designated use attainment using chemical, physical and biological data collected.

WDNR's water quality assessment goal is to use clearly defined, publicly accessible methods for collection and analysis of data to ensure defensible assessment decisions. To this end, the WDNR built upon its 2014 assessment methodology work by creating a revised *Wisconsin Consolidated Assessment and Listing Methodology* (WisCALM) to conduct assessments in 2016 for determining the attainment of designated uses.

For 2016 the following components of WisCALM were revised:

- Methods for assessing the Public Water Supply Designated Use were added.
- Corrections and clarifying language was added to Section 4.6 Lake Impairment Assessment: Public Health and Welfare Uses.
- References were added to incorporate the stream/river Natural Community validation process.
- A minor revision of the stream/river total phosphorus (TP) assessment method and associated assessment automation was incorporated in existing guidance.
- Total phosphorus (TP) delisting protocol was incorporated.
- Guidelines for assessment unit delineation were added.

Through 2006, WDNR provided its statewide water quality assessment and narrative Water Quality Assessment Report to Congress as required by Section 305(b) of the CWA and its list of impaired waters as required by Section 303(d) of the

CWA as two separate products. In 2008 the WDNR worked with the EPA to integrate its mainframe database for 305(b) and 303(d) assessment submittals. This data integration process was the first step for Wisconsin to provide an integrated assessment and listing report.

C3. Statewide Water Condition Results

Results of Probability-based Designs

Lakes

In recent years the EPA has instituted a National Aquatic Resource Assessment program. The program assesses aquatic resources on a 5 years rotational basis. Lakes were assessed in 2007 and 2012. The next survey will be in 2017. The goal of the survey is to address two key questions about the quality of the Nation's lakes, ponds, and reservoirs:

- What percent of the Nation's lakes are in good, fair, and poor condition for key indicators of trophic state, ecological health, and recreation?
- What is the relative importance of key stressors such as nutrients and pathogens?

The sampling design for this survey is a probability based network which will provide statistically-valid estimates of the condition of all lakes with known confidence. Samples sites were randomly selected throughout the conterminous U.S. A total of 1028 lakes were sampled. Wisconsin sampled 50 lakes. This number was greater than originally selected by the EPA (28) but the additional lakes strengthened the statistical inferences for the state. In 2007, the lakes that were chosen were at least four ha in size and had a maximum depth of at least 1m. For the 2012 assessment the minimum lake size was reduced to one ha.

In 2007, the most widespread stressors were those that affect the shoreline and shallow water areas. In Wisconsin there were fewer lakes rated as poor for the lakeshore habitat metric compared with all lakes nationally. The number of lakes in Wisconsin rated as poor for the metrics physical habitat complexity and lakeshore disturbance was similar to lakes nationally. While these metrics are not yet available for the 2012 assessment, it is likely they will, again, be the most widespread stressors.

Comparing the trophic status of Wisconsin lakes (chlorophyll-*a* and total phosphorus) in 2007 vs 2012, there were fewer oligotrophic lakes in 2012 and more eutrophic and hypereutrophic lakes in 2012. Recreational indicators (microcystin and chlorophyll-*a*) also indicated worse water quality in 2012 compared with 2007. The biological condition of the lakes in 2012 also appeared to be worse with fewer lakes classified as good condition (Figure 13). There were similar numbers of lakes in poor condition but the number of lakes in fair condition in 2012 was much greater than in 2007.

Were Wisconsin lakes really in worse condition in 2012 compared with 2007? Ten lakes that were sampled in 2007 were also sampled in 2012. The trophic variables of these lakes were generally similar both years. About 52 lakes in Wisconsin have been sampled annually for the last 25 years for trophic variables. Unlike the NLA, these lakes were not randomly chosen. Comparing these lakes in 2007 and 2012, their water quality was similar both years. It appears the reason for the conclusion from the NLA that water quality was worse in Wisconsin lakes was worse in 2012 was the result of the lakes chosen. Even though lakes were randomly chosen in both years, the lakes in 2012 tended to be shallower and smaller in size (Figure 14). In 2012, the minimum lakes size was reduced but removing lakes that are smaller than four ha does not change the conclusions.

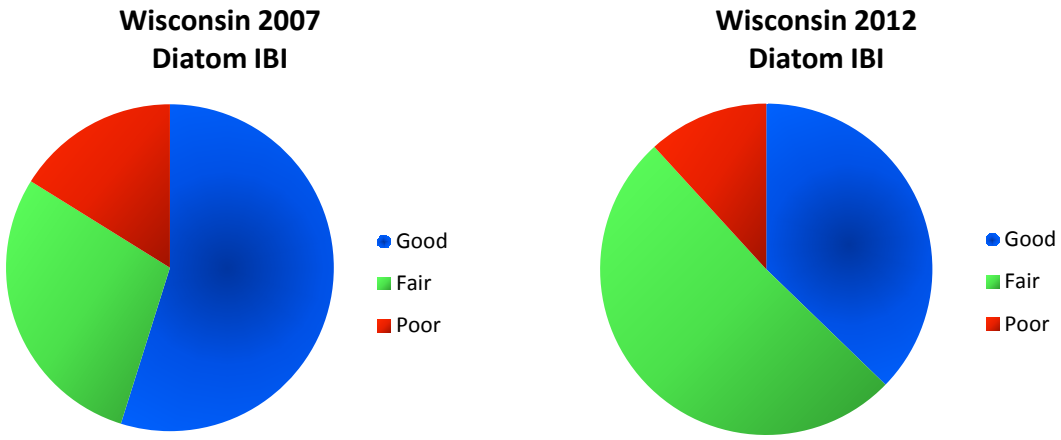


Figure 13. Comparison of biological condition as determined using surface sediment diatoms. The biological condition is worse in 2012 compared with 2007.

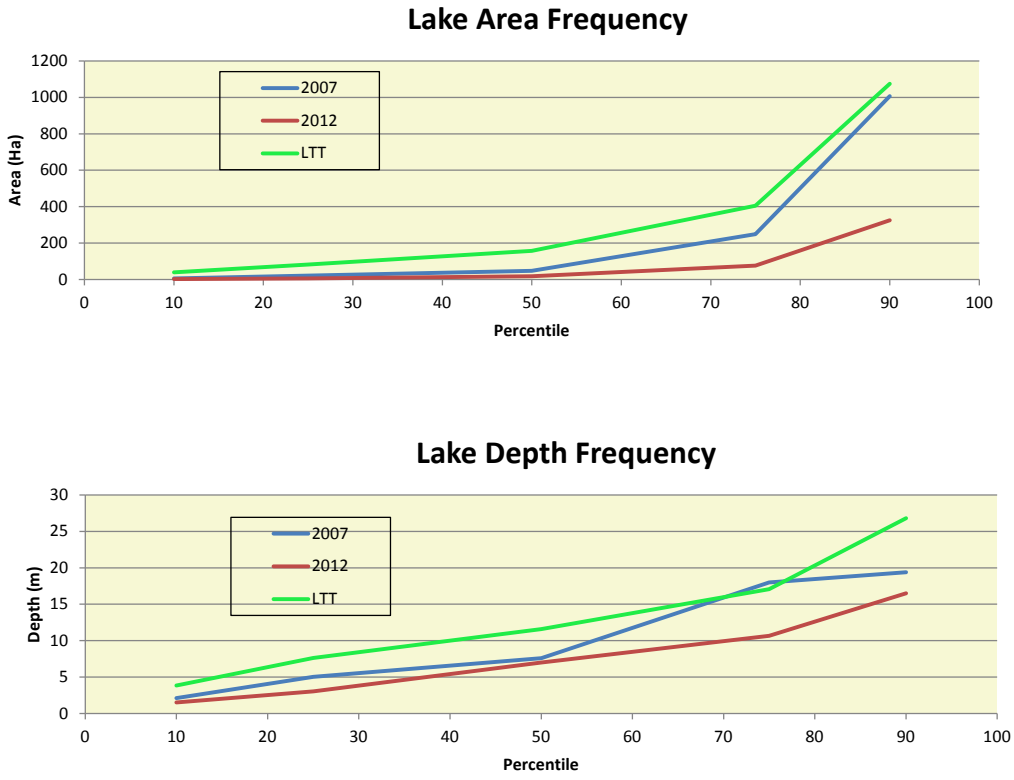


Figure 14. Lakes sampled in 2012 tended to be smaller in size and shallower. The DNR Long Term Trend lakes (LTT) were not randomly chosen. These lakes tended to be larger and deeper than the NLA lakes.

Rivers

In 2003, 2008 and 2013 the WDNR took part in three statistically valid surveys of the Nation's rivers and streams led by the EPA: the 2003 Wadeable Stream Assessment and the 2008 and 2013 National Rivers and Streams Assessments. The sampling designs for the National surveys were a probability based network that provided statistically valid estimates of conditions for the population of rivers and streams across the United States with a known confidence.

In 2010-2013 the WDNR began a similar monitoring program to conduct a detailed assessment of the condition of wadeable streams across the State using a probabilistic design called the Natural Community Stratified Random (NCSR) monitoring program. The Wisconsin project design included monitoring at 548 sites over four years that was spatially stratified to cover the entire stream, geographic and land use types found throughout the State. By using a probabilistic design the WDNR was able to use the results to determine the condition of Wisconsin's wadeable streams in a statistically valid manor. The results of this analysis provide a clear assessment of the physical, chemical and biological quality of wadeable, perennial streams across the State.

Overall, we found that in the majority of Wisconsin's wadeable streams there was not a water quality problem as assessed by biologic condition, although results varied regionally. These results indicate that the condition of fish assemblages in wadeable streams is slightly worse than the condition of macroinvertebrate assemblages (32% compared to 14% to 22% in Poor condition). There were strong spatial differences where the northern most Ecoregion in the State, the NLF, consistently had fewer Poor biologic condition scores and environmental stressor scores than the rest of the State. The major difference in this part of the State can probably be attributed to land use intensity. The land use in the NLF is comprised of ~7% agriculture and ~4% urban while the rest of the State is ~48% agriculture and ~7% urban. The large north to south disparity in agricultural land use intensity is likely the driving force in regional patterns of stream quality across Wisconsin.

The pattern of water quality degradation in Ecoregions with high anthropogenic land use was also found in a probabilistic survey of Minnesota's wadeable streams. Data from Minnesota should be comparable to Wisconsin as the two states share many geophysical and land use characteristics. In addition, three of Wisconsin's Omernik Level III Ecoregions are shared with Minnesota (http://www.epa.gov/wed/pages/ecoregions/level_iii_iv.htm). There is also a strong north to south gradient in land use intensity, especially agriculture, in both States. Minnesota found that nearly twice as many stream miles were found in Poor biologic condition for macroinvertebrate and fish assemblages in the heavily agricultural southern Temperature Prairies Ecoregion than the northern, heavily forested, Mixed Wood Shield Ecoregion (30-52% and 37-66%, respectively). Minnesota attributed the reduced biologic condition to a combination of direct impacts such as drainage practices (i.e. channelization, modified habitat) and indirect processes, such as increased runoff leading to increased nutrient and sediment loading. Considering the high RR scores in our study for total phosphorus, nitrogen, TSS and physical habitat these are likely the prevailing mechanisms connecting land use practices to Poor environmental stressors and Poor biologic condition estimates in Wisconsin streams.

Results across States are not always comparable as States generally use different methods for data collection, analysis and interpretation. In order to get a Nationwide assessment the EPA conducted the National Rivers and Streams Assessment (NRSA), a probabilistic survey using consistent methods across the contiguous United States. The data collection and analytical methods used in the NCSR study are different than those used in the EPA's NRSA. However, interpretation of the data was similar so we can make generalizations about the condition of Wisconsin's streams from this study to the Nationwide estimates in the EPA's NRSA.

Compared to the Nationwide estimates for stream condition from the EPA's NRSA Wisconsin's stream condition is similar or slightly better condition to the rest of the Nation. Macroinvertebrates were found in Poor condition for 55% (IBI) and 17% (O/E) for the Nationwide estimate. Wisconsin's estimates were better with 14% (mIBI) and 22% (O/E) in Poor condition Statewide. Fish condition was also slightly better for the Wisconsin estimate than the Nationwide estimate at 32% to 36%, respectively. Examining environmental stressors we found those that impact Wisconsin are also some of the most prevalent across the nation. Total phosphorus and total nitrogen were two most prevalent stressors in the Nationwide estimates followed by several measures of physical habitat. The EPA's NRSA further divided the nation into three climatic regions generally based on Ecoregions. In terms of biologic condition the eastern and midwestern U.S. generally scored in worse condition than the western U.S. These results likely follow broad nationwide patterns of population and land use that were observed at a smaller scale within Wisconsin.

Lake Trophic Status

General Condition Assessments for Wisconsin lakes report whether each lake is in Excellent, Good, Fair, or Poor condition at a point in time. These assessments are based on the Trophic Status Index (TSI), which characterizes lake productivity using chlorophyll-*a*, Secchi depth, or satellite data. Chlorophyll-*a*, the photosynthetic pigment in algae, is the most direct measure of lake productivity and the preferred method of assessment. Secchi depth measures water clarity and is generally deeper in less productive lakes. Water clarity can also be estimated by the spectra of colors observed from satellite imagery. Although chlorophyll-*a* more directly measures lake productivity, it is also the most costly to collect and is available on the smallest amount of lakes. Secchi depth is collected on a large number of lakes by citizen volunteers, and satellite data is obtained on approximately 8,000 lakes greater than 5 acres in area each year.

Because satellite data are available for the majority of lakes in the State, WDNR can now complete a much more comprehensive assessment of Wisconsin's lakes. The satellite image data are converted to Secchi depth values, which measure water clarity, and by inference, a lake's trophic state. To determine how satellite data should correctly be interpreted, citizen volunteers measured Secchi depths on lakes around the State and researchers used those findings to calibrate equations that estimate Secchi depth from satellite data. The satellite-based TSI is calculated using the estimated Secchi depth values.

A total of 4,506 lakes and 915,829 lake acres were assessed for TSI in 2013-2014 (Table 10). Most lakes assessed for TSI used satellite data. All three types of data (chlorophyll-*a*, Secchi depth, and satellite) are sometimes available for a single lake. Chlorophyll-*a* data, the most accurate but also most time-consuming assessment tool, is always prioritized over the other data types for reporting, and Secchi depth has second priority. Chlorophyll-*a* was used to assess 9% of TSI assessed lakes and Secchi was used for 4% of TSI assessed lakes. In total, General Conditional Assessments were conducted on 85% of Wisconsin's lake acres.

Table 10. Number of lakes and number of lake acres assessed by method using Lake Trophic Status Index.

TSI Analysis Tool	# Lakes Assessed	% of TSI Assessed Lakes	# Lake Acres Assessed	% of TSI Lake Acres Assessed	% of All Lake Acres Assessed
Satellite	3,920	87%	494,272	54%	46%
Secchi	202	4%	77,340	8%	7%
Chlorophyll-*a*	384	9%	344,217	38%	32%
Total TSI Assessed Lakes	4,506	100%	915,829	100%	85%

Most lakes were in Good or Excellent condition (Table 11). Although a small proportion of assessed lakes were in Poor or Fair condition, this still amounted to 482 lakes. By acreage, 37% of lakes are in fair or poor condition, meaning that most of the fair or poor lakes are fairly large and are likely of statewide importance. Of those that were considered Poor, some but not all are designated as Impaired if there are enough data to warrant listing under the WisCALM criteria. The condition of 926 lakes is unknown either because the lakes' natural community type is unknown or it is small. Criteria based on TSI vary by lake type and are undefined for small lakes.

Table 11. Condition of all lakes assessed with the Trophic Status Index by number and by area.

Condition	# Lakes Assessed	% of TSI Assessed Lakes	# Lake Acres Assessed	% of TSI Lake Acres Assessed	% of All Lake Acres Assessed
Excellent	1,167	26%	190,182	21%	18%
Good	1,931	43%	305,632	33%	28%
Fair	395	9%	274,447	30%	25%
Poor	87	2%	66,635	7%	6%
Unknown*	926	21%	78,933	9%	7%
Total	4,506	100%	915,829	100%	85%

In general, low productivity lakes (e.g., oligotrophic) are more likely to have Excellent water quality, but it is possible to have Excellent water quality in all but hypereutrophic lakes. Of the State's 69 Hypereutrophic lakes, all have Poor or unknown quality. Eutrophic lakes, however, are often naturally occurring and span the range from Excellent to Poor water quality, with the majority in the Good to Fair categories. Only 21 of the State's mesotrophic lakes are Fair, and all oligotrophic lakes are Excellent (Table 12).

Table 12. Number of lakes in poor to excellent condition by trophic status.

Condition	Hypereutrophic	Eutrophic	Mesotrophic	Oligotrophic
Excellent		95	816	256
Good		535	1396	
Fair		374	21	
Poor	38	49		
Unknown*	31	463	423	9
Total	69	1516	2656	265

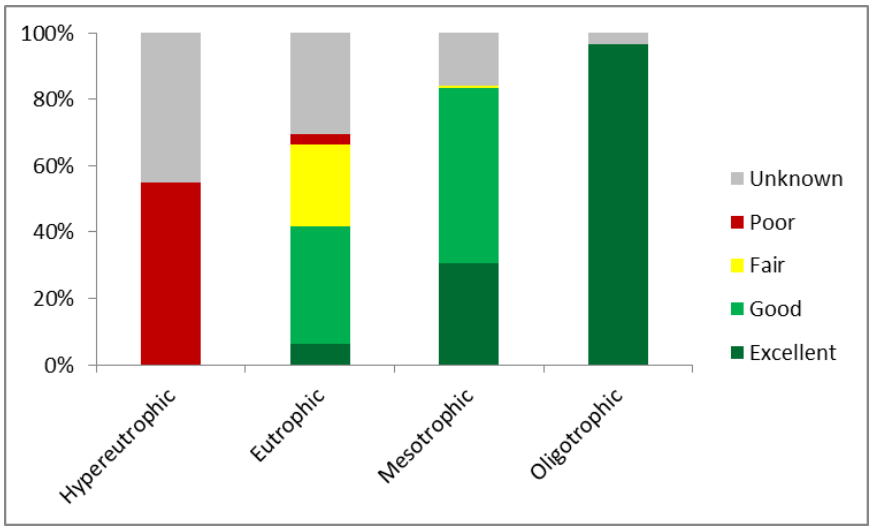


Figure 15. Percent of all assessed lakes in Excellent to Poor condition based on the Trophic Status Index. Unknown condition occurs when a lake is small or has no natural community type assigned.

Results of Statewide Condition Assessments

The vast number of water resources in the State precludes monitoring and assessing all waters in any specific timeframe. The State has over 88,000 miles of streams and nearly 47,000 miles, approximately 53%, are entered into the assessment database. WDNR generally prioritizes the collection and entry of water information for waters within watershed planning areas, or waters within areas that are showing degradation or impairment. As resources allow, additional waters will be monitored and updated in the assessment database to ensure the documentation of the State's water conditions are as comprehensive as possible.

Each waterbody is assessed for multiple designated uses depending on the available data. For a description of each designated use please see the Water Quality Standards section of this report. Below are summaries of the designated use support for each waterbody type in the state. The tables show how many miles or acres of the resource were assessed or not assessed, and of those assessed, how many are Fully Supporting, Supporting, or Not Supporting each of the four Designated Uses. For EPA summarization purposes the condition levels of Fully Supporting and Supporting should be considered "fully supporting".

Lakes – The Fish and Aquatic Life (FAL) use was the most assessed for lakes, with only 14% of the lake acreage in the database unassessed (Table 13 and Figure 16). A total of 56% of lake acres supported FAL use. Data for FAL use assessments were robust because of contributions by citizen volunteers and the ability to use satellite data (see the Citizen Involvement section for more information). Citizen volunteer work has also helped assess Recreation Use (REC); in 2012 68% and in 2014 59% of lake acres went unassessed for REC. In 2016 only 52% were unassessed. There were 14% of acres supporting and 34% not support REC.

Table 13. Summary of Designated Use Support for Lakes - Acres

Use Category	Fully Supporting	Supporting	Not Supporting	Not Assessed	Total Size
Fish Consumption	10,244.98	18,344.24	246,564.38	680,383.33	955,536.93
Fish and Aquatic Life	203,649.58	334,914.00	283,540.11	133,433.24	955,536.93
Public Health and Welfare		131,871.09		823,665.84	955,536.93
Recreation	134,023.95	1,036.38	328,441.17	492,035.43	955,536.93

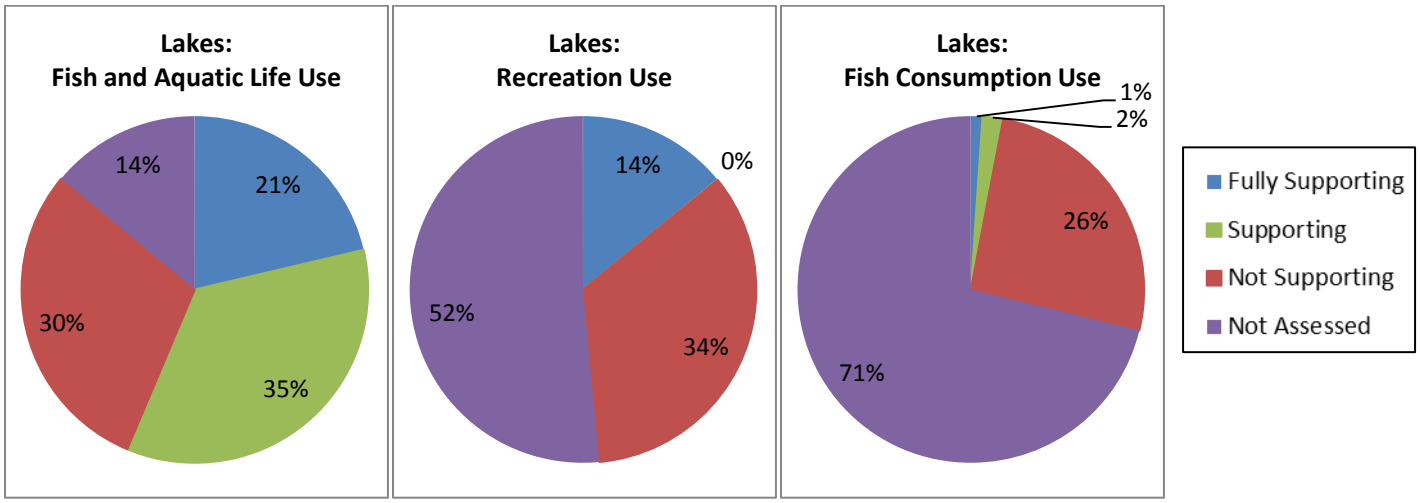


Figure 16. Percentage of lake acres supporting three different designated uses.

Impoundments – Over half of all impoundment acres do not support Fish and Aquatic Life, Recreation, and Fish Consumption uses (Table 14 and Figure 17). Nearly all impoundment acres in the database were assessed for Fish and Aquatic Life use.

Table 14. Summary of Designated Use Support for Impoundments - Acres

Use Category	Fully Supporting	Supporting	Not Supporting	Not Assessed	Total Size
Fish Consumption	13,370.21	9,654.00	68,545.43	31,641.90	123,211.54
Fish and Aquatic Life	19,173.99	24,817.46	75,139.19	4,080.90	123,211.54
Public Health and Welfare				123,211.54	123,211.54
Recreation	4,209.48	64.55	83,662.96	35,274.55	123,211.54

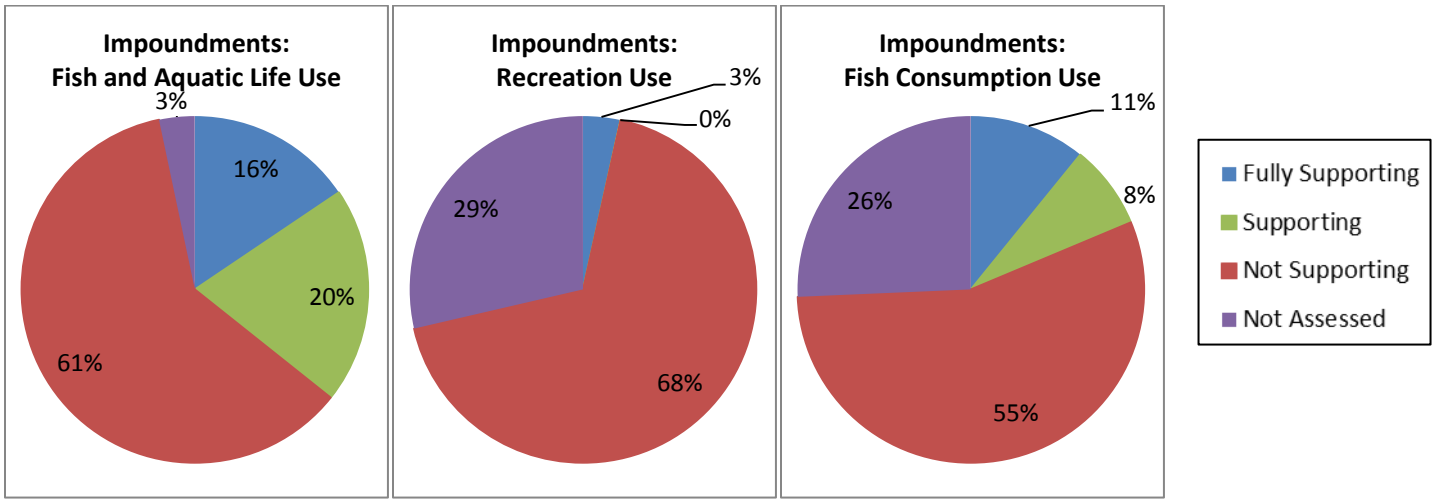


Figure 17. Percentage of impoundment acres supporting three different designated uses.

Bays/Harbors – Bays and harbors are a part of lakes and impoundments and there are more in the state than represented in Table 15 below. Bays and harbors are generally only distinguished for assessment when there is an impairment, which is reflected by the high amount of acreage that is not supporting for most uses.

Table 15. Summary of Designated Use Support for Bays/Harbors - Acres

Use Category	Fully Supporting	Supporting	Not Supporting	Not Assessed	Total Size
Fish Consumption			19,971.73	6,891.01	26,862.74
Fish and Aquatic Life	1,027.33	82.95	20,827.36	4,925.10	26,862.74
Public Health and Welfare		140.57	5,902.36	20,819.81	26,862.74
Recreation			856.59	26,006.15	26,862.74

Rivers/Streams, and Riverine Backwaters – There are approximately 88,000 stream miles in Wisconsin but only about half are in the WATERS database (Table 16). The number of miles that have been assessed has greatly increased over time (Figure 18). This increase is a combination of increased volunteer monitoring (Figure 2) and improved assessment methodology. Beginning with the 2014 cycle more of the biological data was used to assess waters. The majority of river/stream assessments are for the Fish and Aquatic Life (FAL) use and 14% of miles are considered not supporting (Table 16 and Figure 19). A full 39% of FAL assessments supported the use.

Table 16. Summary of Designated Use Support for Rivers/Streams - Miles					
Use Category	**Fully Supporting**	**Supporting**	**Not Supporting**	**Not Assessed**	**Total Size**
Fish Consumption	67.00	120.63	1518.79	45,247.73	46,954.17
Fish and Aquatic Life	12,154.45	5,955.77	6,764.75	22,079.74	46,954.17
Public Health and Welfare				46,954.15	46,954.17
Recreation	4.24	9.33	155.62	46,784.96	46,954.17

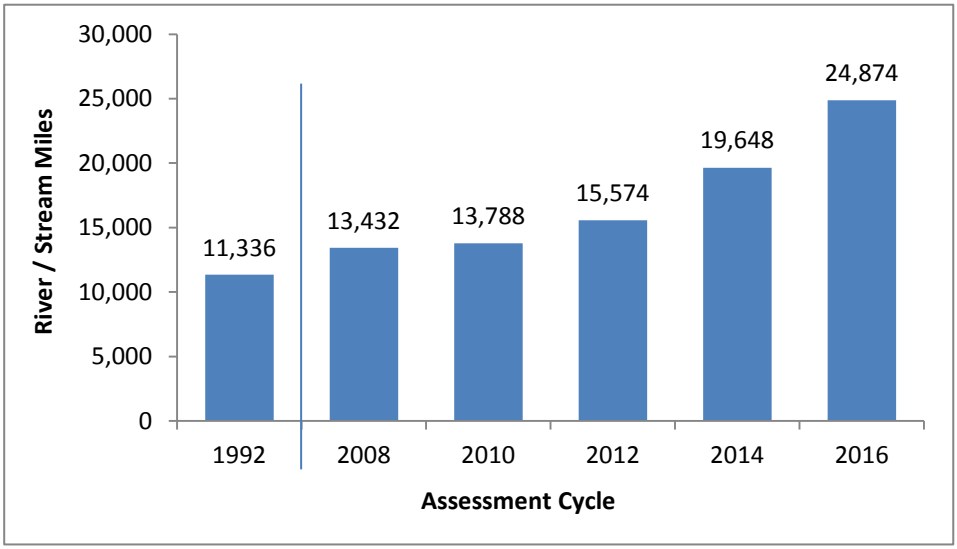


Figure 18. The number of river/stream miles that have been assessed in past assessment cycles.

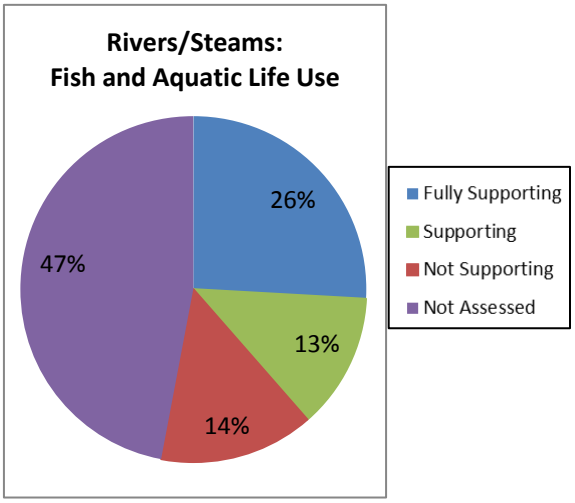


Figure 19. Percentage of river/stream miles by use support for the 2016 Fish and Aquatic Life use assessments.

Great Lakes Shoreline – Wisconsin has over 1,000 miles of Great Lakes Shoreline, with only a fraction of those shoreline miles considered assessed for Fish Consumption uses (Table 17). A little over 100 miles is considered supporting Fish and Aquatic Life use.

Table 17. Summary of Designated Use Support for Great Lakes Shoreline - Miles					
Use Category	**Fully Supporting**	**Supporting**	**Not Supporting**	**Not Assessed**	**Total Size**
Fish Consumption			268.33	700.00	968.33
Fish and Aquatic Life		112.32		856.01	968.33
Public Health and Welfare				968.33	968.33
Recreation				968.33	968.33

Great Lakes Beaches – REC use is the only use assessed for Great Lake beaches. Wisconsin has approximately 55 miles of public beach and a total of 192 coastal beaches along the shores of Lake Michigan and Superior. Of these, 17.33 miles are considered not supporting REC use (Table 18).

Table 18. Summary of Designated Use Support for Great Lakes Beaches - Miles					
Use Category	**Fully Supporting**	**Supporting**	**Not Supporting**	**Not Assessed**	**Total Size**
Fish Consumption				45.89	45.89
Fish and Aquatic Life				45.89	45.89
Public Health and Welfare				45.89	45.89
Recreation	24.9	3.66	17.33		45.89

Inland Beaches – Inland beaches are underrepresented in the State's assessment database as these areas are added when an impairment is found to exist. REC use is the only use assessed for inland beaches. Of the 11.08 miles in the assessment database, 8.02 miles (72%) are considered fully supporting and 1.7 miles (15%) are considered not supporting REC use.

Table 19. Summary of Designated Use Support for Inland Beaches - Miles

Use Category	Fully Supporting	Supporting	Not Supporting	Not Assessed	Total Size
Fish Consumption				11.08	11.08
Fish and Aquatic Life				11.08	11.08
Public Health and Welfare				11.08	11.08
Recreation	8.02	0.14	1.7	1.22	11.08

Springs – The State has many known or suspected springs, few of which are documented in the WATERS database. For the purpose of assessment, many of these springs are classified as "small lakes' or "shallow headwaters" and thus are assessed using the TSI general assessment protocols.

Table 20. Summary of Designated Use Support for Springs - Acres

Use Category	Fully Supporting	Supporting	Not Supporting	Not Assessed	Total Size
Fish Consumption				1,500.79	1,500.79
Fish and Aquatic Life	201.52	545.64	37.00	716.63	1,500.79
Public Health and Welfare				1,500.79	1,500.79
Recreation	8.00		37.00	1455.79	1,500.79

Wetlands – Few of the state's wetlands have been assessed for the 303(d) process. Assessment methods and tools have been developed for wetland assessments but these methods require a great deal of professional expertise to carry out. New assessments have not been entered into the WATERS database in several cycles.

Table 21. Summary of Designated Use Support for Wetlands - Acres

Use Category	Fully Supporting	Supporting	Not Supporting	Not Assessed	Total Size
Fish Consumption				5,011,450.45	5,011,450.45
Fish and Aquatic Life		5,009,989.00	1,000.00	461.45	5,011,450.45
Public Health and Welfare				5,011,450.45	5,011,450.45
Recreation				5,011,450.45	5,011,450.45

Five-Part Categorization

The EPA encourages States/Tribes to use a five-category system for classifying all water bodies (or segments) within its boundaries regarding the waters' status in meeting the State's/Tribe's water quality standards (Table 22). The classification system is based on designated uses for reporting on water quality. Each waterbody and designated use combination is assigned a reporting category.

Table 22: EPA Integrated reporting categories.

Category/ Subcategory	Description
Category 1	All designated uses are supported, no use is threatened.
Category 2	Available data and/or information indicate that some, but not all, designated uses are supported.
Category 3	There is insufficient available data and/or information to make a use support determination.
Category 4	Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed.
Subcategory 4a	A State developed TMDL has been approved by EPA or a TMDL has been established by EPA for any segment-pollutant combination.
Subcategory 4b	Other required control measures are expected to result in the attainment of an applicable water quality standard in a reasonable period of time.
Subcategory 4c	The non-attainment of any applicable water quality standard for the segment is the result of pollution and is not caused by a pollutant.
Category 5	Available data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed.

WDNR has further refined subcategories. Category 5 (waters not meeting water quality standards and a TMDL is needed) subcategories distinguish among differing types of impaired waters and TMDL priorities. WDNR created 5B to identify waters impaired by mercury mainly from atmospheric sources. Within the last three assessment periods, WDNR has added additional subcategories under Category 5. These additional subcategories are defined in Table 23.

Table 23: WDNR's Integrated Reporting subcategories for impaired waters requiring TMDLs.

Subcategory	Definition
Category 5A	Available information indicates that at least one designated use is not met or is threatened and/or the anti-degradation policy is not supported, and one or more TMDLs are still needed. This is the default category for impaired waters.
Category 5B	Available information indicates that atmospheric deposition of mercury has caused the impairment and no other sources have been identified.
Category 5C	Available information indicates that non-attainment of water quality standards may be caused by naturally occurring or irreversible human-induced conditions.
Category 5P	Available information indicates that the applicable total phosphorus criteria are exceeded; however, biological impairment has not been demonstrated (either because bioassessment shows no impairment or because bioassessment data are not available).
Category 5W	Available information indicates that water quality standards are not met; however, the development of a TMDL for the pollutant of concern is a low priority because the impaired water is included in a watershed area addressed by at least one of the following WDNR-approved watershed plans: adaptive management plan, adaptive management pilot project, lake management plan, or Clean Water Act Section 319-funded watershed plan (i.e., nine key elements plan).

Table 24 shows how many miles or acres for each waterbody type are in each listing category. Any water in Categories 4 or 5 are considered impaired. Over 50% of assessed river/stream miles, beach miles, and lake acres were placed in Category 2 because at least one designated use was supported (Figure 20). These waters are not considered impaired. Of the impaired river miles, lake acres, and impoundment acres the majority require a TMDL.

Table 24: Waterbody miles and acres in each listing Category. Wisconsin does not have any waters in Categories 1, 4B, 4C, or 5W.

Waterbody Type	Category							Total
	2	3	4A	5A	5B	5C	5P	
River/stream (miles)	13,006.93	26,319.22	790.57	4,726.89	27.07	17.61	2,065.88	46,954.17
Lake (acres)	410,221.60	149,589.68	24,625.22	302,636.98	46,117.04	7,871.41	14,475.00	955,536.93
Impoundment (acres)	16,478.05	6,891.02	4,353.90	82,228.96	12,587.37		672.24	123,211.54
Beaches (miles)	36.72	1.22		19.03				56.97

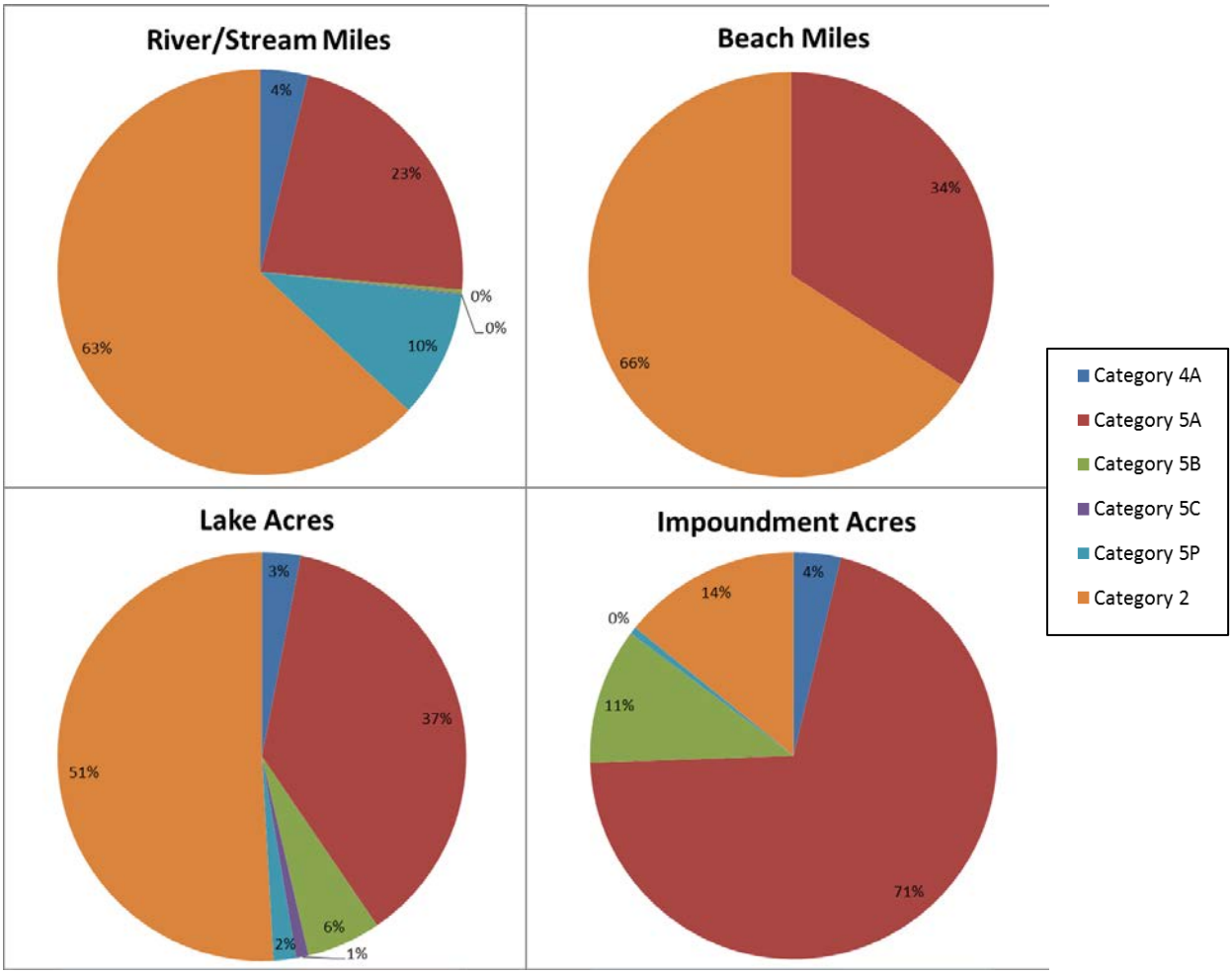


Figure 20. A breakdown of listing category by waterbody type for assessed waters.

Proposed 2016 303(d) Impaired Waters List

Impaired waters, as defined by Section 303(d) of the federal CWA, are those waters that are not meeting the State's water quality standards. Every two years states are required to submit a list of impaired waters to EPA for approval.

Summary of Pollutants and Impairments

Each waterbody can have multiple pollutant listings and each pollutant can have multiple impairments (Table 25). The pollutant is considered the cause of the impairment; in EPA terminology what WDNR terms a 'pollutant' is called a 'cause'. In the tables and figures below the pollutants and impairments are summarized by waterbody miles or acres. The sum of miles/acres for any waterbody type will be greater than the total number of listed miles/acres because waters can be listed for multiple pollutants and impairments.

Table 25. An example of pollutant-impairments for a single lake.

Pollutant	Impairment(s)
Total Phosphorous	Excess Algal Growth, Eutrophication, Low DO
Mercury	Contaminated Fish Tissue
Total Suspended Solids	Degraded Habitat Low DO

Freshwater Lakes – Over half, 56%, of lake acres are listed for Total Phosphorus (Figure 21). Total Phosphorus is one of the only pollutants consistently assessed for multiple uses in lakes (Recreation use and Fish and Aquatic Life use), which accounts for the higher percentage of lake acres attributed to the pollutant (Table 26). The impairments associated with total phosphorus, such as eutrophication, excess algal growth, and water quality use restrictions, also cover a large number of lake acres (Table 27). Many acres are also listed for the pollutants Mercury and PCBs under the Fish Consumption use.

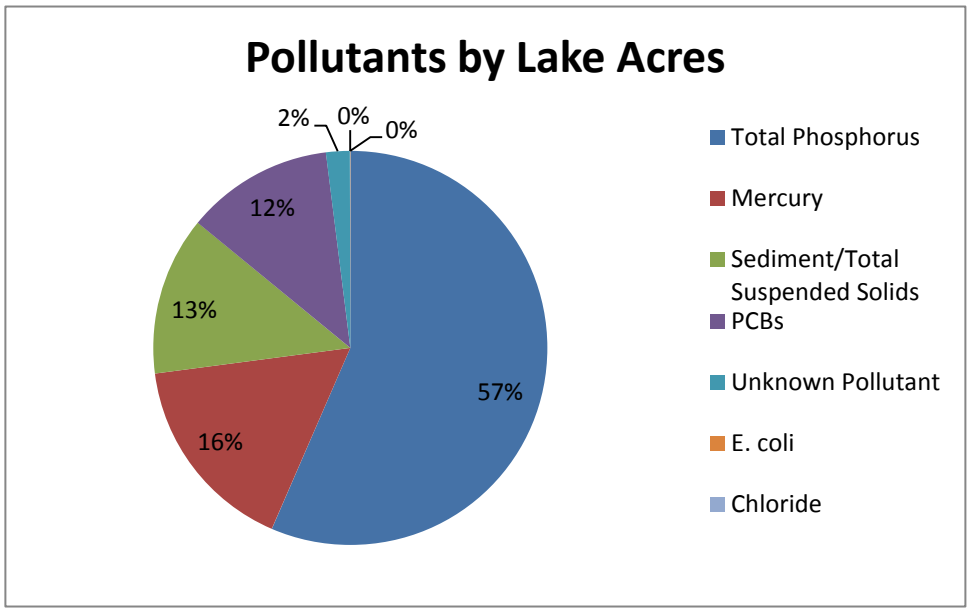


Figure 21. Pollutants in lakes by percentage of lake acres for all designated uses combined.

Table 26. Pollutant by lake acreage for each designated use.

Fish and Aquatic Life Use	Acres
Chloride	27.44
Mercury	375.06
PCBs	4,222.69
Sediment/Total Suspended Solids	203,472.01
Total Phosphorus	420,587.21
Unknown Pollutant	8,476.47

Recreation Use	Acres
E. coli	395.29
Total Phosphorus	463,023.93
Unknown Pollutant	22,161.84

Fish Consumption Use	Acres
Mercury	255,899.68
PCBs	184,611.64

Table 27. Impairment by lake acreage for each designated use.

Fish and Aquatic Life Use	Acres
Acute Aquatic Toxicity	13.72
Chronic Aquatic Toxicity	5,997.19
Contaminated Fish Tissue	375.06
Contaminated Sediment	4,222.69
Degraded Biological Community	120
Degraded Habitat	39,490.20
Elevated Water Temperature	390.23
Elevated pH	3,528.35
Eutrophication	189,918.30
Excess Algal Growth	840
Fish Kills	72.61
Impairment Unknown	24,936.59
Low DO	159,937.65
Turbidity	156,630.96
Water Quality Use Restrictions	42,038.71

Recreation Use	Acres
Degraded Biological Community	120
Excess Algal Growth	261,611.08
Impairment Unknown	27,419.78
Low DO	8,404.93
Recreational Restrictions - Pathogens	395.29
Water Quality Use Restrictions	185,343.98

Fish Consumption Use	Acres
Contaminated Fish Tissue	289,935.15

Freshwater Impoundments – As with lakes the impoundments have the highest percentage of acres listed for the pollutant Total Phosphorus (Figure 22).

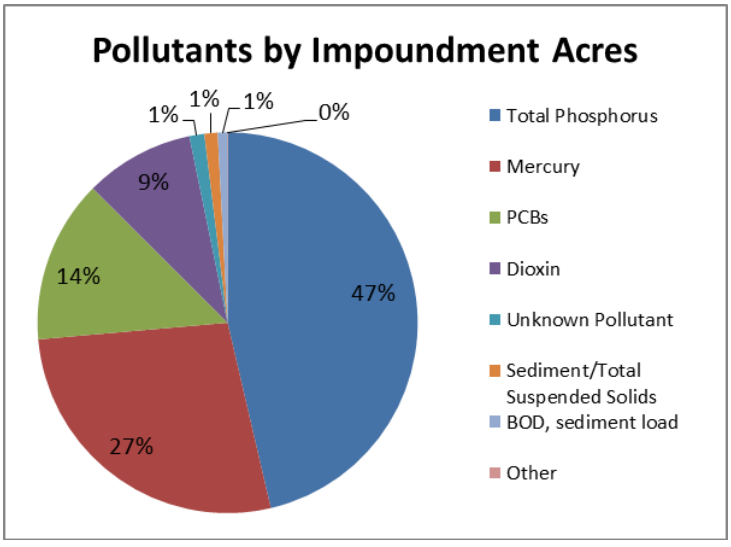


Figure 22. Pollutants in impoundments by percentage of acres for all designated uses combined.

Table 28. Pollutant by impoundment acreage for each designated use.

Fish and Aquatic Life Use	Acres
BOD, sediment load	2,953.37
Mercury	5,480.58
PAHs	1.26
PCBs	37.11
Sediment/Total Suspended Solids	4,286.26
Total Phosphorus	90,314.13
Unknown Pollutant	284.31
Unspecified Metals	125.2
Recreation Use	**Acres**
E. coli	64.55
Total Phosphorus	85,867.14
Unknown Pollutant	4,554.65
Fish Consumption Use	**Acres**
Dioxin	35,386.44
Mercury	98,187.69
PCBs	52,656.51

Table 29. Impairment by impoundment acreage for each designated use.

Fish and Aquatic Life Use	Acres
Chronic Aquatic Toxicity	347.54
Contaminated Fish Tissue	5,193.44
Contaminated Sediment	263.54
Degraded Habitat	3,022.52
Elevated Water Temperature	1.26
Elevated pH	4,734.70
Eutrophication	35,256.71
Impairment Unknown	109.24
Low DO	40,199.61
Turbidity	24.74
Water Quality Use Restrictions	12,942.50
Recreation Use	**Acres**
Excess Algal Growth	23,366.28
Impairment Unknown	2,967.74
Recreational Restrictions - Blue Green Algae	9,000.00
Recreational Restrictions - Pathogens	64.55
Water Quality Use Restrictions	51,042.94
Fish Consumption Use	**Acres**
Chronic Aquatic Toxicity	353.64
Contaminated Fish Tissue	97,480.41
Contaminated Sediment	353.64

Bays and Harbors – The largest percentage of bay/harbor acres are listed for PCBs, the majority of which are associated with Contaminated Fish Tissue impairment (Figure 23 and Table 31).

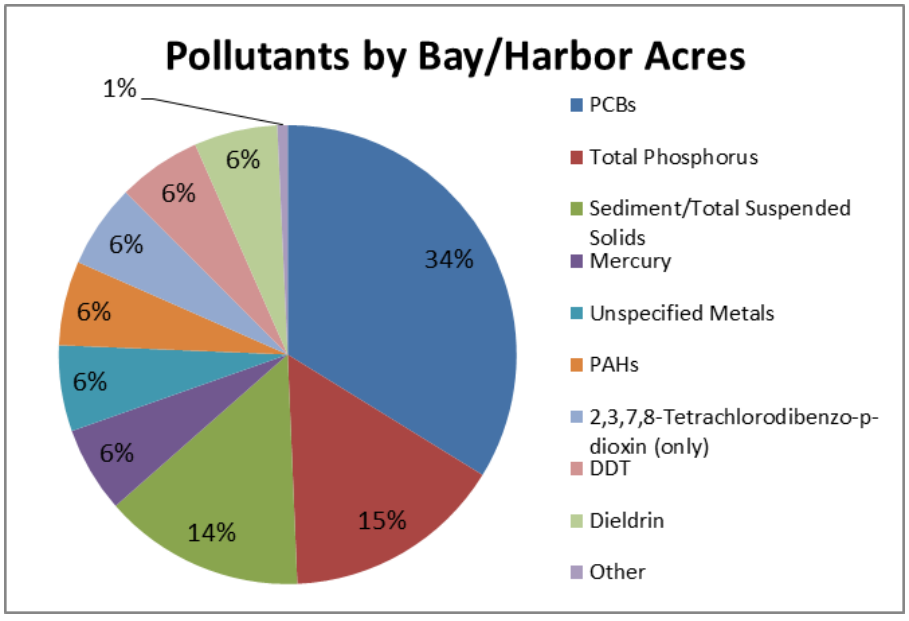


Figure 23. Pollutants in bays and harbors by percentage of acres for all designated uses combined.

Table 30. Pollutant by bay/harbor acreage for each designated use.

Fish and Aquatic Life Use	Acres
Foam/Flocs/Scum/Oil Slicks	18.51
Lead	140.57
PAHs	5,954.11
PCBs	13,867.36
Sediment/Total Suspended Solids	14,231.23
Total Phosphorus	14,956.18
Unknown Pollutant	11.35
Unspecified Metals	6,066.51
Recreation Use	**Acres**
Total Phosphorus	603.54
Unknown Pollutant	554.82
Fish Consumption Use	**Acres**
Mercury	6,067.94
PCBs	19,971.73
Public Health and Welfare Use	**Acres**
2,3,7,8-Tetrachlorodibenzo-p-dioxin (only)	5,902.36
DDT	5,902.36
Dieldrin	5,902.36

Table 31. Impairment by bay/harbor acreage for each designated use.

Fish and Aquatic Life Use	Acres
Chronic Aquatic Toxicity	6,094.48
Contaminated Sediment	14,024.55
Degraded Habitat	13,867.36
Elevated pH	363.87
Eutrophication	724.95
Low DO	13,867.36
Recreation Use	**Acres**
Excess Algal Growth	554.82
Non-Native Aquatic Plants	301.77
Water Quality Use Restrictions	301.77
Fish Consumption Use	**Acres**
Contaminated Fish Tissue	19,971.73
Public Health and Welfare Use	**Acres**
Contaminated Sediment	5,902.36

Rivers and Streams – The most stream miles are listed for the pollutant Total Phosphorus (46%) followed by PCBs (16%), Sediment/Total Suspended Solids (15%), and Mercury (9%) (Figure 24). Total Phosphorus is only a pollutant under the Fish and Aquatic Life use, unlike for lakes.

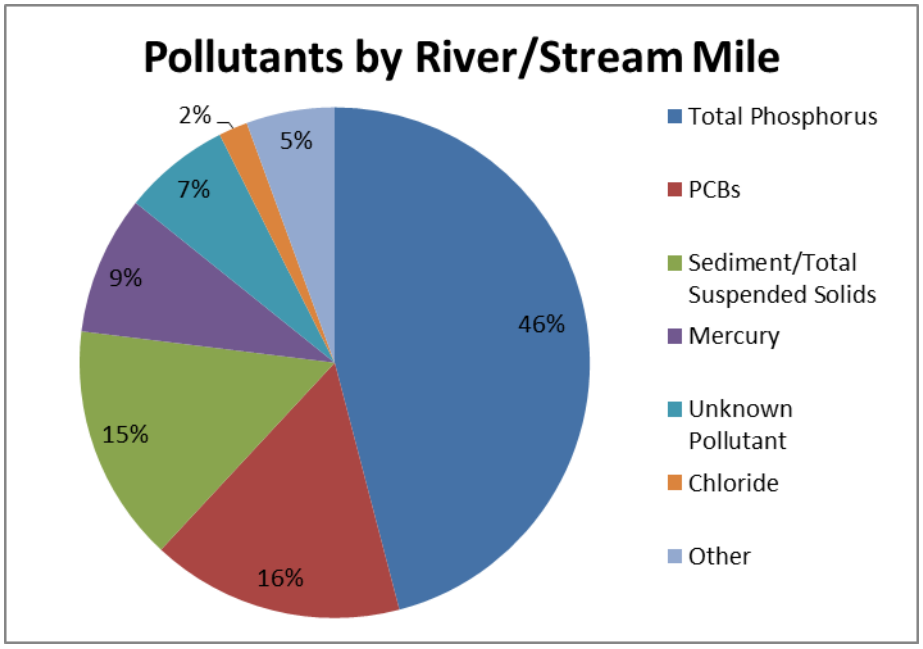


Figure 24. Pollutants in rivers and streams by percentage of miles for all designated uses combined. For pollutants covered by 'Other' see Table 32.

Table 32. Pollutant by river/stream mileage for each designated use.

Fish and Aquatic Life Use	Miles
Ammonia (Unionized) - Toxin	65.43
Arsenic	9.88
BOD	61
BOD, sediment load	43.58
Cadmium	2.25
Chloride	233.41
Copper	0.54
Creosote	18.12
Degraded Habitat	10.45
Elevated Water Temperature	31.44
Fish Barriers (Fish Passage)	3.25
Foam/Flocs/Scum/Oil Slicks	1.76
Lead	31.74
Mercury	16.44
Other flow regime alterations	4.96
PAHs	32.97
PCBs	274.36
Sediment/Total Suspended Solids	1,913.65
Total Phosphorus	5,840.57
Unknown Pollutant	863.58
Unspecified Metals	84.46
Zinc	19.59
Recreation Use	**Miles**
E. coli	45.85
Fecal Coliform	116.51
Fish Consumption Use	**Miles**
Cadmium	2.25
Dioxin	29.13
Mercury	873.42
PCBs	1,530.71
PFOs	97.3

Table 33. Impairment by river/stream mileage for each designated use.

Fish and Aquatic Life Use	Miles
Acute Aquatic Toxicity	128.8
Chronic Aquatic Toxicity	273.89
Contaminated Fish Tissue	62.5
Contaminated Sediment	222.22
Copper	0.54
Degraded Biological Community	1,488.32
Degraded Habitat	1,541.92
Degraded Submerged Aquatic Vegetation (SAV)	48.1
Elevated Water Temperature	697.98
Elevated pH	14.06
Eutrophication	68.16
Excess Algal Growth	8.09
Fish Barriers (Fish Passage)	3.25
Impairment Unknown	2,601.85
Low DO	860.29
Low flow alterations	6.15
Sediment/Total Suspended Solids	19.47
Turbidity	17.51
Water Quality Use Restrictions	1,050.14
Recreation Use	**Miles**
Recreational Restrictions - Pathogens	156.86
Fish Consumption Use	**Miles**
Acute Aquatic Toxicity	2.25
Contaminated Fish Tissue	1,817.90
Contaminated Sediment	20.62

Beaches – Inland lake beaches and Great Lake beaches were only listed for the pollutant *E. coli* with associated Recreational Restrictions – Pathogens impairment (Tables 34-37).

Table 34. Inland Beach Pollutant Miles by Designated Use.

Recreation Use	Miles
E. coli	3.97

Table 35. Impairment by Inland Beach Mile (all designated uses).

Recreation Use	Miles
Recreational Restrictions - Pathogens	3.97

Table 36. Great Lake Beach Pollutant Miles by Designated Use.

Recreation Use	Miles
E. coli	31.86

Table 37. Impairment by Great Lake Beach Mile (all designated uses).

Recreation Use	Miles
Recreational Restrictions - Pathogens	31.86

Great Lake Shoreline – Great Lake shoreline miles are listed for the pollutants Mercury and PCBs that are causing Contaminated Fish Tissue impairment.

Table 38. Great Lake Shoreline Pollutant Miles by Designated Use.

Fish Consumption Use	Miles
Mercury	259.39
PCBs	268.33

Table 39. Impairment by Great Lake Shoreline Mile (all designated uses).

Fish Consumption Use	Miles
Contaminated Fish Tissue	268.33

Springs – One spring-lake is impaired for Total Phosphorus with an unknown impairment for both FAL and REC uses. This occurs when Total Phosphorus exceeds listing criteria but Chlorophyll-*a* data do not.

Table 40. Lake Pollutant Acreage by Designated Use

Fish and Aquatic Life Use	Acres
Total Phosphorus	37.00
Recreation Use	**Acres**
Total Phosphorus	37.00

Table 41. Impairment by Lake Acreage (all designated uses).

Fish and Aquatic Life Use	Acres
Impairment Unknown	37.00
Recreation Use	**Acres**
Impairment Unknown	37.00

Wetlands – A total of 1,000 acres of wetlands are considered impaired. These acres are listed for Sediment/Total Suspended Solids and Total Phosphorus.

Table 42. Wetland Pollutant Acres by Designated Use

Fish and Aquatic Life Use	Acres
Sediment/Total Suspended Solids	1,000.00
Total Phosphorus	1,000.00

Table 43. Impairment by Wetland Acres (all designated uses).

Fish and Aquatic Life Use	Acres
Degraded Habitat	1,000.00
Low DO	1,000.00

C4. Trends Analysis

Long-Term Phosphorus Trends in Lakes

Anthropogenic nutrient loading is a major stressor of lakes worldwide. Although watershed management efforts have reduced nutrient loading, eutrophication may worsen as agriculture expands, land develops, and precipitation intensifies. The WDNR has been collecting total phosphorus (TP) on 62 lakes for up to 45 years, providing an opportunity to test whether phosphorus concentrations have changed over time. These lakes occur throughout the state in agricultural, urbanized, and forested watersheds and range in size, trophic status, and hydrology. I used linear models to test for change in annual mean TP over time.

Total phosphorus significantly increased in six lakes, decreased in eight lakes, and did not change in 44 lakes (Figure 25). Lakes with a decreasing trend were located in southern Wisconsin watersheds with significantly more developed land. These lakes were also shallower (mean maximum depth of 29 feet), more eutrophic (median total phosphorus of 56 ug/L), and had an earlier period of record dating back to the mid-1970's. In contrast, most lakes with an increasing TP trend were deeper (mean maximum depth of 67 feet), oligotrophic or mesotrophic (median TP of 12 ug/L), and had a more recent period of record dating back to the late 1980's. Lakes with increasing TP trends were in forested, northern watersheds.

Long-term data sets such as this one elucidate trends in time and space and provide opportunity to understand causes of change, be they environmental drivers or the result of direct management actions. Future analyses will examine potential drivers of changes in TP over time and will also test for trends in other parameters such as: surface water temperature, hypolimnetic dissolved oxygen, water clarity, chlorophyll-*a*, nitrogen, pH, alkalinity, color, calcium, and magnesium.

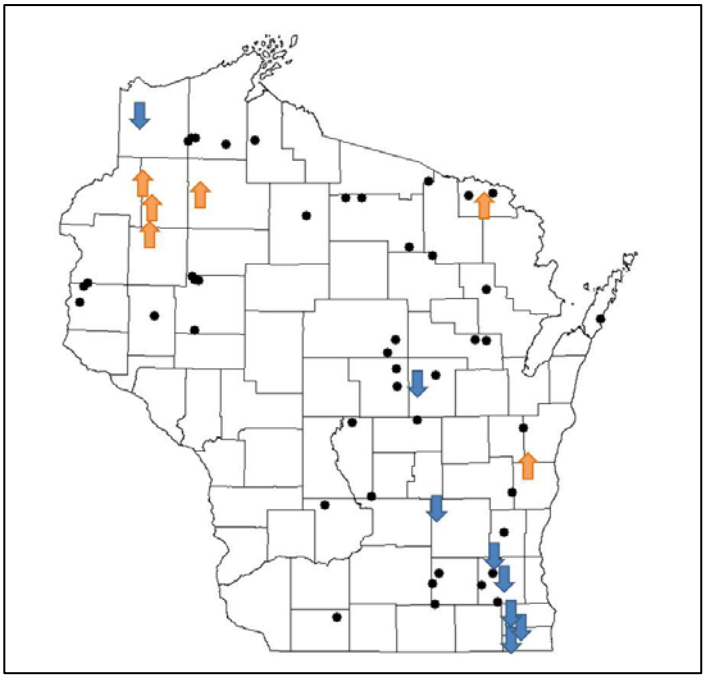


Figure 25. Wisconsin lakes that exhibit a significant increasing (upward orange arrow), significant decreasing (downward blue arrow), or no trend (black circle) in total phosphorus over the past 10 to 45 years.

Long-Term Water Quality Trends in Wisconsin Rivers

As described in the monitoring strategy section, the WDNR has been monitoring water quality at 38 river stations for periods of 15 to 55 years. Long-term trends in these datasets were analyzed with the Fluxmaster model, which estimates linear trends while controlling for the effects of discharge and season on water quality.

River water quality trends were highly variable among parameters and regions of the state. Concentrations of total phosphorus and total suspended solids have decreased in most rivers over the last several decades. In contrast, concentrations of chloride and nitrate have increased in most rivers over this period. The largest reductions in total phosphorus occurred in southern Wisconsin, and many of the rivers with large phosphorus reductions also had large suspended solids reductions. Nitrate concentrations increased in most rivers in agricultural basins in Wisconsin. Chloride concentrations increased in nearly all rivers in Wisconsin, even in mostly forested basins.

The reasons for these trends are likely a combination of changes in land management practices, including agricultural production systems, erosion control, and nutrient management, improvements in wastewater treatment, and increases in road salt use. Further analyses will evaluate non-linear trends to identify periods where the most significant changes occurred, and will determine whether trends vary among seasons. These more detailed analyses will provide more certainty about the causes of improvements and declines, and will help target where and when further work is needed.

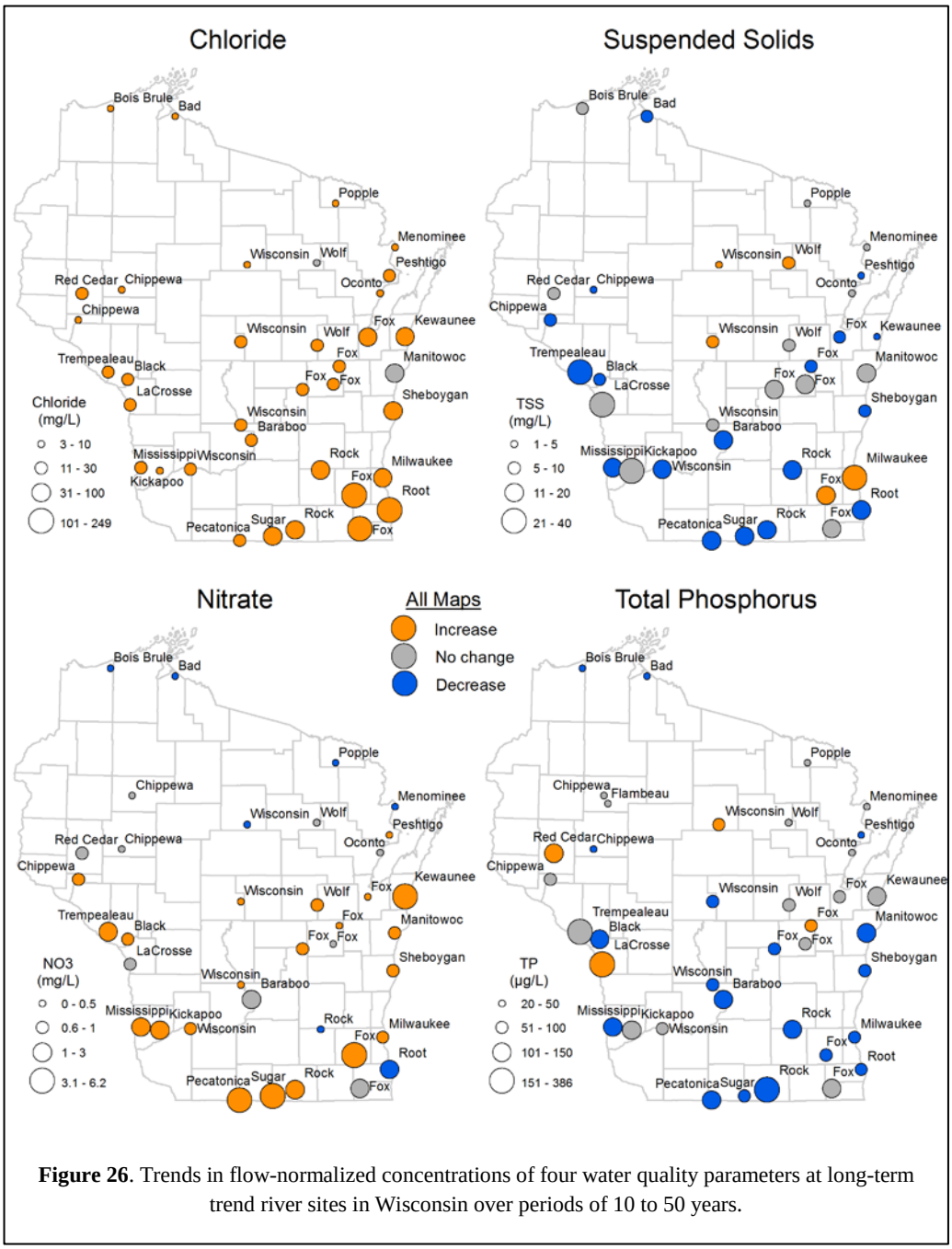


Figure 26. Trends in flow-normalized concentrations of four water quality parameters at long-term trend river sites in Wisconsin over periods of 10 to 50 years.

C5. Groundwater

The Groundwater Coordinating Council prepares an annual report each year that summarizes the operations and activities of the council, describes the state of the groundwater resource and its management, and makes recommendations. The report is due each August for the preceding fiscal year. The latest report is for fiscal year 2015 (July 1, 2014 – June 30, 2015) and is contained on the WDNR website: http://dnr.wi.gov/topic/Groundwater/GCC/.

Drilling a well on rural property.

C6. Wetlands

In the period since Wisconsin's 2010 Water Quality Report to Congress, the WDNR wetland monitoring and assessment team has completed the following studies to develop our ability to assess both the condition and function of Wisconsin's Wetlands.

National Wetland Condition Assessment (NWCA) and WI Lake Michigan Basin Intensification Study

As part of its share of the 2011 NWCA sites, a WDNR crew surveyed 17 Assessment Areas using the NWCA protocol. That data was incorporated into the nationwide study. The NWCA report is currently in its final editing and is expected to be released in late April 2016 as the *National Wetland Condition Assessment 2011: A Collaborative Survey of the Nation's Wetlands*. There will also be a separate *2011 National Wetland Condition Assessment Technical Report*.

As a complement to the 2011 NWCA, Wisconsin received a grant to conduct the2011-2012 Wisconsin Intensification Study in the Lake Michigan Basin (Figure 27). This study used the same probabilistic design and methods as the NWCA

to enable an assessment of wetland condition in the Intensification Study Area. Field work was conducted in 2011 and 2012 and a total of 50 sites were surveyed across the study area (Figure 27). WDNR data analysis occurred concurrently with the EPA NWCA data analysis and was completed in late 2015. The final report is expected to also be completed in late April 2016 and will mark the completion of the first comprehensive probabilistic survey of wetland condition within the State of Wisconsin.

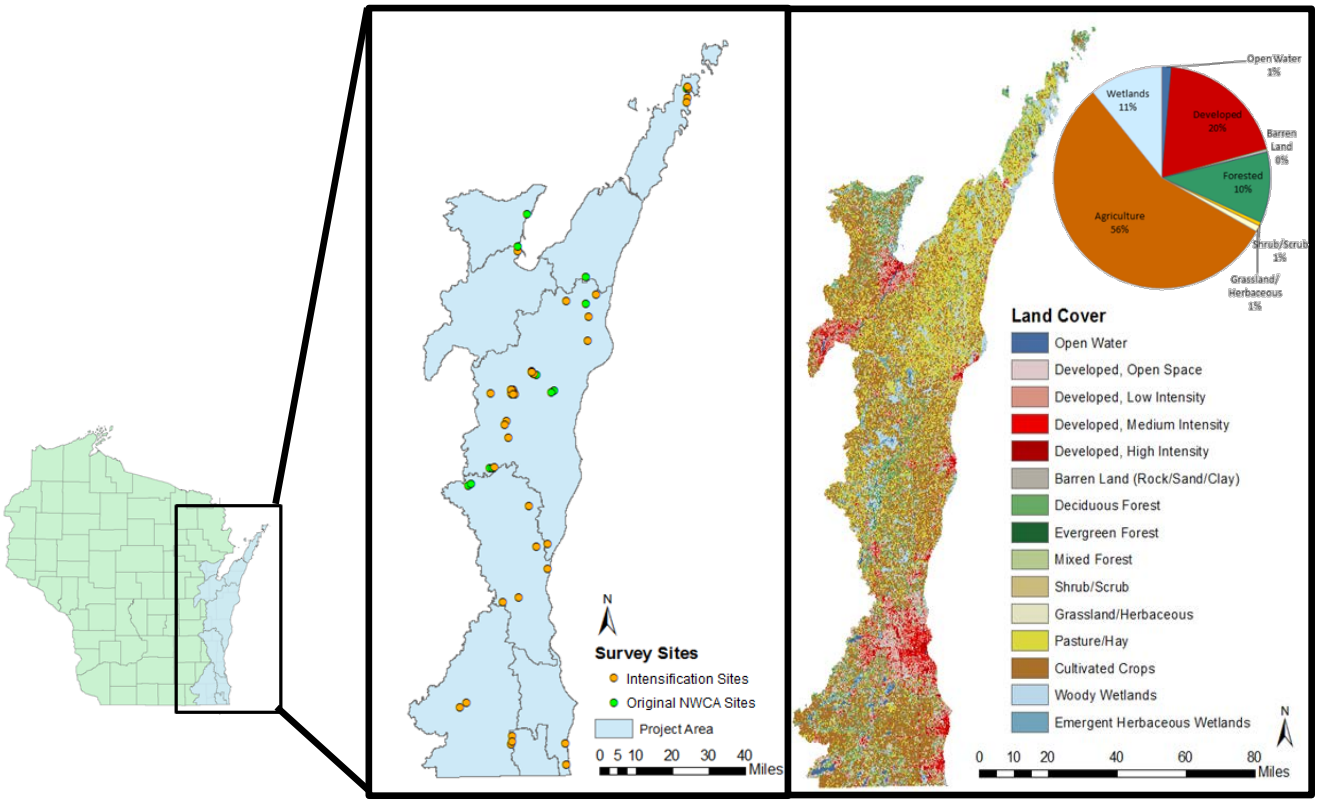


Figure 27. A map of the Wisconsin Intensification Study area, including location of sites and current land cover.

A key preliminary finding of the study involved an assessment of plant community condition in relation to potential wetland ecosystem stressors. Using the criteria and calculations published in *Floristic Quality Assessment Benchmarks for Wetlands in Southeast Wisconsin* (Bernthal et al. 2007), floristic quality was assessed for sites surveyed in the Wisconsin Intensification Study. One measure calculated was "Mean C", or the mean coefficient of conservatism for a site (Figure 28). This is a simple metric used in Floristic Quality Assessment, which has been shown in other studies to be a reliable, robust indicator of wetland condition (DeBerry et al. 2015). The probabilistic study design allowed for calculation of the percent of wetland area within the study area under a given condition. Overall, most wetlands in the Intensification Study area were determined to be in fair condition based on floristic quality metrics (Figure 28). However, when wetlands were divided into those that were wooded (forested and shrub combined - PW) and those that were herbaceous (dominated by grasses, sedges, cattails, wildflowers and other non-woody plants - PH) the herbaceous wetlands were in much poorer condition than the wooded wetlands (Figure 28).

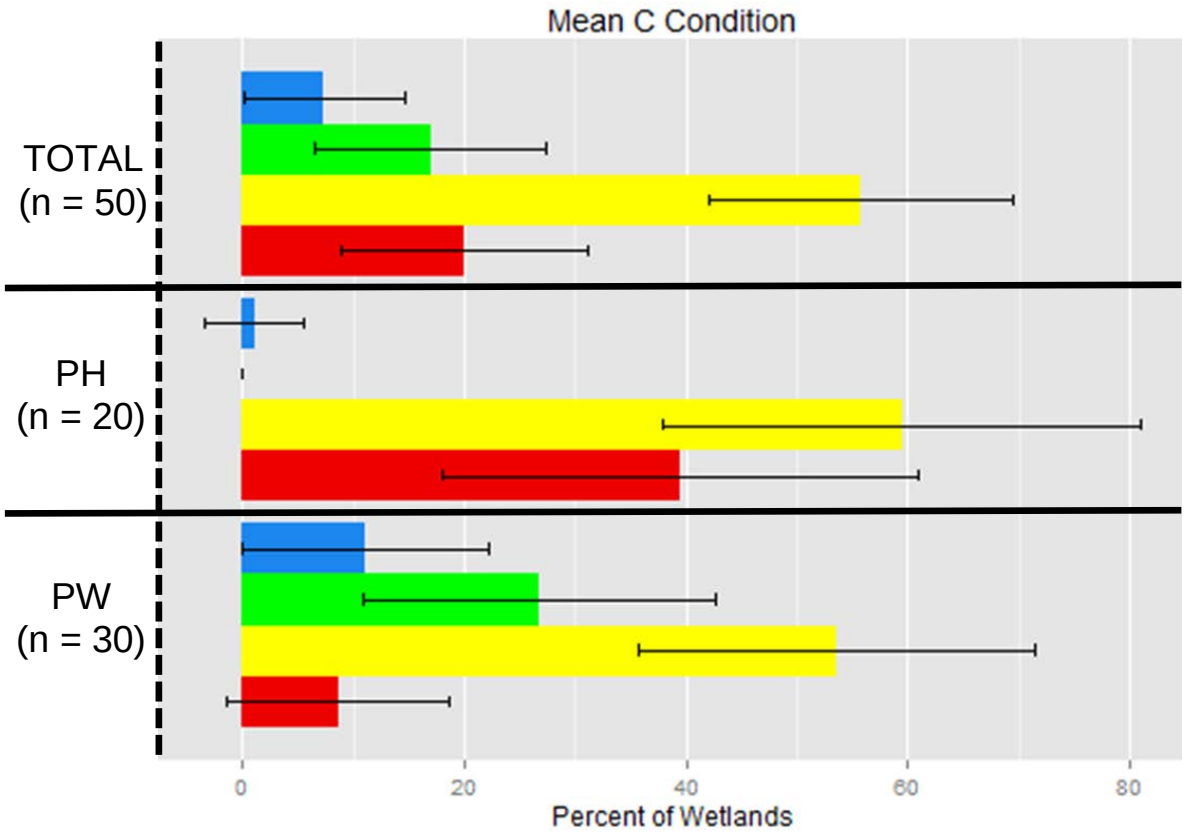


Figure 28. Vegetation condition for wetlands in the Wisconsin Intensification Study Area.

The data were further analyzed to identify factors most influencing plant community condition. Mean C scores were inversely related to the relative percent (%) cover of *Phalaris arundinacea* (reed canary grass), meaning that wetland plant communities with a high percentage of reed canary grass were more likely to be in poorer overall condition (Figure 29).

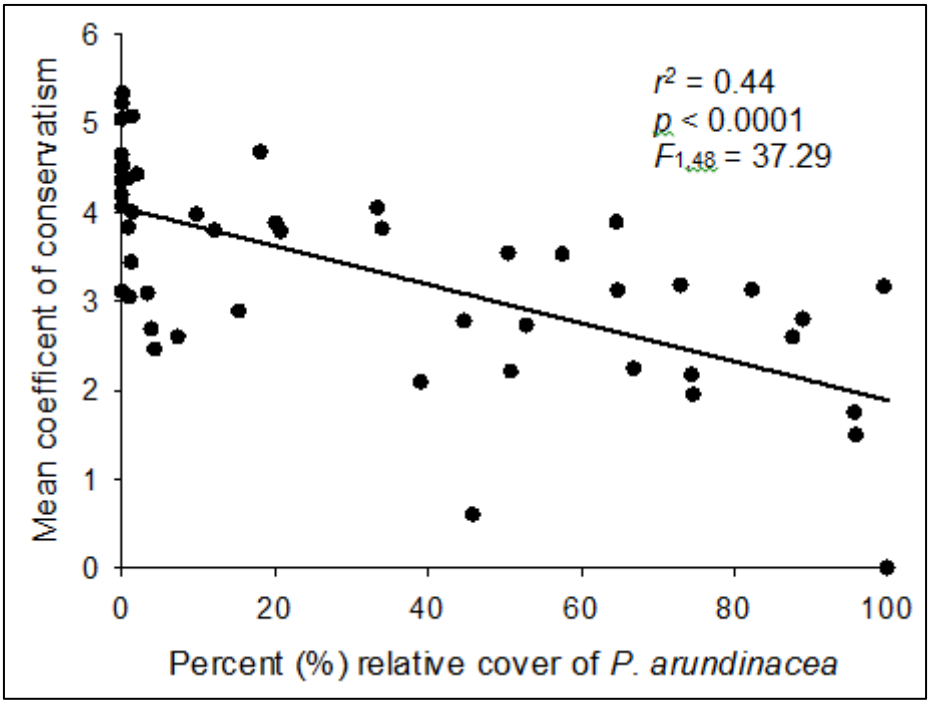


Figure 29. A comparison of Mean C (Floristic Quality) versus the relative % cover of reed canary grass of wetlands sampled during the 2011-2012 Wisconsin Intensification Study.

An examination of absolute cover identified which invasive species were most dominant in these plant communities. Reed canary grass (*Phalaris arundinacea*) was far and away the most dominant species by an order of magnitude, followed by hybrid cattail. Narrow-leaved cattail and the two invasive buckthorn shrubs were also identified as common invasive species present in the study area.

Table 44. A list of the most abundant non-native plants observed in wetlands of the 2011-2012 Wisconsin Intensification Study.

Latin name	Common name	Overall rank	Total absolute cover	Abundance per site per plot
Phalaris arundinacea	Reed canary grass	1	10026.3	40.1%
Typha X glauca	Hybrid cattail	5	1174.2	4.7%
Typha angustifolia	Narrow-leaved cattail	24	340.1	1.4%
Rhamnus frangula	Glossy buckthorn	25	333	1.3%
Rhamnus cathartica	Common buckthorn	27	253.2	1.0%

This finding was expected based on previous reed canary grass mapping studies completed by WDNR, which found that most of the watersheds in the Study Area had between 5% and 16% of their wetlands dominated by reed canary grass as of the early 2000s (Hatch and Bernthal 2008; Figure 30).

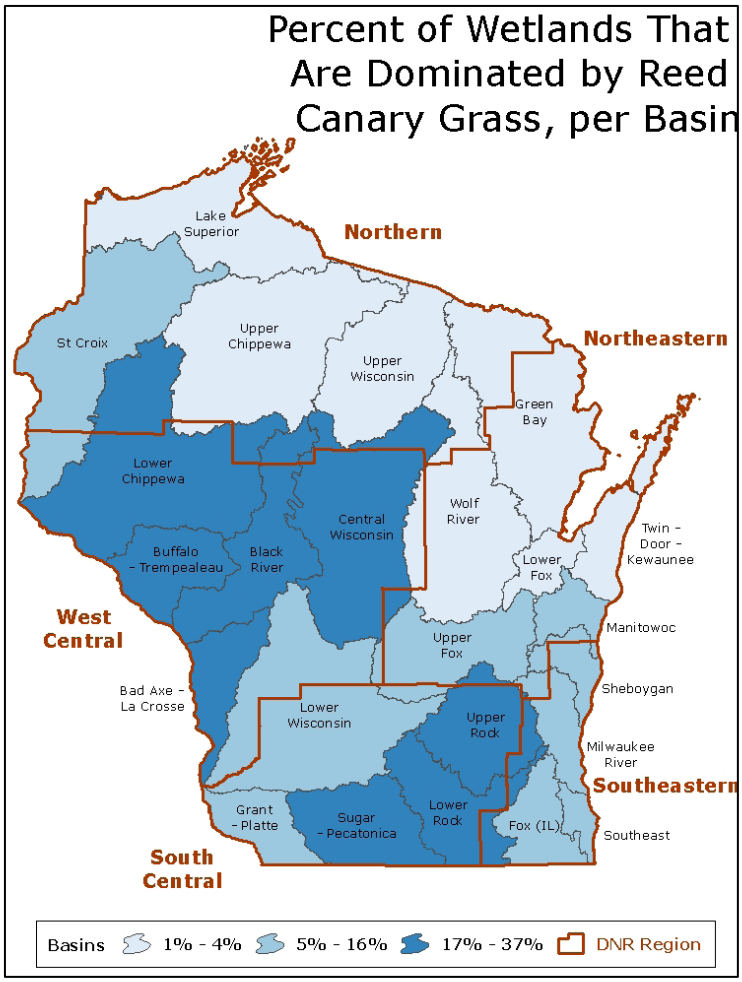


Figure 30. A map of Wisconsin watersheds and the proportion of wetlands within watersheds that had plant communities dominated by reed canary grass, a pervasive invasive plant species in Wisconsin, as of the early 2000s.

Finally, WDNR further investigated drivers of plant community condition (Mean C) in relation to soil chemistry and physical properties. Floristic condition was inversely related to the proportion of soil phosphorus bound to iron and aluminum in the soil (expressed as a %; Figure 31). This pool of phosphorus reflected both naturally occurring soil phosphorus and phosphorus which accumulated in wetland soils from current and historic land use practices (Nair 2014). These preliminary results suggested that plant community condition (and overall wetland condition) in the study area was negatively influenced by phosphorus that accumulated in wetland soils, likely driven by poor historic and current land use practices. This finding warrants future study and verification both in the study area and statewide.

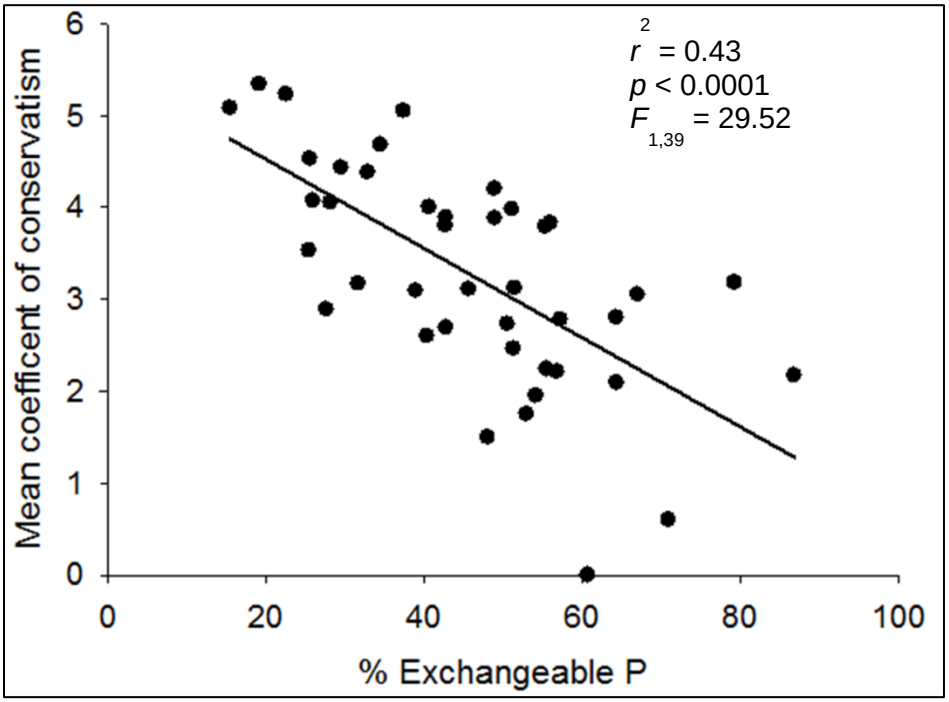


Figure 31. A comparison of Mean C (Floristic Quality) versus the % Soil Exchangeable Phosphorus of wetlands sampled during the 2011-2012 Wisconsin Intensification Study. Exchangeable phosphorus is the proportion of soil phosphorus bound to soil iron and aluminum, which may become available to plants during fluctuations of hydrology and soil oxygen conditions.

References:

Bernthal, T.W., J. Kline, and A. Reis. 2007. Floristic quality assessment benchmarks for wetlands in Southeastern Wisconsin. Wisconsin Department of Natural Resources. Madison, WI. Final Report to United States Environmental Protection Agency, Region V Wetland Grant #CD965118-01-0.

DeBerry, D.A., S.J. Chamberlain, and J.W. Matthews. 2015. State of the Science Report: Trends in floristic quality assessment for wetland evaluation. *Wetland Science and Practice* 32:12-22.

Hatch, B.K. and T.W. Bernthal. 2008. Mapping Wisconsin wetlands dominated by reed canary grass, *Phalaris arundinacea* L.: a landscape level assessment. Wisconsin Department of Natural Resources. Madison, WI. Final Report to United States Environmental Protection Agency, Region V Wetland Grant #96544501-0. DNR PUB-WT-900 2008. http://dnr.wi.gov/topic/wetlands/documents/RCGFinalReport10_08.pdf

Nair, V.D. 2014. Soil phosphorus saturation ratio for risk assessment in land use systems. *Frontiers in Environmental Science* 2(6) doi: 10.3389/fenvs.2014.00006

D. Public Participation

Continued Public Participation in Developing the 2016 Integrated Report

One of Wisconsin's goals for the 2016 assessment cycle was to provide opportunity for public participation, and greater transparency about our listing process. To accomplish this, staff provided several opportunities to the public, as shown below.

- A **solicitation for public data** was announced in a press release and sent to interested parties through the WDNR's GovDelivery service on December 18, 2014, and publicly submitted data were accepted through January 15, 2015. This data solicitation was also publicized via public notice on the WDNR's website. An electronic mailbox was used to encourage on-line comment submittal. Nine entities submitted data for consideration; they are listed in Section C2. All public data were required to meet certain quality assurance measures to qualify for use in 303(d) listing decisions.

- Once the draft 2016 Impaired Waters list was developed, a **public comment period** was held from October 27, 2015 through November 25, 2015 and announced through a press release and on WDNR's website.

- A **public 'webinar'** (a live online presentation) was held on November 3, 2015. Many stakeholder groups and citizens joined the live webinar, which was also recorded and posted online for future viewing. The webinar presentation described the process for Impaired Waters listing and the overall context of CWA requirements for reporting. A statistical summary of listed waterbodies was presented, and participants were shown how to use WDNR's enhanced website to find specific waterbodies or query information. The webinar was informational only; while participants were able to use a 'chat' feature to submit questions during the webinar, they were instructed to submit formal comments separately.

Public comments on the draft 2016 impaired waters list were compiled, responses drafted, and edits made to the impaired waters listings in response to comments. Comments from approximately 27 citizens or organizations were received. A majority of respondents (19) expressed concern over the designation of the Ahnapee River as a low priority for Total Maximum Daily Load (TMDL) development was expressed by several citizens and business owners in Algoma, WI. It was brought to the WDNR's attention that business, recreation, and public health in Algoma are influenced by the pollution of the Ahnapee River and Crescent Beach. It was requested that the Ahnapee River be placed as a high priority for TMDL development so that the sources of pollution could be identified and the river and beach could be restored. Other comments were in regard to specific waterbody assessments. WDNR's responses to public comments are included in this Integrated Report submittal package to EPA in Attachment E.

Questions about the Impaired Waters List or WDNR's Impaired Waters Program can be submitted electronically to DNRImpairedWaters@wisconsin.gov or mailed to the Water Evaluation Section, Wisconsin DNR, P.O. Box 7921, WT/2, Madison, WI 53707-792.

Appendices

Appendix A. Wisconsin's Total Maximum Daily Load Development (TMDL) Prioritization Framework Document
Appendix B. Wisconsin's Full 2016 Draft List

Wisconsin's Water Quality Restoration and Protection Prioritization Framework

Clean Water Act Section 303(d) Long-Term Vision Implementation of the Priority Goal for Total Maximum Daily Load or Alternative Plan Development

Wisconsin Department of Natural Resources
Water Quality and Watershed Management Bureaus

March 8, 2016

Table of Contents

Introduction

The Wisconsin Department of Natural Resources (WDNR) participated in the 2014 National Training Workshop on Clean Water Act (CWA) Section 303(d) Listing & TMDLs: Implementing the Prioritization Goal of the New Long-Term Vision. The assembled participants discussed approaches for implementing the Prioritization Goal of the Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program. This workshop was instrumental in kick-starting WDNR's engagement in the new CWA 303(d) Vision process and a reevaluation of water quality restoration and protection priorities. The following is the prioritization goal as stated in December 2013 CWA Section 303(d) Program Long-Term Vision:

> "For the 2016 integrated reporting cycle and beyond, States review, systematically prioritize, and report priority watersheds or waters for restoration and protection in their biennial integrated reports to facilitate State strategic planning for achieving water quality goals."

The new CWA 303(d) Vision is about prioritizing the work that is most important to meet state water quality goals as states, tribes, territories, and EPA implement CWA 303(d) Program responsibilities with existing resources. It fosters opportunities for collaboration and integration with other Clean Water Act programs; with other programs within the agency; with other agencies; and between EPA and the states, tribes, and territories, all of which can help to strategically focus resources.

In addition to Total Maximum Daily Load (TMDL) analyses, the new Vision allows for consideration and use of other tools (as appropriate) , including protection plans and alternatives to TMDLs, to achieve applicable water quality standards, with TMDL development expected to continue to be a primary feature of the program. WDNR is not starting from scratch on prioritization; past prioritization schemes have been revamped to address lessons learned, new thinking, and alternative strategies to restoration and protection. There are many ways to prioritize waters and watersheds for restoration and protection, and the WDNR has developed a method that meets the Vision prioritization goal and allows for more focused utilization of limited staff and fiscal resources.

Recent changes to the CWA 303(d) Program measures better reflect progress in implementing the CWA 303(d) Program responsibilities consistent with the new Vision. The new US EPA 303(d) Program performance measure (WQ-27) tracks progress in developing TMDL and alternative restoration plans for priority impaired waters, and in some cases protection plans for priority healthy waters. The new US EPA 303(d) Program complementary measure (WQ-28) provides an opportunity for programs to receive credit for work that they are doing outside of priority areas as well as for activities leading up to completion of TMDLs or other alternative plans in priority areas. The priority areas identified in this framework will be used for reporting on these performance measures through federal fiscal year (FFY) 2022.

Prioritization Minimum Elements

Several minimum elements were identified by US EPA for inclusion in Wisconsin's TMDL/303(d) program prioritization framework. US EPA recognizes that states will address these elements differently, both in their framework documents and in practice. The purpose of including these minimum elements is to ensure that states develop a framework that the TMDL/303(d) program can provide to other state programs, partner agencies, and public stakeholders that explains and defends the prioritization choices made to apply limited state time and resources to one area versus another. The minimum elements include a description of the changes from past prioritization schemes, mechanism and factors considered in current prioritization scheme, consideration of EPA national and regional priorities, ongoing restoration and protection work, approach to changing priorities, public engagement, schedule for updates, and the current priority designations. The following sections describe how these minimum elements are addressed in Wisconsin's prioritization framework.

Description of Changes from Past Prioritization Scheme

CWA Section 303(d) requires each state to prioritize waterbodies identified on their impaired waters list for TMDL development. Past priority rankings were evaluated during each listing cycle to determine if TMDL development could be completed based on available staff and fiscal resources. Generally, the previous prioritization scheme assigned to a waterbody a ranking of "high" when a TMDL was in development, a ranking of "medium" when information was being gathered that could be used for future TMDL development, and a ranking of "low" when no information was available for TMDL development. In addition, previous prioritization schemes considered several factors in the ranking of each impaired waterbody for TMDL development, including availability of information for TMDL development, likelihood that water quality would respond to management actions, severity of the impairment, and public health concerns. These same factors are also considered in the current prioritization approach, but more as a secondary screening level as opposed to the main driver in selecting priority waters for restoration planning.

This prioritization framework takes a slightly different approach than past prioritization efforts. The primary change in the prioritization process is the incorporation of a systematic and objective modeling analysis that identifies watershed areas at a 12-digit Hydrologic Unit Code (HUC-12) scale experiencing the most ecological degradation and vulnerability to future degradation. Priority areas identified through this screening process were further reviewed by a WDNR team of experts to remove areas already addressed by a TMDL or alternative restoration or protection plans, or where water quality problems are not currently evident. This part of the process, while acknowledging the importance of an objective determination of priority, takes advantage of staff knowledge and experience. During this process, non-quantifiable indicators are considered, including ongoing water quality studies or restoration work, social/economic importance of the waterbody, or likelihood of stakeholder engagement.

The current approach also focuses planning efforts on two pollutants, total phosphorus (TP) and total suspended solids (TSS); whereas, past prioritization considered other pollutants, like mercury, to be a higher priority. While WDNR considers impairments

caused by mercury and other toxics to be important pollutants of concern, TMDL and alternative watershed restoration planning approaches for which the prioritization framework was designed to address pollutants from diverse sources that are dispersed throughout a watershed. TP and TSS are two of the most common pollutants identified on Wisconsin's impaired waters list and often originate from a combination of point and nonpoint sources. Therefore, TP and TSS are the priority pollutants selected for the 303(d)/TMDL program's prioritization effort. Sources of impairments caused by heavy metals or other toxic pollutants are often localized, legacy contamination and are being addressed primarily through other WDNR programs, such as the Great Lakes Areas of Concern (AOC); the Wisconsin Pollutant Discharge Elimination System (WPDES) program; and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund Program.

Past prioritization processes did not specifically identify areas for protection, as opposed to restoration, as limited staff and fiscal resources were focused on impaired waters in need of restoration. Still, WDNR's lake and river protection program has funded the development and implementation of many protection plans over the past two decades. While a relatively small number of protection priority watersheds are identified in this framework, as compared to restoration priority watersheds, WDNR continues to endorse the use of water quality protection planning as a management tool for achieving the antidegradation provisions of Wisconsin's water quality standards to maintain or improve water quality of the state's high quality waters.

Mechanism for Restoration Area Prioritization

Level 1 Priority – Ongoing restoration planning. Level 1 priority areas were identified as areas where TMDLs are currently in development for pollutants of concern. On previous impaired waters lists (2014 list and prior), these waters were also assigned high priority for TMDL development. Two large-scale watershed projects, the Wisconsin River TMDL Project and the Upper Fox and Wolf Rivers TMDL Project, are underway that will address the priority pollutants of TP and TSS in all Level 1 priority areas. Continuation and completion of these ongoing restoration planning efforts remains a high priority for WDNR.

Level 2 Priority – Future restoration planning. The primary mechanism for identifying additional priority areas (watersheds) was the use of modeling tools to identify areas with predicted poor ecological health or high phosphorus yields and instream concentrations. The Wisconsin Healthy Watersheds Assessment (HWA) that was conducted, in part, through the US EPA's Healthy Watersheds Initiative identified watersheds that were designated Level 2 priority areas for the development of TP and TSS restoration plans. In addition to the priority areas identified using the HWA datasets, top group phosphorus priority areas from Wisconsin's Nutrient Strategy were incorporated as Level 2 priority areas for the development of restoration plans addressing sources of phosphorus.

Mechanism for Protection Area Prioritization

For this prioritization framework, watershed vulnerability was defined as the potential for future degradation of watershed processes and aquatic ecosystem health. The HWA

Vulnerability Index was used to identify watersheds that are a priority for the development of protection plans for the pollutants TP and TSS.

Vulnerability can be driven by a variety of factors. The HWA Vulnerability Index considered the following attributes: climate change, land use change, and water use. Additional protection priority areas may be identified in future updates of the prioritization framework based on potential threats to water quality that were not considered in the HWA Vulnerability Index.

Factors Considered in Prioritization

WDNR used the HWA Ecosystem Health and Vulnerability Indices to identify high priority watershed areas for restoration and protection, respectively. Aquatic ecosystem health refers to several properties of streams, lakes, and wetlands that describe their structure and function. Eleven aquatic ecosystem health metrics were selected based on data availability, data quality, and the objectives of the assessment. The selected ecosystem metrics characterize the hydrology, habitat, geomorphology, water quality, and biological condition attributes of watershed health. The Ecosystem Health Index included the following metrics: total phosphorus, nitrate-nitrite, suspended sediment, lake clarity, aquatic insects, stream patch size, percent of streams that are canals/ditches, road crossing density, stream habitat rating, Reed Canary Grass-dominated wetlands, and stream flow "exchange" (an estimate of the difference between present-day and pre-development annual flow duration statistics).

Index scores for assessed catchments were aggregated up to a HUC-12 watershed scale. Maps of the Ecosystem Health and Vulnerability Index scores are in Attachments 1 and 2, respectively. The index scores were color-coded on these maps using a quartile scaling with darker colors indicating lower ecological condition and higher vulnerability. Those HUC-12 watersheds ranking in the top quartile (i.e., 25% of watersheds with lowest Ecosystem Health scores) were considered restoration plan priority areas. Those HUC-12 watersheds with both high Ecosystem Health scores (25% of watersheds with highest Ecosystem Health Index scores) and high Vulnerability scores (50% of watersheds with highest Vulnerability Index scores) were considered protection plan priority areas and were identified as Level 2 priority areas. Watersheds with existing EPA-approved TMDLs or nine-key element restoration or protection plans were excluded from the priority area designations.

Top group phosphorus watersheds identified by the state's Nutrient Strategy document were included as Level 2 priority areas for development of phosphorus reduction plans. These watersheds were selected based on SPARROW model incremental phosphorus yields and median stream concentrations of phosphorus monitored during the growing season. Top group phosphorus watersheds from the Nutrient Strategy that overlapped with Level 2 priority watersheds based on the HWA were assigned a Level 2 priority. Maps of the priority areas for the development of water quality restoration and protection plans can be found in Attachments 3 and 4, respectively.

Final selection of project areas for the development of restoration and protection plans will be a two-stage process. The first stage is based on the modeling approaches described above that objectively identify priority areas in need of restoration and

protection. The second stage is to refine those areas using a variety of factors that use local expertise about individual watersheds. Factors to be considered in the selection of priority areas for which to develop restoration or protection plans include the following:

- Severity of observed water quality impairments
- Impairments that are a public health concern
- Likelihood of water quality improvement in response to management actions
- Ongoing water quality studies or restoration work
- Social / economic importance
- Stakeholder engagement and readiness

The presence/absence of point sources in a watershed will also be used to inform the selection of the appropriate type of restoration or protection plan to be developed (e.g., nine key element restoration or protection plan, adaptive management restoration plan, or TMDL). Priority areas with a blend of point and nonpoint sources of a priority pollutant may be best suited for adaptive management restoration plans or TMDLs, whereas priority areas with few or no point sources of pollution would be best candidates for nine key element restoration or protection plans.

Consideration of EPA National and Regional Priorities

WDNR collaborates with the US EPA on prioritization, recognizing the US EPA's priorities as an important factor in this process. In 303(d)/TMDL program framework, WDNR has identified TP and TSS as priority pollutants to be addressed by restoration and protection plans. The US EPA also has identified nutrient pollution as a key water quality challenge nationally and a priority for their agency.

WDNR has worked closely with US EPA national and regional staff during the priority setting process, incorporating feedback from US EPA and keeping them informed about our progress. WDNR will continue to consider how US EPA's priorities will fit within WDNR's prioritization framework and may make additional adjustments based on their feedback.

Changes to the federal Nonpoint Source (NPS) Program Grant Guidelines in April 2013 emphasize the importance of states updating their NPS management programs to ensure that CWA Section 319 funds are targeted to the highest priority watersheds and activities. State NPS management programs should include a strategy for prioritizing waters and watersheds in which to focus restoration and protection efforts. In addition, the NPS grant guidelines promote the integration of state TMDL and NPS Programs to align priorities and coordinate restoration of NPS-impaired waters. The WDNR is updating the state's *NPS Program Management Plan* for FFY 2016-2020 to incorporate this prioritization framework. In doing so, Wisconsin may progressively address identified watersheds impacted by NPS pollution by conducting more detailed watershed assessments, developing watershed-based plans, and implementing the plans.

Ongoing Restoration and Protection Planning Work

WDNR is currently working with multiple stakeholders in the development of TMDLs for the restoration of HUC-12 watersheds identified as Level 1 priority in this framework

document. TMDLs are currently in development for Level 1 priority areas through the efforts of two large-scale watershed projects: 1) the Wisconsin River TMDL Project and 2) the Upper Fox and Wolf Rivers TMDL Project. Both of these studies are slated for completion before FFY 2022, which is the deadline for completion of restoration and protection plans for all top priority waters identified for reporting on the US EPA performance measure WQ-27.

As the Level 1 priority areas will be addressed with the completion of the Upper Wisconsin and Upper Fox/Wolf TMDLs, WDNR will work with external stakeholders and partners to complete additional restoration plans that address the priority pollutants of TP and TSS in the Level 2 priority areas identified in this framework. Plans developed in these areas of the state will be included in reporting on the US EPA performance measure WQ-28.

WDNR has also worked with partners to develop water quality protection plans. Waters in these areas are meeting water quality standards based on available information, but plans were developed to maintain or improve water quality into the future. Additional HUC-12 watershed areas have been identified as Level 2 priority areas for the development of protection plans.

Approach for Changes to Priorities

The prioritization plan represents the currently anticipated restoration/protection planning work load, including TMDL development, but it is subject to change depending on overall Department priorities and available resources.

Given that the impaired waters list is updated biennially, changes to these priority areas may occur. When new priorities are identified based on new information, WDNR will work with US EPA and stakeholders in determining whether to add priority areas or reevaluate previous priority designations.

Public Engagement Approach

For the Vision to be successfully implemented, an understanding of the Vision must be communicated to other CWA programs, other agencies, stakeholders, and the public. Stakeholder and public familiarity with (and interest in) the priority issue(s) or water(s) is key to their engagement. The development and implementation of Wisconsin's prioritization framework has included, and will continue to involve, several programs within the Water Quality and Watershed Management Bureaus, including Wisconsin Pollutant Discharge Elimination System (WPDES), Section 303(d)/TMDL, Water Quality Monitoring and Assessment, and Nonpoint Source (NPS) Programs.

This draft prioritization framework will be communicated to the public and input on the framework will be solicited during the public comment periods for the updated *NPS Program Management Plan* update and the draft 2016 Impaired Waters List to facilitate transparency and public engagement in the prioritization process. The final framework will be included in Wisconsin's 2016 Integrated Report of Water Quality to Congress and the updated NPS Management Plan. The draft and final framework document will be

announced to the public via press release and GovDelivery mailings and made available to the public for review on WDNR's website.

Schedule for Updates

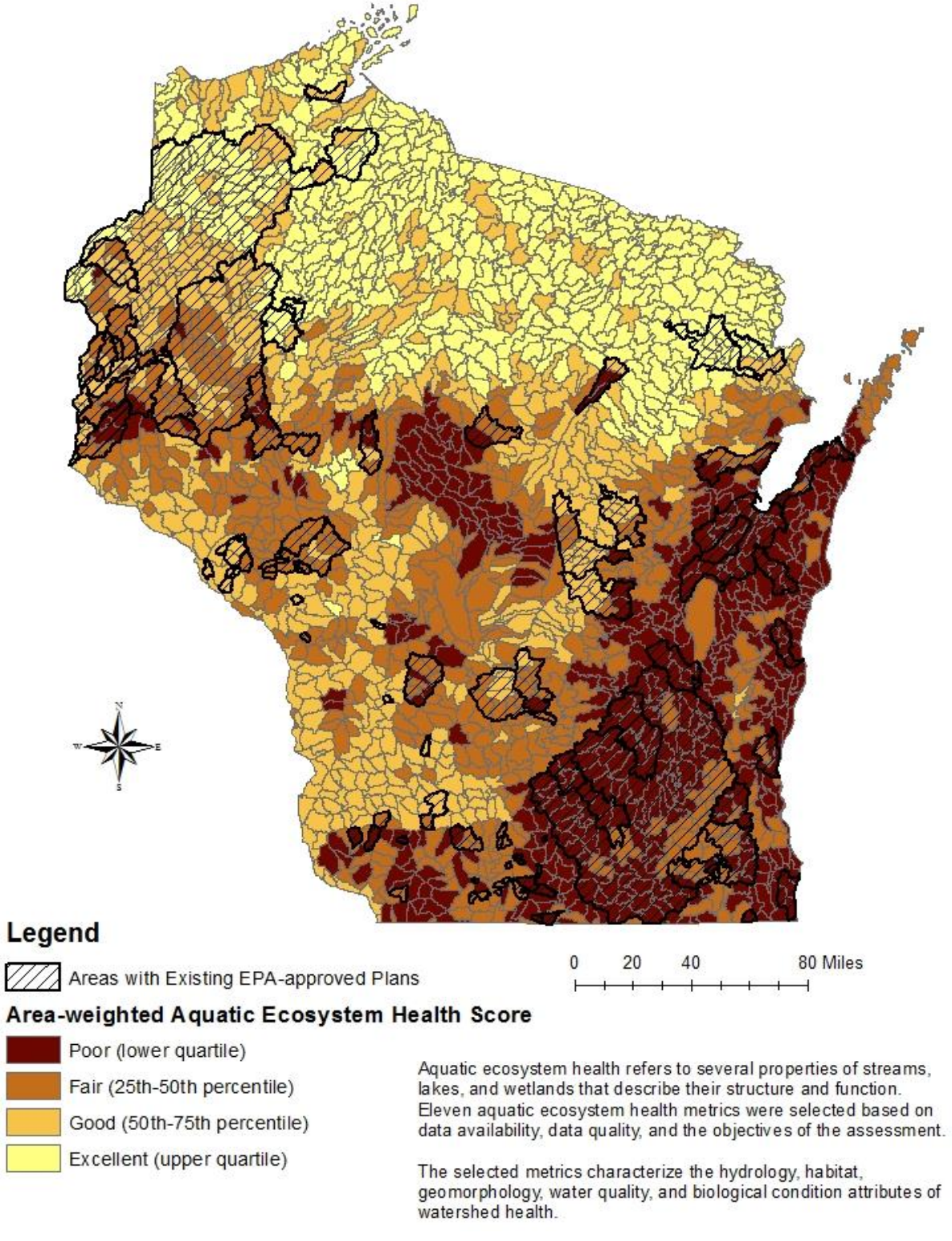
WDNR will review and update the prioritization scheme, as needed, on even-numbered years and incorporate the updates in the state's biennial Integrated Report of Water Quality. Updates on this schedule will allow WDNR to adapt the framework to new information about current water quality conditions from each biennial statewide assessment, as well as incorporating public input during comment periods and evaluating the effectiveness of the current prioritization scheme.

Priority Designations

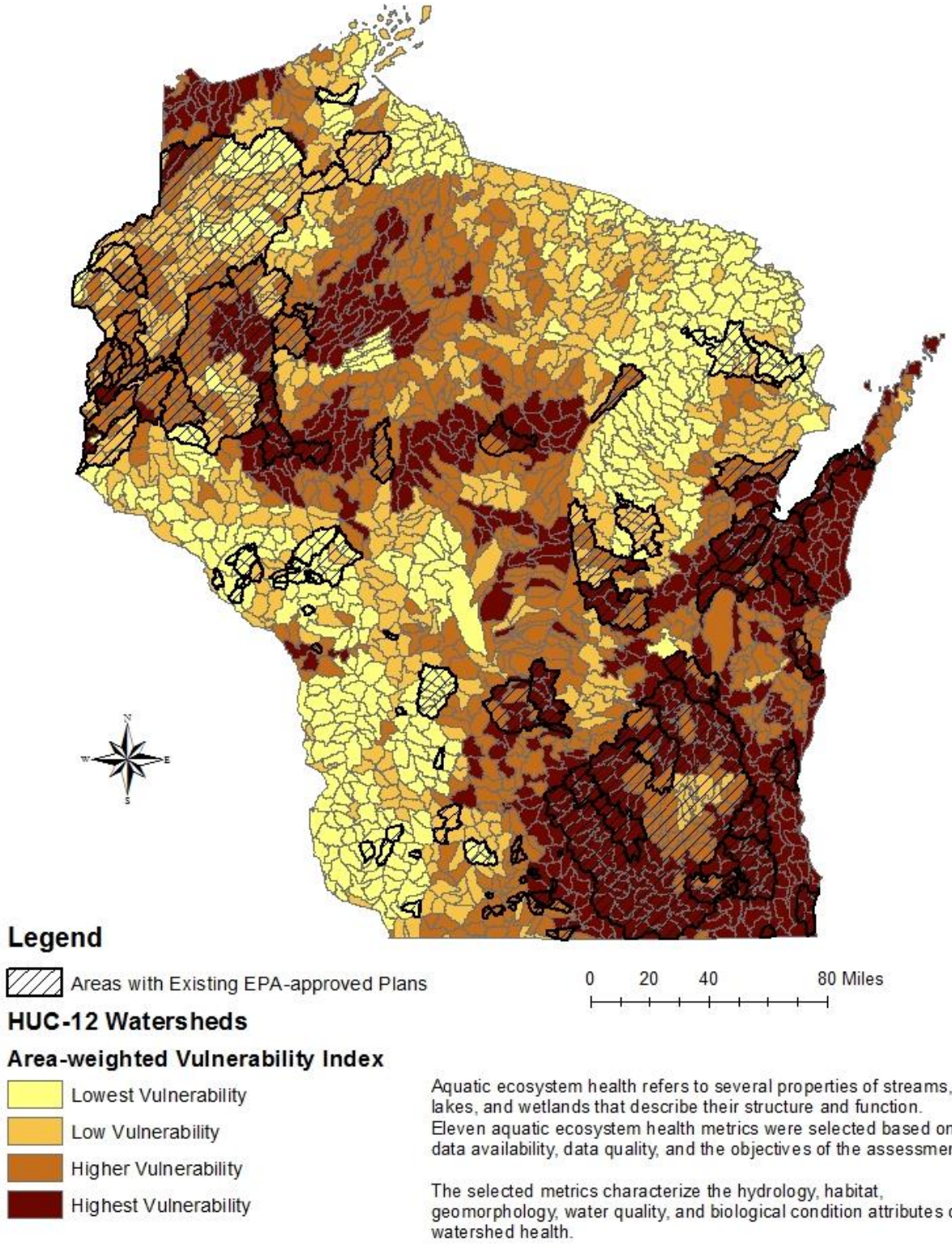
The prioritization framework includes the process for selecting priority HUC-12 watersheds for the development of protection and restoration plans, as well as maps showing the locations of these areas (Attachments 3 and 4) and lists of the priority area HUC-12 watersheds (Attachments 8, 9, and 10). Level 1 priority areas are the waterbodies to be tracked in Measure WQ-27 for the priority pollutants of total phosphorus and total suspended solids.

Both the process and selected priority areas will be vetted by the public. After the framework document has been reviewed and finalized, any changes to the priority areas identified in this draft will be summarized and included in the final framework with updated lists of priority areas and maps, as needed.

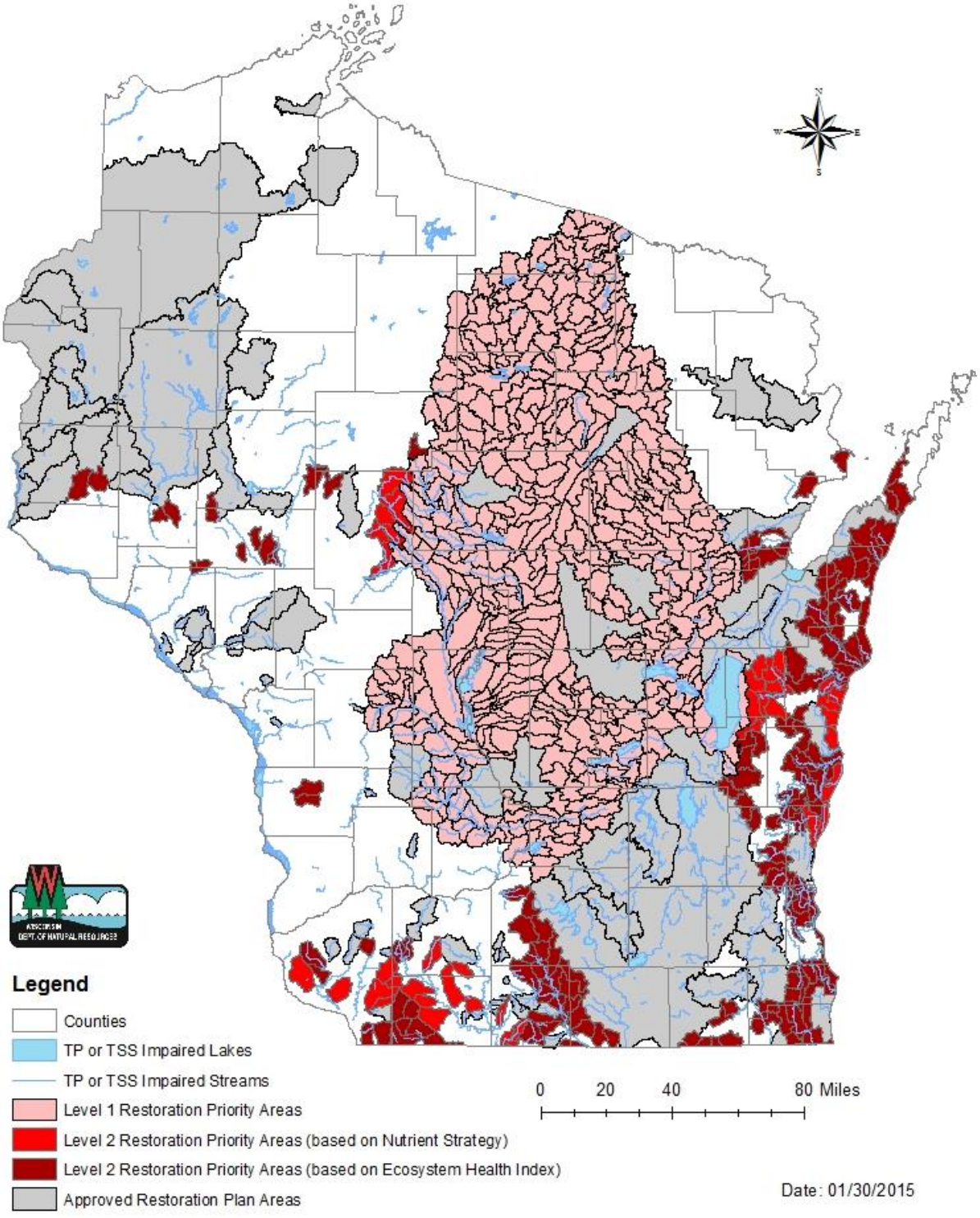
Attachment 1: Ecosystem Health Index scores and existing water quality restoration or protection plans.



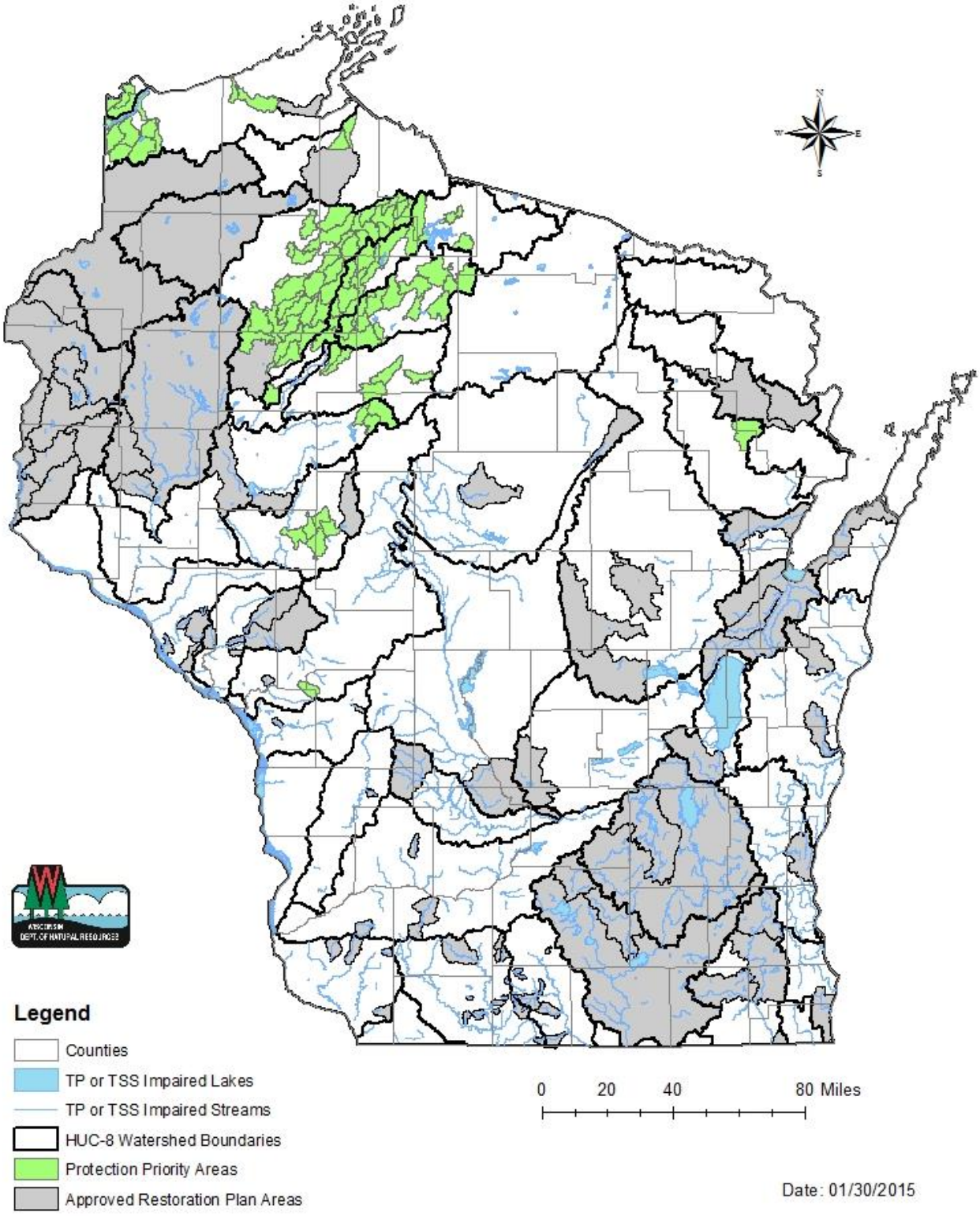
Attachment 2: Vulnerability Index scores and existing water quality restoration or protection plans.



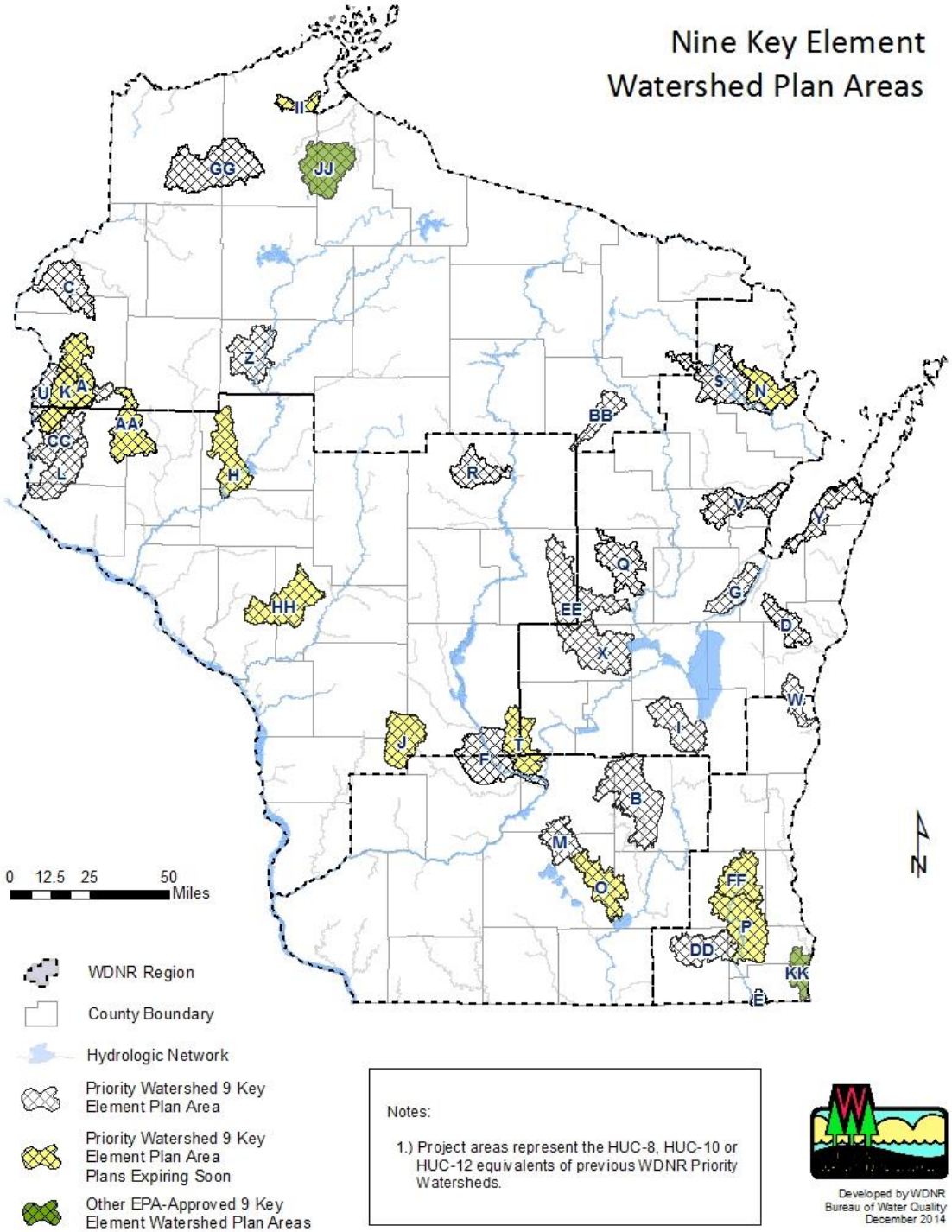
Attachment 3: Level 1 and 2 water quality restoration priority areas (HUC-12 watersheds) and existing water quality restoration or protection plans.



Attachment 4. Water quality protection priority areas (HUC-12 watersheds) and existing water quality restoration or protection plans.



Attachment 5. Nine Key Element Watershed Plan Areas (list of watershed names, plan type, and status are provided in Attachment 6).



Attachment 6. List of Nine Key Element Plan Areas, including watershed name and code, Hydrologic Unit Code number, expiration date, and plan type (restoration or protection).

Map Code	Watershed Name	Watershed Code	Hydrologic Unit Code (HUC)	Expiration Date	Plan Type
A	Balsam Branch	SC05	0703000508	2016	Protection
B	Beaver Dam River	UR03	0709000109	2019	Restoration
C	Big Wood Lake	SC11	0703000501	2019	Protection
D	Branch River	MA03	0403010105	2017	Protection
E	Camp & Center Lakes	part of FX02	071200061005	2017	Protection
F	Dell Creek	LW26	0707000319	2019	Protection
G	Duck/Apple/Ashwaubenon Creeks	LF02	0403020404 & 0403020401	2019	Restoration
H	Duncan Creek	LC18	0705000504	2015	Restoration
I	Fond du Lac River	UF03	0403020301 & 0403020302	2019	Restoration
J	Hillsboro	part of LW24	070700040104 & 070700040105	2015	Restoration
K	Horse Creek	part of SC04	070300050804	2019	Restoration
L	Kinnickinnic River (St. Croix Basin)	SC01	0703000511	2019	Restoration
M	Lake Mendota	LR09	0709000205	2018	Restoration
N	Lake Noquebay	GB09	0403010503	2016	Protection
O	Lake Ripley	part of LR11	070900020404	2016	Restoration
P	Little Muskego, Big Muskego, Wind Lakes	FX04	0712000603	2015	Restoration
Q	Lower Little Wolf River	WR06	0403020217	2018	Protection
R	Lower Rib River	CW23	0707000210	2019	Protection
S	Middle Peshtigo/Thunder Rivers	GB10	0403010504	2019	Protection
T	Neenah Creek	UF14	0403020102	2015	Restoration
U	Osceola Creek	part of SC08	070300050902	2017	Restoration
V	Pensaukee River	GB02	0403010301	2018	Protection
W	Pigeon River	SH06	0403010108	2019	Restoration
X	Pine & Willow Rivers	WR02	0403020220	2019	Restoration
Y	Red River/Sturgeon Bay	TK07	0403010204	2017	Protection
Z	Soft Maple/Hay Creeks	UC17	0705000107	2017	Restoration
AA	South Fork Hay River	LC06	0705000705	2015	Protection
BB	Springbrook Creek	CW21	0707000211	2018	Restoration

Map Code	Watershed Name	Watershed Code	Hydrologic Unit Code (HUC)	Expiration Date	Plan Type
CC	St. Croix County Lakes Cluster	parts of SC01, SC02, SC08	070300050808, 070300050908, 070300051008, 070300051002	2018	Restoration
DD	Sugar/Honey Creeks	FX05	0712000604 & 0712000605	2018	Restoration
EE	Tomorrow/Waupaca River	WR05	0403020218	2017	
FF	Upper Fox River (IL)	FX07	0712000601	2015	Restoration
GG	Upper St. Croix/Eau Claire Rivers	SC18	0703000101	2018	Protection
HH	Upper Trempealeau River	BT05	0704000502	2016	Restoration
II	Whittlesey Creek	part of LS07	010403011008	2016	Protection
JJ	Marengo River	LS12	0401030204	2023	Protection
KK	Pike River	SE01 & SE02	0404000204	2038	Restoration

* Not shown on the map in Attachment 5 are the following additional restoration plans:
1) Plum and Kankapot Creeks (HUC 0403020402) approved in December 2014
2) St. Croix River Basin (HUC 07030001) with EPA approval pending

Attachment 7. List of EPA-approved Total Maximum Daily Load (TMDL) Restoration Plans, including approval year and link to TMDL websites or approved plan.

- Rock River TMDL, 2012
- Red Cedar River (Tainter Lake, Lake Menomin) TMDL, 2012
- Lake St. Croix TMDL, 2013 [PDF]
- Lower Fox River Basin and Lower Green Bay TMDL, 2011 [PDF]
- Little Lake Wissota, 2010 [PDF]
- Milwaukee – Cedar Creek, 2008 [PDF]
- Mead Lake, 2008 [PDF]
- Little Willow Creek, 2008 [PDF]
- Otter Creek, 2008 [PDF]
- Dougherty Creek, 2008 [PDF]
- Hardies Creek, 2008 [PDF]
- Stillwell & Squaw Creek, 2007 [PDF]
- Parsons Creek, 2007 [PDF]
- Martin, Martinville, and Rogers Branch, 2007 [PDF]
- Gills Coulee Creek, 2006 [PDF]
- Snowden Branch, 2006 [PDF]
- Waumandee Creek Watershed, 2005 [PDF]
- Becky Creek, 2005 [PDF]
- Sugar Pecatonica River Basin, 2005 [PDF]
- Castle Rock Creek, 2004 [PDF]
- Carpenter Creek TMDL, 2004 [PDF]
- Gunderson Valley Creek, 2004 [PDF]
- Halfmoon Lake, 2004 [PDF]
- Silver Lake, 2004 [PDF]
- Trump Coulee Creek, 2004 [PDF]
- Eagle Creek & Joos Valley, 2003 [PDF]
- Sugar–Honey Creeks Watershed, 2003 [PDF]
- Middle Trempealeau River Watershed Sediment TMDL, 2002 [PDF]
- Jug Creek [PDF]
- Cedar Lake, 2003 [PDF]
- Token Creek, 2002 [PDF]
- Squaw Lake, 2000 [PDF]

Attachment 8. List of Level 1 restoration plan HUC-12 areas (ongoing plan development) for EPA performance measure WQ-27 (sorted alphabetically by HUC-10 watershed name).

Alexander Lake-Wisconsin River
Berry Creek-Wisconsin River
070700020402
Devil Creek
070700020403
Joe Snow Creek-Wisconsin River
070700020404
Little Pine Creek
070700020401
Bear Creek-Embarrass Creek
Bear Creek
040302021303
Bear Creek-Embarrass River
Maple Creek
040302021302
Township of Deer Creek-Embarrass River
040302021301
Township of Libery-Embarrass River
040302021304
Bear Creek-Wolf River
Black Otter Lake-Wolf River
040302021404
Municipality of Stephensville-Bear Creek
040302021402
Town of Greenville-Bear Creek
040302021401
Village of Shiocton-Wolf River
040302021403
Beaver Creek
Eagle Nest Flowage-Beaver Creek
070700031402
Meadow Valley-Beaver Creek
070700031401
Big Green Lake
Big Green Lake
040302010902

Silver Creek
040302010901
Big Roche a Cri Creek
Dead Horse Creek
070700030802
Lower Big Roche a Cri Creek
070700030804
Middle Big Roche a Cri Creek
070700030803
Upper Big Roche a Cri Creek
070700030801
Big Sandy Creek-Eau Claire River
Little Sandy Creek-Big Sandy Creek
070700021303
Mole Brook-Eau Claire River
070700021301
Prahl Creek-Big Sandy Creek
070700021302
Silver Creek-Eau Claire River
070700021304
Black Brook-Eau Claire River
Antigo Flats-East Branch of the Eau Claire Rivers
070700021203
Black Brook
070700021202
Bogus Swamp-East Fork of the Eau Claire River
070700021201
Oldens Creek-Eau Claire River
070700021205
West Branch of the Eau Claire River
070700021204
Black Creek
Beaver Creek-Black Creek
070700020701
Drewek Creek-Black Creek
070700020702
Buffalo and Puckaway Lakes-Fox River
Buffalo Lake-Fox River
040302010604
French Creek

040302010602
Good Earth Creek-Fox River
040302010603
Portage Canal-Fox River
040302010601
Puckaway Lake-Fox River
040302010605
City of Berlin-Fox River
Barnes Creek
040302011105
Black Creek
040302011101
City of Berlin-Fox River
040302011106
Hogars Bayou-Fox River
040302011107
Mill Race-Fox River
040302011102
Puchyan River
040302011103
Town Ditch
040302011104
City of Stevens Point-Wisconsin River
Biron Flowage-Wisconsin River
070700030306
City of Stevens Point-Wisconsin River
070700030302
Hay Meadow Creek
070700030301
Little Plover River
070700030303
Mosquito Creek
070700030305
Village of Plover-Wisconsin River
070700030304
Copper River
Copper River Outlet
070700020203
Middle and South Forks of the Copper River
070700020202

North Fork of the Copper River
070700020201
Cranberry Creek
Lower Cranberry Creek
070700031202
Upper Cranberry Creek
070700031201
Deerskin River
Blackjack Creek
070700010102
Deerskin River
070700010104
Little Deerskin River
070700010103
Thoroughfare Creek-Deerskin River
070700010101
Dell Creek-Wisconsin River
Long Lake-Wisconsin River
070700031908
Devil's Lake-Baraboo River
Boulder Creek-Baraboo River
070700040404
Cascade Mountain-Baraboo River
070700040406
Devil's Lake-Baraboo River
070700040402
Leech Creek
070700040405
Pine Creek
070700040401
Rawley Creek
070700040403
Dill Creek-Big Eau Pleine River
Dill Creek
070700021504
East Branch of the Big Eau Pleine River
070700021501
Hamann Creek
070700021506
Noisy Creek-Big Eau Pleine River

070700021507
Porky Creek-Big Eau Pleine River
070700021505
Randall Creek
070700021503
West Branch of the Big Eau Pleine River
070700021502
Duck Creek-Wisconsin River
Duck Creek-Wisconsin River
070700050105
Headwaters Rocky Run
070700050103
Middle Branch Duck Creek
070700050101
North Branch Duck Creek
070700050102
Rocky Run
070700050104
Eagle River
Eagle River Chain of Lakes-Eagle River
070700010206
Headwaters-Eagle River
070700010201
Julia Creek
070700010202
Ninemile Creek-Eagle River
070700010204
Planting Ground Lake-Eagle River
070700010205
Three Lakes Chain of Lakes-Eagle River
070700010203
East Shore of Lake Winnebago
City of Utowana Beach-Lake Winnebago
040302030304
De Neveu Creek
040302030301
Pipe Creek-Lake Winnebago
040302030303
Taycheedah Creek
040302030302

Eau Claire Flowage-Wisconsin River
County Line Creek-Wisconsin River
070700021401
Eau Claire Flowage
070700021403
Jim Moore Creek-Wisconsin River
070700021402
Evergreen River-Wolf River
Elton Creek-Evergreen River
040302020303
McCall Creek-Evergreen River
040302020304
Ninemile Creek
040302020301
Slough Gundy Rapids-Wolf River
040302020302
White Lake Creek-Wolf River
040302020305
Flume Creek-Little Wolf River
Bradley Creek-Little Wolf River
040302021504
Comet Creek
040302021503
Flume Creek
040302021502
Holt Creek-Little Wolf River
040302021501
Fourmile Creeik
Fourmile Creek
070700030402
Fourmile Creek
Buena Vista Creek
070700030401
Nepco Lake
070700030403
Fourteenmile Creek
Fourteenmile Creek
070700030603
Leola Ditch
070700030601

Lone Rock-Fourteenmile Creek
070700030602
Gillmore Creek-Big St. Germain River
Gilmore Creek
070700010503
Lost Creek-Big St. Germain Lake
070700010501
Plum Creek-Big St. Germain Lake
070700010502
Hemlock Creek
East Fork of Hemlock Creek
070700031001
Little Hemlock Creek
070700031003
Lower Hemlock Creek
070700031005
Middle Hemlock Creek
070700031004
Upper Hemlock Creek
070700031002
Lake Butte des Mortes
Brooks Cemetary
040302011203
Daggetts Creek
040302011202
Lake Butte des Mortes-Fox River
040302011205
Sawyer Creek
040302011204
Spring Brook
040302011201
Lake Dubay-Big Eau Pleine River
Fenwood Creek
070700021602
Freeman Creek
070700021603
Lake Dubay
070700021604
Rock Creek-Big Eau Pleine River
070700021601

Lake Dubay-Wisconsin River
Bull Junior Creek
070700021802
Fourmile Creek
070700021801
Hog Creek
070700021804
Johnson Creek
070700021806
Lake Dubay-Wisconsin River
070700021807
Little Eau Claire River
070700021805
Mosinee Flowage-Wisconsin River
070700021803
Lake Mohawksin-Lake Alice-Wisconsin River
Big Pine Creek
070700011304
Cresent Creek-Wisconsin River
070700011302
Green Meadow Creek
070700011303
Lake Alice-Wisconsin Rvier
070700011305
Lake Mohawksin-Wisconsin River
070700011306
Noisy Creek
070700011301
Lake Poygan
Alder Creek
040302022103
Arrowhead River
040302022105
Lake Poygan
040302022106
Medina Junction-Rat River
040302022101
Pumpkinseed Creek
040302022104
Town of Dale-Rat River

040302022102
Lake Winnebago
Lake Winnebago
040302030401
Legend Lake-Wolf River
Dalles Creek-Wolf River
040302020701
Legend Lake-Wolf River
040302020702
Lily River
Bog Brook-Lily River
040302020204
East Branch of the Lily River
040302020205
Hunting River
040302020202
Non-Contributing-Lily River
040302020203
Pickerel Creek
040302020201
Squaw Creek-Wolf River
040302020206
Little Baraboo River-Baraboo River
Cazenovia Branch
070700040203
Crossman Creek
070700040202
Dutch Hollow Lake-Baraboo River
070700040206
Lake Redstone
070700040205
Little Baraboo River
070700040204
Plum Creek
070700040201
Twin Creek-Baraboo River
070700040207
Little Eau Pleine River
Bear Creek
070700021705

Carlson Creek-Little Eau Pleine River
070700021701
Honey Island Flowage-Little Eau Pleine River
070700021706
McMillan Marsh-Little Eau Pleine River
070700021702
Squaw Creek/Scheuer Creek
070700021703
Townline Reservoir-Little Eau Pleine River
070700021707
Wild Creek-Little Eau Pleine River
070700021704
Little Rib River
Little Brook-Little Rib River
070700020902
West Fork of the Little Rib River-Rib River
070700020901
Little Roche a Cri Creek
Bingham Creek
070700030902
Carter Creek
070700030903
Fordham Creek-Little Roche a Cri Creek
070700030901
Friendship Lake-Little Roche a Cri Creek
070700030904
Lower Grand River
Belle Fountain Creek
040302010503
Grand Lake-Grand River
040302010502
Grand River
040302010504
Lake Emily
040302010501
Lower Lemonweir River
Brewer Creek-Lemonweir River
070700031702
Onemile Creek
070700031701

Outlet of the Lemonweir River
070700031704
Sevenmile Creek
070700031703
Lower Tomahawk River
Lake Nokomis
070700011004
Little Rice Creek
070700011001
Little Rice River
070700011002
Rice River Flowage
070700011003
Mead Marsh-Yellow River
Mead Marsh-Yellow River
070700031301
Mecan River
Chafee Creek
040302010702
Little Pine Creek-Mecan River
040302010703
Mecan River
040302010704
Weddle Creek
040302010701
Middle and South Branches Embarrass River
Dent Creek-Middle Branch of the Embarrass River
040302021005
Elmhurst Creek-Middle Branch of the Embarrass River
040302021004
Logemanns Creek-Middle Branch Embarrass River
040302021006
Municipality of Caroline-South Branch Embarrass River
040302021007
Packard Creek-Middle Branch Embarrass River
040302021003
Spranger Creek-South Branch Embarrass River
040302021001
Tiger Creek-South Branch Embarrass River
040302021002

Middle Lemonweir River
Bear Creek
070700031601
Cutler Ditch-Lemonweir River
070700031602
Fountain Creek-Little Lemonweir River
070700031604
Indian Creek-Little Lemonweir River
070700031603
New Lisbon Lake-Lemonweir River
070700031605
Middle Tomahawk River
Bear Creek-Tomahawk River
070700010905
Bearskin Creek
070700010906
Headwaters-Willow River
070700010901
Rocky Run
070700010904
Swamp Creek-Tomahawk River
070700010907
Swamsauger Creek
070700010902
Willow Reservoir
070700010903
MIll Creek
Bear Creek
070700030203
Lower Mill Creek
070700030204
Middle Mill Creek
070700030202
Upper Mill Creek
070700030201
Montello River
Klawitter Creek
040302010303
Montello River
040302010304

Tagatz Creek
040302010301
Westfield Creek
040302010302
Narrows Creek-Baraboo River
Copper Creek-Baraboo River
070700040304
Hill Point Creek-Narrows Creek
070700040301
Narrows Creek
070700040302
Pleasant Valley-Baraboo River
070700040305
Seeley Creek
070700040303
New Wood River
Averil Creek-New Wood River
070700020102
East and Center Forks of the New Wood River
070700020101
North Branch and MainstemEmbarrass River
Mill Creek
040302021203
Pine Lake-Embarrass River
040302021204
Pony Creek-North Branch of the Embarrass River
040302021202
Strassburg Creek-North Branch of the Embarrass River
040302021201
Partridge Lake-Wolf River
Hatton Creek
040302021903
Mosquito Creek
040302021905
Partridge Crop Lake-Wolf River
040302021902
Partridge Lake-Wolf River
040302021906
Potters Creek
040302021901

Walla Walla Creek
040302021904
Pelican River
Gudegast Creek
070700010704
Headwaters-North Branch Pelican River
070700010705
Lower Pelican River
070700010708
Middle Pelican River
070700010707
Monico Creek
070700010701
North Branch Pelican River
070700010706
Twin Lakes Creek
070700010703
Upper Pelican River
070700010702
Petenwell Lake
Campbell Creek-White Creek
070700031806
City of Wisconsin Rapids-Wisconsin River
070700030701
Duck Creek
070700031805
Fivemile Creek-Wisconsin River
070700030704
Grays Marsh
070700031808
Juneau County Ditch
070700031804
Klein Creek
070700031802
Mocassin Creek
070700030702
Petenwell Lake
070700030705
070700031803
Sevenmile Creek

070700030703
Unnamed trib-Wisconsin River
070700031809
White Creek
070700031807
Pigeon River
North Branch of the Pigeon River
040302021101
Pigeon Lake-Pigeon River
040302021103
South Branch of the Pigeon River
040302021102
Pine River
Lower Pine River
070700020504
Middle Pine River
070700020503
North Branch of the Pine River
070700020502
Upper Pine River
070700020501
Pioneer Creek-Wisconsin River
Buckatabon Creek
070700010306
Lac Vieux Desert-Wisconsin River
070700010302
Muskrat Creek-Wisconsin River
070700010304
Pioneer Creek
070700010305
Portage Creek
070700010301
Rice Creek
070700010307
Sucker Creek-Wisconsin River
070700010308
Tamarack Creek
070700010303
Plover River
Headwaters of the Plover River

070700030101
Jordan Pond-Plover River
070700030103
McDill Pond-Plover River
070700030104
Pike Lake-Plover River
070700030102
Prairie du Sac Dam-Wisconsin River
Hinkson Creek
070700050201
Prairie du Sac Dam-Wisconsin River
070700050206
Prentice Creek-Wisconsin River
070700050205
Rowan Creek
070700050202
Spring Creek
070700050204
Whalen Bay-Wisconsin River
070700050203
Prairie River
Big Hay Meadow Creek
070700020303
Lilly Hay Meadow Creek
070700020305
Lower Prairie River
070700020306
Middle Prairie River
070700020304
North Branch of the Prairie River
070700020302
Upper Prairie River
070700020301
Rainbow Flowage-Mud Creek-Wisconsin River
Little St. Germain Creek
070700010403
Mud Creek
070700010401
Rainbow Flowage-Wisconsin River
070700010404

Sugar Camp Creek
070700010402
Red River
Mattoon Creek-West Branch of the Red River
040302020501
Miller Creek
040302020504
Moose Lake-Red River
040302020503
Red Lakes-Red River
040302020505
Silver Creek-West Branch of the Red River
040302020502
Rhinelander Flowage-Upper Wisconsin River
Pine Lake Creek
070700010602
Rhinelander Flowage
070700010603
Tom Doyle Creek-Wisconsin River
070700010601
Rocky Creek-Yellow River
East Branch of the Yellow River-Yellow River
070700031103
Headwaters of the Yellow River
070700031101
Owl Creek-Yellow River
070700031106
Puff Creek-Yellow River
070700031105
Rocky Creek
070700031104
South Branch of the Yellow River
070700031102
Rush Creek
Eightmile Creek
040302011001
Rush Creek
040302011002
School Section Creek-Wolf River
Navarino Marsh-Wolf River

040302020903
Outagamie State Wildlife Area-Wolf River
040302020904
Schoenick Creek
040302020902
School Section Creek-Wolf River
040302020901
Shawano Lake
Loon Creek
040302020602
Pickerel Creek
040302020601
Shawano Lake
040302020603
Shioc River
City of Seymour-Black Creek
040302020805
East Branch of the Shioc River
040302020801
Herman Creek
040302020803
Mink Creek-Shioc River
040302020807
Toad Creek
040302020804
Village of Black Creek-Black Creek
040302020806
White Lake-Shioc River
040302020802
Somo River
Brant Creek
070700011101
Hay Creek-Somo River
070700011105
Headwaters-Somo River
070700011102
Landwehr Creek-Somo River
070700011104
Little Somo River
070700011103

South Branch of the Little Wolf River
Nace Creek-South Branch of the Little Wolf River
040302021602
Nichol Creek-South Branch of the Little Wolf River
040302021604
North Branch of the Little Wolf River
040302021603
Peterson Creek
040302021601
040302021605
Spirit River
North Fork Spirit Creek
070700011201
Spirit River
070700011202
Spirit River Flowage
070700011204
Squaw Creek
070700011203
Strongs Prairie Non-contributing Area
Strongs Prairie Non-Contributing Area
070700031801
Swamp Creek
Headwaters-Wolf River
040302020101
Little Rice Lake-Wolf River
040302020102
Metonga Lake-Swamp Creek
040302020104
Spider Creek-Wolf River
040302020106
Squaw Creek-Swamp Creek
040302020105
Upper Post Lake-Wolf River
040302020103
Swan Lake-Fox River
Sand Spring Creek-Fox River
040302010101
Swan Lake-Fox River
040302010102

Tenmile Creek
Ditch number 5-Ditch number 9
070700030502
Non-Contributing-Tenmile Creek
070700030501
South Branch Tenmile Creek
070700030503
Tenmile Creek
070700030504
Trappe River
Little Trappe River-Trappe River
070700020602
Prospect Creek-Trappe River
070700020601
Upper Grand River
Headwaters Grand River
040302010401
Little Green Lake-Grand River
040302010402
Upper Lemonweir River
Brandy Creek-Lemonweir River
070700031507
Dandy Creek-Lemonweir River
070700031508
Jay Creek-East Fork of the Lemonweir River
070700031506
Kreyer Creek-South Fork of the Lemonweir River
070700031504
Lake Tomah-South Fork of the Lemonweir River
070700031501
Mud Creek
070700031502
Sand Creek
070700031505
Water Mill Pond-Lemonweir River
070700031503
Upper Tomahawk River
Arbor Vitae Lakes
070700010801
Cedar Falls-Shishebogama Lake-Tomahawk River

070700010806
Kaubashine Creek
070700010805
Mishonagon Creek-Tomahawk River
070700010803
Squirrel River
070700010804
Tomahawk Lake-Tomahawk River
070700010802
West Branch of the Wolf River
Elma Creek-West Branch of the Wolf River
040302020402
Little West Branch Creek
040302020403
Little West Branch of the Wolf River
040302020401
Neopit Millpond 108-West Branch of the Wolf River
040302020404
West Shore Lake Winnebago
Willow Harbor-Lake Winnebago
040302030102
West Shore of Lake Winnebago
City of Oshkosh-Lake Winnebago
040302030101
Van Dyne Creek-Lake Winnebago
040302030103
White River
Little Lunch Creek-White River
040302010804
Lunch Creek
040302010803
Soules Creek-White River
040302010802
Sucker Creek
040302010805
West Branch White River
040302010801
White River
040302010806
Wood Creek-Big Rib River

Baldwin Creek-Big Rib River
070700020806
Lemke Creek
070700020802
McGinnis Creek
070700020805
Mink Creek-Big Rib River
070700020804
Silvernagel Creek-Big Rib River
070700020803
Wood Creek
070700020801

Attachment 9. List of Level 2 restoration plan HUC-12 areas identified by Aquatic Ecosystem Index scores (sorted alphabetically by HUC-10 watershed name).

Ahnapee River and Stony Creek
Ahnapee River
040301020204
Mashek Creek-Frontal Lake Michigan
040301020205
Rio Creek
040301020202
Silver Creek
040301020203
Stony Creek-Frontal Lake Michigan
040301020201
Allen Creek
Allen Creek
070900040302
City of Evansville-Allen Creek
070900040301
Bad Axe River
Pumpkin Ridge-North Fork Bad Axe River
070600010302
Springville Branch of the Bad Axe River
070600010301
Black Earth Creek
Halfway Prairie Creek
070700050503
Upper Black Earth Creek
070700050501
Black-Little Black Rivers
Correction Creek-Little Black River
070400070103
Cedar Creek
Jackson Marsh State Wildlife Area-Cedar Creek
040400030303
Town of Richfield
040400030301
East and West Branches Milwaukee River-Milwaukee River
Headwaters West Branch Milwaukee River

040400030201
Kettle Moraine Lake-Milwaukee River
040400030202
Village of Kewaskum-Milwaukee River
040400030207
West Branch Milwaukee River
040400030203
East Twin River-Frontal Lake Michigan
East Twin River
040301010105
Jambo Creek
040301010103
Krok Creek-East Twin River
040301010102
Molash Creek-Frontal Lake Michigan
040301010101
Eau Claire River
Bears Grass Creek
070500060503
Fall Creek
070500060504
Thompson Valley Creek
070500060501
Eau Galle River
Carr Creek-Eau Galle River
070500051001
Galena River
Blacks Creek-Galena River
070600050304
Kelsey Branch-Galena River
070600050306
Madden Branch
070600050301
Pats Creek-Galena River
070600050302
Shullsburg Branch
070600050303
Harvey Creek-Buffalo River
Peeso Creek
070400030106

Headwaters Des Plaines River
Brighton Creek
071200040101
Headwaters Des Plaines River
071200040103
Jerome Creek-Des Plaines River
071200040104
Kilbourn Road Ditch
071200040102
Headwaters Pecatonica River
Livingston Branch
070900030201
Village of Cobb
070900030202
Headwaters Sugar River
Badger Mill Creek
070900040201
Headwaters Sugar River
070900040202
Paoli-Sugar River
070900040203
Kewaunee River
Casco Creek-Kewaunee River
040301020304
Headwaters Kewaunee River
040301020301
Scarboro Creek
040301020303
School Creek
040301020302
Lake Menomin-Red Cedar River
Elk Creek
070500071005
Little Sugar River
Little Sugar River
070900040404
Ward Creek-Little Sugar River
070900040402
Lower Peshtigo River
Little River-Frontal Lake Michigan

040301050605
Thomas Slough-Frontal Lake Michigan
040301050607
Lowes Creek-Chippewa River
Sherman Creek
070500050701
Manitowoc River-Frontal Lake Michigan
Cato Falls-Manitowoc River
040301010603
Little Manitowoc River-Frontal Lake Michigan
040301010604
Manitowoc River
040301010605
Village of Reedsville-Mud Creek
040301010601
Menomonee River
Little Menomonee River
040400030402
Menomonee River
040400030405
Village of Menomonee Falls-Menomonee River
040400030401
Middle Grant River
Blake Fork
070600030201
Hackett Branch-Grant River
070600030203
Mill Creek
North Mill Creek
071200040201
Milwaukee River-Frontal Lake Michigan
Lincoln Creek
040400030605
Milwaukee River
040400030606
Town of Freedonia-Milwaukee River
040400030602
Muddy Creek-Chippewa River
Iron Creek-Muddy Creek
070500050802

Mullet River
Lower Mullet River
040301010903
Nippersink Creek
Headwaters Nippersink Creek
071200060903
North Branch Milwaukee River
Batavia Creek-North Branch Milwaukee River
040400030103
Lizard Mound State Park
040400030106
North Branch Milwaukee River
040400030107
Silver Creek
040400030104
North Branch Nippersink Creek
West Branch North Branch Nippersink Creek-North Branch Nippersink Creek
071200060801
North Fork Eau Claire River
Goggle-Eye Creek-North Fork Eau Claire River
070500060102
Little Otter Creek-Wolf River
070500060104
Oak Creek-Frontal Lake Michigan
Wind Point-Frontal Lake Michigan
040400020101
Onion River
City of Belgium
040301011002
Lower Onion River
040301011004
Middle Onion River
040301011003
Upper Onion River
040301011001
Otter Creek
Beaver Creek-Otter Creek
070500060401
Piscasaw Creek
Headwaters Piscasaw Creek

070900060303
Lawrence Creek
070900060301
West Branch Piscasaw Creek
070900060302
Platte River
Leggett Creek
070600030501
Raccoon Creek
East Fork Raccoon Creek
070900031502
Headwaters Raccoon Creek
070900031501
Richland Creek
Headwaters Richland Creek
070900031101
Root River
City of Racine-Root River
040400020306
Community of Husher-Root River
040400020305
Hoods Creek
040400020304
Husher Creek-Root River
040400020303
Root River Canal
East Branch Root River Canal
040400020202
Root River Canal
040400020204
Village of Union Grove-West Branch Root River Canal
040400020201
West Branch Root River Canal
040400020203
Rush River
Village of Baldwin-Rush River
070400010501
Sheboygan River-Frontal Lake Michigan
Cedar Lake
040301011105

City of Sheboygan Falls-Sheboygan River
040301011108
Community of Mt. Calvary
040301011101
Feldner's Creek-Sheboygan River
040301011103
Headwaters Sheboygan River
040301011102
Kiel Marsh State Wildlife Area-Sheboygan River
040301011106
Otter Creek-Sheboygan River
040301011107
Sheboygan River-Frontal Lake Michigan
040301011109
Sinnisawa River-Mississippi River
Menominee River
070600050201
Sinsinawa River
070600050203
South Fork Apple River-Apple River
South Fork Apple River
070600050502
West Fork Apple River-Apple River
070600050503
Squaw Creek-Fox River
Hoosier Creek
071200061001
Palmer Creek-Fox River
071200061003
Story Creek-Sugar River
Gill Creek-Sugar River
070900040503
Ross Crossing-Sugar River
070900040502
Story Creek
070900040501
Suamico and Little Suamico Rivers-Frontal Green Bay
Headwaters Little Suamico River
040301030201
North Branch Suamico River-Suamico River

040301030205
South and West Branches of the Suamico River
040301030204
Tibbet Creek-Frontal Green Bay
040301030203
Sylvester Creek-Sugar River
Decatur Lake-Sugar Creek
070900040605
Judah Branch
070900040603
Norwegian Creek
070900040602
Sylvester Creek
070900040604
Taylor Creek-Sugar River
Mt Hope Cemetary
070900040704
Taylor Creek
070900040703
Willow Creek
070900040702
Upper Door Peninsula
Big Creek-Frontal Sturgeon Bay
040301020110
Egg Harbor-Frontal Green Bay
040301020108
Lilly Bay Creek
040301020109
Waukegan River-Frontal Lake Michigan
Waukegan River-Frontal Lake Michigan
040400020501
West Branch Sugar River
West Branch Sugar River
070900040103
West Twin River
Black Creek
040301010201
Devils River
040301010202
Francis Creek-West Twin River

040301010204
Neshota River
040301010203
West Twin River
040301010205
White River
Como Creek
071200060601
Ore Creek
071200060603

Attachment 10. List of Level 2 restoration plan HUC-12 areas identified by Wisconsin's Nutrient Strategy – top group phosphorus watersheds (sorted alphabetically by HUC-10 watershed name).

Ames Branch-Pecatonica River
Ames Branch
070900030305
Bonner Branch
070900030301
Otter Creek
070900030304
Wood Branch
070900030302
Bear Creek-Embarrass River
Township of Deer Creek-Embarrass River
040302021301
Bear Creek-Wolf River
Black Otter Lake-Wolf River
040302021404
Municipality of Stephensville-Bear Creek
040302021402
Town of Greenville-Bear Creek
040302021401
Black River and Sauk and Sucker Creeks-Frontal Lake Michigan
Barr Creek-Frontal Lake Michigan
040301011202
Black River
040301011201
Sauk Creek
040301011204
Sucker Creek-Frontal Lake Michigan
040301011203
Dill Creek-Big Eau Pleine River
Dill Creek
070700021504
East Branch of the Big Eau Pleine River
070700021501
Hamann Creek
070700021506
Noisy Creek-Big Eau Pleine River

070700021507
Porky Creek-Big Eau Pleine River
070700021505
Randall Creek
070700021503
West Branch of the Big Eau Pleine River
070700021502
East Branch Pecatonica River
Whiteside Creek
070900030804
Honey Creek-Pecatonica River
Hawthorn Creek-Honey Creek
070900031004
Honey Creek
070900031005
Jordan Creek
070900031002
Lake Arbutus-Black River
O'Neill Creek
070400070902
Lake Butte des Mortes
Brooks Cemetary
040302011203
Daggetts Creek
040302011202
Lake Butte des Mortes-Fox River
040302011205
Sawyer Creek
040302011204
Spring Brook
040302011201
Little Eau Pleine River
Bear Creek
070700021705
Carlson Creek-Little Eau Pleine River
070700021701
Honey Island Flowage-Little Eau Pleine River
070700021706
McMillan Marsh-Little Eau Pleine River
070700021702

Squaw Creek/Scheuer Creek
070700021703
Wild Creek-Little Eau Pleine River
070700021704
Little Platte River
Blockhouse Creek
070600030404
Middle Little Platte River
070600030405
Mounds Branch
070600030401
Upper Little Platte River
070600030402
Lower Grant River
Boice Creek
070600030302
Rattlesnake Creek
070600030301
Mineral Point Branch
Headwaters Mineral Point Branch
070900030102
North Branch Manitowoc River
Headwaters North Branch Manitowoc River
040301010301
North Branch Manitowoc River
040301010303
Spring Creek
040301010302
Popple River
North Fork of the Popple River
070400070201
South Fork of the Popple River
070400070202
Rock Creek-Black River
Bear Creek-Rock Creek
070400070403
Municipality of Veefkind-Rock Creek
070400070402
Nelson Creek
070400070401

Rocky Creek-Yellow River
East Branch of the Yellow River-Yellow River
070700031103
Headwaters of the Yellow River
070700031101
Puff Creek-Yellow River
070700031105
South Branch of the Yellow River
070700031102
Sevenmile and Silver Creeks-Frontal Lake Michigan
Centerville Creek-Frontal Lake Michigan
040301010704
Pine Creek-Frontal Lake Michigan
040301010702
Point Creek
040301010703
Sevenmile Creek-Frontal Lake Michigan
040301010705
Silver Creek
040301010701
Shioc River
City of Seymour-Black Creek
040302020805
East Branch of the Shioc River
040302020801
Herman Creek
040302020803
Toad Creek
040302020804
Village of Black Creek-Black Creek
040302020806
South Branch Manitowoc River
City of Chilton-South Branch Manitowoc River
040301010404
Headwaters Killsnake River
040301010406
Headwaters South Branch Manitowoc River
040301010401
Killsnake River
040301010407

Pine Creek
040301010403
South Branch Manitowoc River
040301010408
Stony Brook-South Branch Manitowoc River
040301010402
Upper Grand River
Headwaters Grand River
040302010401
Little Green Lake-Grand River
040302010402
Yellowstone River
Upper Yellowstone River
070900030701

2016 Impaired Waters List

A. Full Impaired Waters List (Categories 4 and 5)
B. 2016 Proposed Listings
C. 2016 Proposed Delistings

Notes

Listing records are provided for each impaired assessment unit (AU) and pollutant combination.
Each waterbody and AU is assigned a unique number; waterbodies are assigned waterbody identification codes (WBIC) and assessment units are assigned WATERS IDs.
The AU/pollutant listings are sorted alphabetically by local waterbody name.

A. Full Impaired Waters List (Categories 4 and 5)

Wisconsin's comprehensive listing of impaired waters. Category 4 waters are those for which EPA-approved Total Maximum Daily Loads (TMDLs) have been developed. Category 5 waters are those for which TMDLs have not yet been developed. This list represents Wisconsin's Section 303(d)-listed waters prepared in fulfillment of Clean Water Act Section 303(d) of the Clean Water Act.

B. 2016 Proposed Listings

Listings proposed to be added in the draft 2016 Impaired Waters List.

C. 2016 Proposed Delistings

Listings proposed to be removed in the draft 2016 Impaired Waters List

A. Full Impaired Waters List (Categories 4 and 5)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Adams Valley Creek	14002	1653700	RIVER	La Crosse	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	EAP Project	Not Applicable	TMDL Needed (5A)
Adell Tributary	10092	33000	RIVER	Sheboygan	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Ahnapee River	18073	94800	RIVER	Door, Kewaunee	0	8	8	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Ahnapee River	18073	94800	RIVER	Door, Kewaunee	0	8	8	04/01/2014	PS/NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Ahnapee River	482923	94800	RIVER	Door	8	15	7	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Airport Road Creek	893239	805200	RIVER	Dane	0	3	3	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Allen Creek	13625	883700	RIVER	Rock	15	20	5	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Allen Creek	13626	883700	RIVER	Rock	20	23	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Allen Creek	5542005	883700	RIVER	Dane, Green, Rock	23	27	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Alto Creek	11414	835900	RIVER	Dodge	0	6	6	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Low flow alterations, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Amacoy Lake	15269	2359700	LAKE	Rusk			278	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Amik Lake, Pike Lake Chain	14815	2268600	LAKE	Vilas			187	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Amnicon Lake	296831	2858100	LAKE	Douglas			390	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Amnicon River Beach, Lake Superior	1487383	2751220	GREAT LAKES BEACH	Douglas			0	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Anderson Creek	10987	133300	RIVER	Fond du Lac	0	7	7	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Anderson Creek	10987	133300	RIVER	Fond du Lac	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Addition	High	TMDL Needed (5A)
Angelo Pond	14028	1660400	IMPOUNDMENT	Monroe			39	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Anna Lake	128391	2953800	LAKE	Vilas			213	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Apple Branch	18546	899800	RIVER	Lafayette	5	8	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Apple Creek	10839	124100	RIVER	Brown, Outagamie	4	24	20	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Apple Creek	10839	124100	RIVER	Brown, Outagamie	4	24	20	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Apple Creek	313933	124100	RIVER	Brown	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Apple Creek	313933	124100	RIVER	Brown	0	4	4	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Apple River Flowage	16550	2624200	LAKE	Polk			639	04/01/2012	Unknown	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Arbutus Lake	18119	181400	LAKE	Forest			161	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Arbutus Lake	14235	1727700	LAKE	Clark, Jackson			839	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Ashippun River	11543	853800	RIVER	Dodge, Jefferson, Washington, Waukesha	0	33	33	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Ashwaubenon Creek	10834	122200	RIVER	Brown	0	15	15	04/01/2008	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Ashwaubenon Creek	10834	122200	RIVER	Brown	0	15	15	04/01/2008	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Babb Creek	13003	1279100	RIVER	Sauk	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Bacon Branch	18554	953200	RIVER	Grant	0	6	6	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Bad Axe River	13966	1639300	RIVER	Vernon	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Badfish Creek	11652	799500	RIVER	Dane, Rock	0	12	12	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Badfish Creek	11653	799500	RIVER	Dane	12	13	1	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Badfish Creek	11652	799500	RIVER	Dane, Rock	0	12	12	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	Watershed Plan (5W)
Baird Creek	10681	118100	RIVER	Brown	0	4	4	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Baird Creek	10681	118100	RIVER	Brown	0	4	4	04/01/2006	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Baird Creek	10682	118100	RIVER	Brown	4	13	10	04/01/2008	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Baird Creek	10682	118100	RIVER	Brown	4	13	10	04/01/2008	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Baker Creek	11460	856000	RIVER	Dodge	0	10	10	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Ballard Lake	15235	2340700	LAKE	Vilas			505	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Balsam Lake	16052	2112800	LAKE	Washburn			295	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Baraboo River	12978	1271100	RIVER	Monroe	109	119	10	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Baraboo River	13023	1271100	RIVER	Juneau	101	106	5	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Baraboo River	944788	1271100	RIVER	Sauk	28	60	32	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Baraboo River	944844	1271100	RIVER	Juneau, Sauk	60	87	27	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Baraboo River	944915	1271100	RIVER	Juneau	87	101	15	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Baraboo River	944741	1271100	RIVER	Sauk, Columbia	0	28	28	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Bark River	310752	813500	RIVER	Waukesha	35	41	6	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Bark River	5541890	813500	RIVER	Jefferson	0	12	12	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Bass Creek	11631	795800	RIVER	Rock	0	22	22	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Bass Lake	18701	2279800	LAKE	Price			84	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Bass Lake	127945	969600	LAKE	Lincoln			100	04/01/2012	Point Source	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Bass Lake	128740	970000	LAKE	Oneida			74	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Bass Lake, North	14929	1868900	LAKE	Iron			194	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Batavia Creek	10083	31400	RIVER	Sheboygan	0	4	4	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Batavia Creek	10083	31400	RIVER	Sheboygan	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Battle Creek	11487	848300	RIVER	Waukesha	2	5	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Bay City Creek	17627	2891100	RIVER	Ashland	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
BB Clark Beach, Monona Lake	1527131	804600	INLAND BEACH	Dane			0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Bear Creek	15581	2061900	RIVER	Pepin	2	8	6	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Bear Creek	15582	2061900	RIVER	Buffalo, Pepin	8	10	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Bear Creek	1470824	2061900	RIVER	Buffalo	10	17	7	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Bear Creek	3883349	2061900	RIVER	Pepin	0	2	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Bear Creek	9791	316000	RIVER	Outagamie	1	2	2	04/01/2012	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Bear Creek	9792	316000	RIVER	Outagamie	2	8	6	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Bear Creek	10414	292100	RIVER	Outagamie, Waupaca	8	12	4	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Bear Creek	10414	292100	RIVER	Outagamie, Waupaca	8	12	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Addition	High	TMDL Needed (5A)
Bear Creek	12317	1398700	RIVER	Wood, Portage	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Bear Creek	13102	1311600	RIVER	Juneau, Monroe	0	14	14	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Bear Creek	13408	1234600	RIVER	Richland	0	8	8	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Bear Lake	18759	2403200	LAKE	Ashland			204	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Bear Lake	127730	552100	LAKE	Forest			68	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Bear Lake (T36N R12W S2)	15985	2105100	LAKE	Washburn, Barron			1,358	04/01/2014	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Bear Trap Lake	16487	2618100	LAKE	Polk			241	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Bears Grass Creek	16099	2130300	RIVER	Eau Claire	6	16	10	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Bears Grass Creek	1476724	2130300	RIVER	Eau Claire	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Bearskill Lake	14803	2265100	LAKE	Iron			44	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Bearskin Lake	128040	1523600	LAKE	Oneida			400	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Addition	Low	Natural Conditions (5C)
Bearskin Lake	128040	1523600	LAKE	Oneida			400	04/01/2012	Unknown	Total Phosphorus	Excess Algal Growth	Deletion	Not Applicable	Removed: Recovery Unknown
Beaver Creek	10008	20000	RIVER	Milwaukee	0	3	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Beaver Creek	18435	1314000	RIVER	Juneau, Monroe	0	4	4	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Beaver Creek	10008	20000	RIVER	Milwaukee	0	3	3	04/01/1998	NPS	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Beaver Creek	11418	836500	RIVER	Dodge, Columbia	0	14	14	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Beaver Creek	12479	1459300	RIVER	Marathon	0	5	5	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Beaver Dam Lake	11411	835100	LAKE	Dodge			6,402	04/01/2010	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Beaver Dam River	11397	831400	RIVER	Dodge	0	11	11	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Beaver Dam River	11397	831400	RIVER	Dodge	0	11	11	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Beaver Dam River	356616	831400	RIVER	Dodge	11	14	3	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Beaver Dam River	356616	831400	RIVER	Dodge	11	14	3	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Beaver Dam River	356663	831400	RIVER	Dodge	14	30	16	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Beaver Dam River	356663	831400	RIVER	Dodge	14	30	16	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Beaver Lake	16223	1834400	LAKE	Chippewa			15	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Becker Lake	9920	77300	LAKE	Calumet			32	04/01/2016	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Becky Creek	15277	2369600	RIVER	Rusk	0	1	1	04/01/2004	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Belleville Millpond (61 ac)	902204	886000	LAKE	Dane			88	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Big Arbor Vitae Lake	128406	1545600	LAKE	Vilas			1,090	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Big Bass Lake	424458	1405200	LAKE	Marathon			177	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Big Blake Lake (Blake)	16558	2627000	LAKE	Polk			217	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Big Butternut Lake	16680	2641000	LAKE	Polk			378	04/01/2012	Other	Total Phosphorus	Excess Algal Growth	303d Listed	Low	Natural Conditions (5C)
Big Creek	14124	1692900	RIVER	Monroe	1	6	5	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Big Creek	1527961	1692900	RIVER	Monroe	0	1	1	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Big Doctor Lake	16690	2453400	LAKE	Burnett			212	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Big Dummy Lake	15829	1835100	LAKE	Barron			111	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Big Eau Pleine Flowage	352690	1427400	IMPOUNDMENT	Marathon			4,909	04/01/1998	NPS	Total Phosphorus	Low DO, Eutrophication, Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Big Eau Pleine River	12398	1427200	RIVER	Marathon	0	17	17	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Big Eau Pleine River	12399	1427200	RIVER	Marathon	17	22	5	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Big Eau Pleine River	886772	1427200	RIVER	Marathon	22	46	23	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Big Fork Lake	128044	1610700	LAKE	Oneida			690	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Big Fork Lake	128044	1610700	LAKE	Oneida			690	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Big Lake	128045	1613000	LAKE	Oneida			865	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Big Lake	18874	2615900	LAKE	Polk			259	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Big Lake	128045	1613000	LAKE	Oneida			865	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Big Mckenzie Lake	17196	2706800	LAKE	Burnett, Washburn			1,185	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Big Moon Lake	15706	2079000	LAKE	Barron			191	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Big Patch Creek	13894	944600	RIVER	Grant	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2006 (4A)
Big Rib River	313263	1451800	RIVER	Marathon	0	14	14	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Big Saint Germain Lake	128411	1591100	LAKE	Vilas			1,617	04/01/2014	NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Big Sand Lake	128410	1602600	LAKE	Vilas			1,408	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Big Stone Lake	128046	1612200	LAKE	Oneida			548	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Big Stone Lake	128046	1612200	LAKE	Oneida			548	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Big Twin Lake	11025	146500	LAKE	Green Lake			78	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Bird Lake	128863	972000	LAKE	Oneida			99	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Black Creek	12474	1458200	RIVER	Marathon	0	15	15	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Black Creek	12475	1458200	RIVER	Marathon	15	20	5	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Black Creek	337866	317100	RIVER	Outagamie, Shawano	16	28	12	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Black Earch Creek	5696531	1248600	RIVER	Dane	7	11	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Black Earth Creek	13474	1248600	RIVER	Dane, Iowa	0	7	7	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Black Earth Creek	13475	1248600	RIVER	Dane	11	17	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community, Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Black Lake (Birch)	18758	2401300	LAKE	Ashland, Sawyer			129	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Black Otter Lake (Hortonville)	9789	315600	LAKE	Outagamie			75	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Black R. (Below Medford)	14258	1676700	RIVER	Clark, Taylor	133	168	36	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Medium	Phosphorus Listed (5P)
Black R. (Below Medford)	14258	1676700	RIVER	Clark, Taylor	133	168	36	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Black River	14287	1676700	RIVER	Jackson	61	74	14	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Black River	18627	1676700	RIVER	Jackson, Trempealeau, La Crosse	0	24	24	04/01/2004	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Black River	14215	1676700	RIVER	Clark	77	91	13	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Black River	18627	1676700	RIVER	Jackson, Trempealeau, La Crosse	0	24	24	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Black River	11346	50300	RIVER	Sheboygan	0	11	11	04/01/2014	PS/NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Black River	14215	1676700	RIVER	Clark	77	91	13	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Black River	18627	1676700	RIVER	Jackson, Trempealeau, La Crosse	0	24	24	04/01/2004	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Black River	14309	1676700	RIVER	Jackson, Monroe	24	61	36	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Black River, Hwy H To Rock Creek	14105	1676700	RIVER	Clark	98	107	9	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Black River, Hwy H To Rock Creek	14105	1676700	RIVER	Clark	98	107	9	04/01/1998	PS/NPS	Unknown Pollutant	Low DO	303d Listed	Low	TMDL Needed (5A)
Blackhawk Creek	11628	797000	RIVER	Rock	2	4	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat, Turbidity	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Blackhawk Lake	13338	1239400	LAKE	Iowa			220	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Bladder Lake	890888	2756200	LAKE	Bayfield			84	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Blake Fork	13917	962000	RIVER	Grant	0	17	17	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Addition	Low	TMDL Needed (5A)
Blake Fork	13917	962000	RIVER	Grant	0	17	17	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Blockhouse Lake	14782	2256800	LAKE	Price			242	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Blue Harbor Beach, Lake Michigan	3899491	20	GREAT LAKES BEACH	Sheboygan			0	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Blue River	13269	1211000	RIVER	Grant	0	18	18	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Blue River	13271	1211000	RIVER	Iowa	32	35	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Bohris Valley Creek	14339	1774200	RIVER	Buffalo	0	5	5	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Boice Creek	13902	956200	RIVER	Grant	0	16	16	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Bone Lake T35n R16w S06	16565	2628100	LAKE	Polk			1,781	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Boot Lake	9921	77600	LAKE	Calumet, Manitowoc			11	04/01/2016	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Bostwick Creek	13989	1650900	RIVER	La Crosse	0	4	4	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Botana Valley Creek	14350	1775700	RIVER	Buffalo	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Bower Creek	10683	118400	RIVER	Brown	0	3	3	04/01/2008	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Bower Creek	10683	118400	RIVER	Brown	0	3	3	04/01/2008	NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Bower Creek	10684	118400	RIVER	Brown	3	13	10	04/01/2008	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Bower Creek	10684	118400	RIVER	Brown	3	13	10	04/01/2008	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Braezels Branch	13695	900700	RIVER	Green, Lafayette	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Branch River	482183	71300	RIVER	Manitowoc	12	20	8	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Branch River	482239	71300	RIVER	Brown, Manitowoc	20	37	17	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Branch River (Main Stem)	9899	71300	RIVER	Manitowoc	0	12	12	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Brewer Creek	13069	1305000	RIVER	Juneau	7	9	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Brewer Creek	18447	1305000	RIVER	Juneau	0	7	7	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community, Impairment Unknown	TMDL Development	High	TMDL Needed (5A)
Brewery Creek	13815	928600	RIVER	Iowa	0	3	3	04/01/1998	PS/NPS	Zinc	Chronic Aquatic Toxicity	EAP Project	Not Applicable	TMDL Needed (5A)
Brewery Creek	13815	928600	RIVER	Iowa	0	3	3	04/01/1998	PS/NPS	Lead	Chronic Aquatic Toxicity	EAP Project	Not Applicable	TMDL Needed (5A)
Bridge Creek	16102	2130600	RIVER	Eau Claire	0	4	4	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Bridge Creek	1480660	2130600	RIVER	Eau Claire	4	9	6	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Brule River Flowage	890809	704400	IMPOUNDMENT	Florence			210	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Brule River State Forest Beach #3, Lake Superior	1452476	2751220	GREAT LAKES BEACH	Douglas			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Buckskin School Creek	13685	897300	RIVER	Green	0	7	7	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Buell Valley Creek	14460	1813100	RIVER	Buffalo	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Buffalo River	14468	1813900	RIVER	Buffalo, Trempealeau	0	42	42	04/01/2012	NPS	Total Phosphorus	Degraded Biological Community, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Buffalo River	14496	1813900	RIVER	Trempealeau	45	57	12	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Buffalo River	1439446	1813900	RIVER	Trempealeau	57	70	13	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Bull Br	13880	953100	RIVER	Grant	0	2	2	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Bull Branch	13836	936400	RIVER	Lafayette	0	4	4	04/01/2010	Other	Zinc	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Bull Branch	13836	936400	RIVER	Lafayette	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Bullhead Lake	9881	68300	LAKE	Manitowoc			67	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Bullhead Lake	9881	68300	LAKE	Manitowoc			67	04/01/2012	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Medium	TMDL Needed (5A)
Burgy Creek	13638	880500	RIVER	Green	0	11	11	04/01/2004	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Butler Ditch	10040	18100	RIVER	Waukesha	0	3	3	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Butternut Lake	14864	2283300	LAKE	Ashland, Price			1,006	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Butternut Lake	14864	2283300	LAKE	Ashland, Price			1,006	04/01/2012	Unknown	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Byron Creek	10995	137400	RIVER	Fond du Lac	2	7	6	04/01/2006	NPS	Sediment/Total Suspended Solids	Low DO, Elevated Water Temperature, Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Byron Creek	1452243	137400	RIVER	Fond du Lac	0	2	2	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Calamus Creek	11423	834900	RIVER	Dodge	0	17	17	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Calamus Creek	11423	834900	RIVER	Dodge	0	17	17	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Caldron Falls Reservoir (Imp)	11949	545400	IMPOUNDMENT	Oconto, Marinette			1,018	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Callahan Lake	15472	2434700	LAKE	Sawyer			106	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Cambra Creek (Canada)	11417	836200	RIVER	Dodge	0	3	3	04/01/2012	NPS	Total Phosphorus	Degraded Biological Community, Impairment Unknown	303d Listed	Low	TMDL Needed (5A)
Camp Lake	15112	1839100	LAKE	Vilas			37	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Carpenter Creek	10784	248800	RIVER	Waushara	0	6	6	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Carpenter Creek	10784	248800	RIVER	Waushara	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Carstens Lake	9869	66800	LAKE	Manitowoc			21	04/01/2014	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Medium	TMDL Needed (5A)
Cary Millpond	10297	262400	LAKE	Waupaca			26	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Casper Creek	11401	832100	RIVER	Dodge	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Castle Rock Flowage	424081	1345700	IMPOUNDMENT	Adams, Juneau			12,386	04/01/1998	Contam. Sed.	Dioxin	Contaminated Fish Tissue	Deletion	Not Applicable	Removed: Recovery Unknown
Castle Rock Flowage	424081	1345700	IMPOUNDMENT	Adams, Juneau			12,386	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Cat Creek	12232	1370700	RIVER	Wood	0	2	2	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Cazenovia Branch	13010	1283100	RIVER	Richland, Sauk	0	1	1	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Cedar Creek	10051	21300	RIVER	Ozaukee	0	5	5	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Cedar Creek	1437248	21300	RIVER	Ozaukee, Washington	5	33	28	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Cedar Lake	18873	2615100	LAKE	Polk, Saint Croix			1,120	04/01/1998	NPS	Total Phosphorus	Excess Algal Growth, Elevated pH	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Cedarburg Pond	11290	21700	LAKE	Ozaukee			15	04/01/2012	Contam. Sed.	PCBs	Contaminated Fish Tissue	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Cedarburg Pond	11271	8500	LAKE	Ozaukee			5	04/01/2012	Point Source	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Cedarburg Pond	11271	8500	LAKE	Ozaukee			5	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Center Creek	13366	1225800	RIVER	Richland	0	2	2	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Chain Lake (Sugar Camp Chain)	128069	1598000	LAKE	Oneida			219	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Addition	High	Natural Conditions (5C)
Chain Lake (Sugar Camp Chain)	128069	1598000	LAKE	Oneida			219	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	Deletion	Not Applicable	Removed: Recovery Unknown
Chase Creek	18575	965800	RIVER	Grant	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Chequamegon Bay (Ashland Coal Tar Site)	891683	2753770	BAY/HARBOR	Ashland			17	04/01/1998	Contam. Sed.	PAHs	Chronic Aquatic Toxicity, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Chequamegon Flowage	16206	2160700	IMPOUNDMENT	Taylor			2,714	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Chequamegon Flowage	16206	2160700	IMPOUNDMENT	Taylor			2,714	04/01/2014	NPS	Total Phosphorus	Eutrophication, Water Quality Use Restrictions, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Cherokee Creek	9977	15250	RIVER	Milwaukee	0	2	2	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Cherry Branch	13688	898500	RIVER	Lafayette	0	7	7	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Cherry Branch	352979	898900	RIVER	Lafayette	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat, Turbidity	303d Listed	Low	Natural Conditions (5C)
Chetek Lake	15815	2094000	LAKE	Barron			770	04/01/2006	NPS	Total Phosphorus	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Chetek River	15795	2089000	RIVER	Barron	0	5	5	04/01/2008	PS/NPS	Total Phosphorus	Low DO, Eutrophication	303d Listed	Low	TMDL Needed (5A)
Chippewa R At Eau Claire	889320	2050000	RIVER	Eau Claire	59	60	1	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Chippewa R At Eau Claire	889320	2050000	RIVER	Eau Claire	59	60	1	04/01/1998	Contam. Sed.	Unspecified Metals	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Chippewa R At L Wissota	889449	2050000	RIVER	Chippewa	77	80	3	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Chippewa River	18765	2050000	RIVER	Buffalo, Pepin	0	21	21	04/01/2008	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Chippewa River	304733	2050000	RIVER	Pepin, Dunn	21	38	17	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Chippewa River	889277	2050000	RIVER	Eau Claire, Dunn	38	59	21	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Chippewa River	889365	2050000	RIVER	Eau Claire, Chippewa	60	77	17	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Chippewa River	889529	2050000	RIVER	Chippewa	80	106	26	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Circle Lily Lake	15161	2326700	LAKE	Iron, Vilas			223	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Cisco Lake	891024	2899200	LAKE	Bayfield			96	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
City Of Kewaunee Beach (Selner Park), Lake Michigan	1452524	20	GREAT LAKES BEACH	Kewaunee			1	04/01/2006	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Clam Lake, Lower	15559	2429300	LAKE	Sawyer			229	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Clam Lake, Upper	18915	2656200	LAKE	Burnett			1,207	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Clara Lake	128737	994700	LAKE	Lincoln			84	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Clear Creek	14149	1697800	RIVER	Jackson, Monroe	0	6	6	04/01/2002	NPS	Elevated Water Temperature	Elevated Water Temperature	303d Listed	Low	TMDL Needed (5A)
Clear Lake	11701	775000	LAKE	Rock			77	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Clear Lake	127840	977000	LAKE	Langlade			88	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Clear Lake	128438	2329000	LAKE	Vilas			555	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Clear Lake	11701	775000	LAKE	Rock			77	04/01/2010	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Cleaver Creek	13031	1292500	RIVER	Juneau	0	5	5	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Cochrane Ditch (Rose Valley Cr)	14461	1813600	RIVER	Buffalo	0	7	7	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Cochrane Ditch (Rose Valley Cr)	3883423	1813600	RIVER	Buffalo	7	10	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Collins (Fish) Lake	10319	270200	LAKE	Portage			49	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Collins (Fish) Lake	10319	270200	LAKE	Portage			49	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Coon Branch	13837	936500	RIVER	Lafayette	0	5	5	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Coon Branch	13838	936500	RIVER	Lafayette	5	7	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Coon Branch	1482046	936500	RIVER	Lafayette	7	8	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Coon Creek	893459	1643500	RIVER	Vernon	0	14	14	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Coon Creek	15665	2066400	RIVER	Dunn	0	3	3	04/01/2002	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Coon Creek	15665	2066400	RIVER	Dunn	0	3	3	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Coon Fork Flowage	18825	2135600	LAKE	Eau Claire			75	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Copper Creek	12999	1278400	RIVER	Sauk	0	6	6	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Council Creek	13110	1341600	RIVER	Monroe	0	4	4	04/01/2014	PS/NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Cox Hollow Lake	13432	1246500	LAKE	Iowa			96	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Cranberry Flowage, Upper	14180	1707100	IMPOUNDMENT	Jackson			35	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Cranberry Lake	128768	1603800	LAKE	Oneida, Vilas			956	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Crane Lake	10605	388500	LAKE	Forest			341	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Crawfish River	11438	829700	RIVER	Dodge, Columbia	50	81	32	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Crawfish River	11438	829700	RIVER	Dodge, Columbia	50	81	32	04/01/2014	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Crawfish River - Columbus Mill Pond	356471	842500	IMPOUNDMENT	Dodge, Columbia			18	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Crawfish River (Jefferson to Rock Creek)	5513911	829700	RIVER	Jefferson	0	11	11	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Crawford Creek	17458	2835500	RIVER	Douglas	0	9	9	04/01/1998	Contam. Sed.	PAHs	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Crawford Creek	17458	2835500	RIVER	Douglas	0	9	9	04/01/1998	Contam. Sed.	Creosote	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Creek 1-8 (T29N, R11W)	1457461	2083000	RIVER	Dunn	0	3	3	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Creek 20-16 Trib. To Gilbert Creek	15656	2064650	RIVER	Dunn	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Creek 2-14 (T29n, R4e)	1459550	1458400	RIVER	Marathon	0	5	5	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Creek 23-13b	359545	1665600	RIVER	Monroe	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Crossman Creek	13019	1286700	RIVER	Juneau, Sauk	0	6	6	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Crossman Creek	13020	1286700	RIVER	Juneau	6	12	6	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Crowley Flowage	14880	2287200	IMPOUNDMENT	Price			354	04/01/1998	Other	Mercury	Contaminated Fish Tissue, Chronic Aquatic Toxicity, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Crystal Lake	9837	45200	LAKE	Sheboygan			152	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Crystal River	10287	258200	RIVER	Waupaca	2	12	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Culver Br	13875	950900	RIVER	Grant	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Cunningham Creek	18625	1747900	RIVER	Clark	0	22	22	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Currie Lake	128089	979300	LAKE	Oneida			96	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Dairyland Reservoir (Flambeau)	14663	2229200	IMPOUNDMENT	Rusk			1,745	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Dam Lake (Sugar Camp Chain)	128092	1596900	LAKE	Oneida			744	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	High	Natural Conditions (5C)
Dam Lake (Sugar Camp Chain)	128092	1596900	LAKE	Oneida			744	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	Deletion	Not Applicable	Removed: Recovery Unknown
Davis Creek	14111	1689300	RIVER	Jackson, La Crosse	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Davy Creek	11548	855400	RIVER	Dodge	0	6	6	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Dawes Creek	12226	1367400	RIVER	Wood	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Day Lake Flowage	15561	2430300	IMPOUNDMENT	Ashland			625	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Dead Creek	904986	860000	RIVER	Dodge	4	11	7	04/01/2006	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Dead Creek	904986	860000	RIVER	Dodge	4	11	7	04/01/2006	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Dead Creek	1455284	860000	RIVER	Dodge	0	4	4	04/01/2006	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Dead Creek	1455284	860000	RIVER	Dodge	0	4	4	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Dead Pike Lake	15067	2316600	LAKE	Vilas			297	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Dead Pike Lake	15067	2316600	LAKE	Vilas			297	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Decatur Lake	4701075	879400	IMPOUNDMENT	Green			109	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Deep Hole Lake	10541	184500	LAKE	Forest			97	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Deep Lake	15894	1844000	LAKE	Washburn			43	04/01/2012	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Deep Wood Lake	128724	1445100	LAKE	Langlade			72	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Deer Creek	424345	772900	RIVER	Waukesha	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Deer Creek	424345	772900	RIVER	Waukesha	0	8	8	04/01/2008	NPS	Elevated Water Temperature	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Deer Creek	424345	772900	RIVER	Waukesha	0	8	8	04/01/2008	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Deer Lake	128733	1519600	LAKE	Lincoln			152	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Deer Tail Creek	14650	2221700	RIVER	Rusk	0	40	40	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Delavan Lake	11618	793600	LAKE	Walworth			2,072	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Dell Creek	13045	1295200	RIVER	Sauk	8	19	12	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Dell Creek	18439	1295200	RIVER	Sauk	2	8	6	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Dell Creek	946824	1295200	RIVER	Juneau	19	23	4	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Delton Lake	13546	1295400	LAKE	Sauk			267	04/01/2016	NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Deneveu Creek	10982	138700	RIVER	Fond du Lac	0	11	11	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Deneveu Creek	10983	138700	RIVER	Fond du Lac	11	12	1	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Des Plaines River	11799	734000	RIVER	Racine, Kenosha	0	23	23	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Dexter Lake	1446343	1369900	LAKE	Wood			222	04/01/2010	NPS	Total Phosphorus	Eutrophication, Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Dexter Lake	1446343	1369900	LAKE	Wood			222	04/01/1998	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Diamond Lake	14291	1757200	LAKE	Taylor			49	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Diamond Lake	891007	2897100	LAKE	Bayfield			322	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Diamond Valley Creek	16109	2131400	RIVER	Eau Claire	1	7	6	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Diamond Valley Creek	16109	2131400	RIVER	Eau Claire	1	7	6	04/01/2014	NPS	Unknown Pollutant	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Diamond Valley Creek	1480889	2131400	RIVER	Eau Claire	0	1	1	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Diamond Valley Creek	1480889	2131400	RIVER	Eau Claire	0	1	1	04/01/2014	NPS	Unknown Pollutant	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Diggings Creek	353842	936800	RIVER	Lafayette	0	5	5	04/01/1998	NPS	Zinc	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Diggings Creek	353842	936800	RIVER	Lafayette	0	5	5	04/01/1998	NPS	Lead	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Diggings Creek	353842	936800	RIVER	Lafayette	0	5	5	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Addition	Low	TMDL Needed (5A)
Diggings Creek	353842	936800	RIVER	Lafayette	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Dill Creek	12402	1430700	RIVER	Marathon	0	8	8	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Dill Creek	12403	1430700	RIVER	Clark, Marathon	8	20	12	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Ditch to the Oregon Branch of Badfish Creek	1516935	800800	RIVER	Dane	0	4	4	04/01/2012	Unknown	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Doc Smith Branch (Cass Valley)	13281	1212000	RIVER	Grant	0	3	3	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Dodge Branch	13746	910800	RIVER	Iowa	0	9	9	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Dodge Branch	13747	910800	RIVER	Iowa	9	17	7	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Dodge Branch	13748	910800	RIVER	Iowa	17	20	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Dodge Branch	13749	910800	RIVER	Iowa	20	23	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Dodge Branch	13748	910800	RIVER	Iowa	17	20	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Addition	Medium	TMDL Needed (5A)
Dodge Branch	13749	910800	RIVER	Iowa	20	23	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Addition	Medium	TMDL Needed (5A)
Dog Lake	128743	1612900	LAKE	Oneida			216	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Door Creek	11644	802800	RIVER	Dane	0	14	14	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Dougherty Creek	13700	901000	RIVER	Green	14	17	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Dougherty Creek	13700	901000	RIVER	Green	14	17	3	04/01/1998	NPS	BOD	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Dougherty Creek	13700	901000	RIVER	Green	14	17	3	04/01/1998	NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Dougherty Creek	13700	901000	RIVER	Green	14	17	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Douglas Creek	14116	1691300	RIVER	Jackson	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Douglas Creek	14117	1691300	RIVER	Jackson	2	4	2	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Douglas Creek	14118	1691300	RIVER	Jackson	4	10	6	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Dowling Lake	20362	2858300	LAKE	Douglas			141	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Drew Creek	11416	836100	RIVER	Dodge	0	3	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Drew Creek	11416	836100	RIVER	Dodge	0	3	3	04/01/2014	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Druid Lake	18223	855200	LAKE	Washington			120	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Duck Creek	10850	409700	RIVER	Brown	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Duck Creek	10850	409700	RIVER	Brown	0	5	5	04/01/2008	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Duck Creek	10851	409700	RIVER	Outagamie	26	33	7	04/01/2008	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Duck Creek	10851	409700	RIVER	Outagamie	26	33	7	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Duck Creek	10850	409700	RIVER	Brown	0	5	5	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Duck Creek	10851	409700	RIVER	Outagamie	26	33	7	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Duck Creek	13523	1266300	RIVER	Columbia	0	12	12	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Duncan Creek	16166	2150600	RIVER	Chippewa	0	9	9	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Duncan Creek	3987136	2150600	RIVER	Chippewa	9	15	6	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Duncan Creek	3987409	2150600	RIVER	Chippewa	15	22	7	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Dunham Lake	16725	2651800	LAKE	Burnett			243	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Dutchman Creek	10832	121600	RIVER	Brown	0	4	4	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Dutchman Creek	1854741	121600	RIVER	Outagamie	16	18	2	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Dutchman Creek	10832	121600	RIVER	Brown	0	4	4	04/01/1998	NPS	Ammonia (Unionized) - Toxin	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Dutchman Creek	1854741	121600	RIVER	Outagamie	16	18	2	04/01/1998	NPS	Ammonia (Unionized) - Toxin	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
E Br Big Eau Pleine River	12411	1432300	RIVER	Marathon	0	11	11	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
E. Br. Pecatonica River	13687	897800	RIVER	Lafayette	0	33	33	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
E. Br. Pecatonica River	13737	897800	RIVER	Lafayette, Iowa	33	55	22	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Eagle Lake	10466	759800	LAKE	Racine			515	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Eagle Lake (Eagle Chain)	128460	1600200	LAKE	Vilas			572	04/01/2014	NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
East Alaska Lake	18067	94200	LAKE	Kewaunee			53	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
East Balsam Lake	4698566	2620600	BAY/HARBOR	Polk			555	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
East Br Big Creek	13006	1280500	RIVER	Juneau, Sauk	0	7	7	04/01/2012	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
East Branch Fondulac River	10991	135900	RIVER	Fond du Lac	0	15	15	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
East Branch Rock River	951364	861400	RIVER	Dodge	0	12	12	04/01/2006	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
East Branch Rock River	951364	861400	RIVER	Dodge	0	12	12	04/01/2006	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
East River	10679	118000	RIVER	Brown	0	14	14	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
East River	10679	118000	RIVER	Brown	0	14	14	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
East River	10680	118000	RIVER	Brown, Calumet	14	42	28	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
East River	10680	118000	RIVER	Brown, Calumet	14	42	28	04/01/2002	NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
East River	10679	118000	RIVER	Brown	0	14	14	04/01/1998	NPS	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
East River	10680	118000	RIVER	Brown, Calumet	14	42	28	04/01/2002	NPS	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
East Trib. to Parsons Cr	903785	136200	RIVER	Fond du Lac	0	2	2	04/01/2008	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
East Trib. to Parsons Cr	903785	136200	RIVER	Fond du Lac	0	2	2	04/01/2008	NPS	Elevated Water Temperature	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
East Twin Lake	16372	2598900	LAKE	Saint Croix			60	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
East Twin River	18071	84000	RIVER	Manitowoc	0	10	10	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
East Twin River	10205	84000	RIVER	Kewaunee	26	34	8	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
East Twin River	10206	84000	RIVER	Kewaunee	34	41	7	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
East Twin River	18071	84000	RIVER	Manitowoc	0	10	10	04/01/2012	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Eau Claire Lake	16115	2133200	LAKE	Eau Claire			25	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Eau Claire Lake, Low	17091	2741600	LAKE	Bayfield, Douglas			802	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Eau Claire Lake, Middle	17093	2742100	LAKE	Bayfield			830	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Eau Galle River	15608	2055000	RIVER	Pepin, Dunn	0	9	9	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Eau Galle River	15610	2055000	RIVER	Pierce, Saint Croix	33	34	1	04/01/1998	NPS	Total Phosphorus	Elevated pH	303d Listed	Low	TMDL Needed (5A)
Eau Galle River	15611	2055000	RIVER	Saint Croix	34	39	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Echo Lake	16602	2630200	LAKE	Barron			161	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Eichelman Beach, Lake Michigan	1452637	20	GREAT LAKES BEACH	Kenosha			1	04/01/2006	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Eighteen Mile Creek	15742	2082400	RIVER	Dunn	0	5	5	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Eighteen Mile Creek	1527717	2082400	RIVER	Dunn	5	6	1	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Elk Creek	14380	1782500	RIVER	Trempealeau	1	22	21	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Elk Creek	16075	2120800	RIVER	Dunn	0	4	4	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Elk Creek	5688228	1782500	RIVER	Trempealeau	0	0	0	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Elkhart Lake	11365	59300	LAKE	Sheboygan			286	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Elmer School Branch	18527	880600	RIVER	Green	0	4	4	04/01/2014	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Emma Lake	128745	983500	LAKE	Oneida			223	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
English Lake	891177	2914800	LAKE	Ashland			232	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Enterprise Lake	127847	1579700	LAKE	Langlade			502	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Esther Park Beach	1487996	804600	INLAND BEACH	Dane	0	0	0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Evergreen Creek	10058	23000	RIVER	Washington	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Fall Creek	16095	2129900	RIVER	Eau Claire	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Fall Creek	16096	2129900	RIVER	Eau Claire	3	11	7	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Faxon (Central Park) Creek	1525909	2843700	RIVER	Douglas	0	3	3	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Feather Branch	13776	917400	RIVER	Lafayette	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Fennimore Fork (Castle Rock)	13275	1211300	RIVER	Grant	17	21	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Fennimore Fork (Castle Rock)	13275	1211300	RIVER	Grant	17	21	4	04/01/2012	Unknown	Total Phosphorus	Water Quality Use Restrictions	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Fennimore Fork (Castle Rock)	13276	1211300	RIVER	Grant	21	26	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Fenwood Creek	12393	1428700	RIVER	Marathon	0	2	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Fenwood Creek	12394	1428700	RIVER	Marathon	2	17	16	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Fifth Lake	128111	1571100	LAKE	Oneida			240	04/01/2014	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Finley Lake	16273	2175700	LAKE	Chippewa			58	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Finley Lake	16273	2175700	LAKE	Chippewa			58	04/01/1998	NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Fischer Park Beaches, Lake Michigan	481811	20	GREAT LAKES BEACH	Manitowoc			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Fish Creek	3924909	44700	RIVER	Ozaukee, Milwaukee	0	3	3	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Fish Lake	13490	985100	LAKE	Dane			216	04/01/2016	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Fisher Creek	18021	62500	RIVER	Sheboygan	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Fisher River	16294	2181500	RIVER	Taylor, Chippewa	0	33	33	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Fishtrap Lake	15403	2401100	IMPOUNDMENT	Sawyer			216	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Fleming Creek	14065	1685600	RIVER	La Crosse	0	10	10	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Fleming Creek	14066	1685600	RIVER	La Crosse	10	20	10	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Flynn Creek	11507	852800	RIVER	Washington	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Fond Du Lac River	10989	133700	RIVER	Fond du Lac	0	2	2	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Fond Du Lac River	10989	133700	RIVER	Fond du Lac	0	2	2	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fond Du Lac River	10989	133700	RIVER	Fond du Lac	0	2	2	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Forest Lake	11274	8900	LAKE	Fond du Lac			51	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Foster Lake	128113	985400	LAKE	Oneida			39	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Fourmile Lake	128114	1610800	LAKE	Oneida			218	04/01/2012	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Fourth Lake	128115	1572000	LAKE	Oneida			258	04/01/2014	NPS	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Fox Lake	11413	835800	LAKE	Dodge			2,625	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Fox Lake	11413	835800	LAKE	Dodge			2,625	04/01/2006	Habitat/Physical	Total Phosphorus	Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Fox River	424184	742500	RIVER	Waukesha	180	187	7	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Low DO	303d Listed	Low	TMDL Needed (5A)
Fox River	424184	742500	RIVER	Waukesha	180	187	7	04/01/1998	PS/NPS	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fox River	424184	742500	RIVER	Waukesha	180	187	7	04/01/1998	PS/NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)
Fox River	424225	742500	RIVER	Waukesha	187	197	9	04/01/1998	PS/NPS	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fox River (At Oshkosh)	352759	117900	RIVER	Winnebago	58	58	0	04/01/2004	Contam. Sed.	PAHs	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Fox River (Below Barstow Impoundment)	10461	742500	RIVER	Waukesha	171	175	4	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Fox River (Below Barstow Impoundment)	10461	742500	RIVER	Waukesha	171	175	4	04/01/1998	PS/NPS	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fox River (Below Barstow Impoundment)	10461	742500	RIVER	Waukesha	171	175	4	04/01/1998	PS/NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)
Fox River (Illinois)	481165	742500	RIVER	Waukesha	151	171	20	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Fox River (Illinois)	10507	742500	RIVER	Racine, Waukesha, Kenosha	113	151	38	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fox River (Illinois)	10507	742500	RIVER	Racine, Waukesha, Kenosha	113	151	38	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Fox River (Illinois)	481165	742500	RIVER	Waukesha	151	171	20	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fox River At Buffalo Lake	11083	168000	LAKE	Marquette			2,179	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Fox River At Buffalo Lake	11083	168000	LAKE	Marquette			2,179	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fox River, Upper Barstow Impoundment	424143	742500	RIVER	Waukesha	176	180	4	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Low DO	303d Listed	Low	TMDL Needed (5A)
Fox River, Upper Barstow Impoundment	424143	742500	RIVER	Waukesha	176	180	4	04/01/1998	PS/NPS	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Fox River, Upper Barstow Impoundment	424143	742500	RIVER	Waukesha	176	180	4	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Frame Park Creek	424708	771650	IMPOUNDMENT	Waukesha	0	1	1	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Frame Park Creek	424708	771650	IMPOUNDMENT	Waukesha	0	1	1	04/01/1998	NPS	PAHs	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Frame Park Creek	424708	771650	IMPOUNDMENT	Waukesha	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Frame Park Creek	424708	771650	IMPOUNDMENT	Waukesha	0	1	1	04/01/1998	NPS	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Franklin Lake	128117	986000	LAKE	Oneida			161	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Fredonia Creek	10014	26600	RIVER	Ozaukee	0	4	4	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Friday Creek	16488	2618200	RIVER	Polk	0	3	3	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Friendship Lake	424108	1352000	LAKE	Adams			120	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Friess Lake	11510	853200	LAKE	Washington			117	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	Deletion	Not Applicable	Removed: Recovery Unknown
Friess Lake	11510	853200	LAKE	Washington			117	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
Galilee Lake	891262	2935500	LAKE	Ashland			212	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Garners Creek	10845	127700	RIVER	Outagamie	0	5	5	04/01/2008	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Garners Creek	10845	127700	RIVER	Outagamie	0	5	5	04/01/2008	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Garners Creek	10845	127700	RIVER	Outagamie	0	5	5	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Gass Lake	9870	67100	LAKE	Manitowoc			6	04/01/2016	NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Gates Lake	15396	1850200	LAKE	Ashland			22	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Gelena River	13833	935500	RIVER	Lafayette	3	36	33	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Ghost Lake	15537	2423000	LAKE	Sawyer			372	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Gill Creek	11570	861700	RIVER	Dodge	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Gill Creek	11570	861700	RIVER	Dodge	0	6	6	04/01/2006	NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Gill Creek	11570	861700	RIVER	Dodge	0	6	6	04/01/2006	NPS	Ammonia (Unionized) - Toxin	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Gills Coulee Creek	13993	1652300	RIVER	La Crosse	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Gills Coulee Creek	13994	1652300	RIVER	La Crosse	1	5	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2006 (4A)
Gilmore Lake	17283	2695800	LAKE	Washburn			389	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Gilmore Lake	128123	1589300	LAKE	Oneida			301	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Gilmore Lake	17283	2695800	LAKE	Washburn			389	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Glen Lake	15726	2071700	IMPOUNDMENT	Saint Croix			84	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Goldenthal Creek	10049	18900	RIVER	Washington	0	4	4	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Goose Lake	902174	872600	LAKE	Dane			12	04/01/2016	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Grand River	10702	159300	RIVER	Green Lake, Marquette, Fond du Lac	21	43	22	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Grand River	11097	159300	RIVER	Green Lake, Marquette	0	21	21	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Grandma Creek	480998	62400	RIVER	Sheboygan	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Grandma Creek	480998	62400	RIVER	Sheboygan	0	5	5	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Granite Lake	15877	2100800	LAKE	Barron			154	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	Natural Conditions (5C)
Grant Park Beach, Lake Michigan	1452696	20	GREAT LAKES BEACH	Milwaukee			1	04/01/2006	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Grant River	13901	956000	RIVER	Grant	0	26	26	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Grantosa Creek	3991760	5035175	RIVER	Milwaukee	0	1	1	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Greater Bass Lake	127855	1445500	LAKE	Langlade			246	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Green Bay (GI Shoreline)	483034	70	GREAT LAKES SHORELINE	Brown, Door, Kewaunee, Marinette, Oconto			9	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Green Bay (Inner Bay, Aoc)	357876	70	BAY/HARBOR	Brown			13,867	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Green Bay (Inner Bay, Aoc)	357876	70	BAY/HARBOR	Brown			13,867	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Green Bay (Inner Bay, Aoc)	357876	70	BAY/HARBOR	Brown			13,867	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Green Bay (Wi -Menominee Aoc)	884910	70	RIVER	Marinette	0	6	6	04/01/1998	Contam. Sed.	Arsenic	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Green Bay (Wi -Menominee Aoc)	884910	70	RIVER	Marinette	0	6	6	04/01/1998	Contam. Sed.	PAHs	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Green Lake (Big Green)	11023	146100	LAKE	Green Lake			7,486	04/01/2014	NPS	Total Phosphorus	Low DO	TMDL Development	High	Natural Conditions (5C)
Green Lake (Big Green)	11023	146100	LAKE	Green Lake			7,486	04/01/2002	Atm. Dep.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Griffin Creek	10403	279000	RIVER	Waupaca	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Grubers Grove Bay, Lake Wisconsin	887849	1260600	BAY/HARBOR	Sauk			25	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	EAP Project	Not Applicable	TMDL Needed (5A)
Grubers Grove Bay, Lake Wisconsin	887849	1260600	BAY/HARBOR	Sauk			25	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	EAP Project	Not Applicable	TMDL Needed (5A)
Grubers Grove Bay, Lake Wisconsin	887849	1260600	BAY/HARBOR	Sauk			25	04/01/2006	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	EAP Project	Not Applicable	TMDL Needed (5A)
Gunderson Valley Creek	887418	1212600	RIVER	Grant	0	5	5	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Gunderson Valley Creek	887418	1212600	RIVER	Grant	0	5	5	04/01/2002	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Half Moon Lake	16081	2125400	LAKE	Eau Claire			135	04/01/1998	NPS	Total Phosphorus	Eutrophication	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Halfway Creek	14056	1676000	RIVER	La Crosse	8	12	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Halfway Prairie Creek	13478	1248800	RIVER	Dane	0	8	8	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Addition	Low	TMDL Needed (5A)
Halfway Prairie Creek	13478	1248800	RIVER	Dane	0	8	8	04/01/2004	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Hallie Lake	18837	2150200	IMPOUNDMENT	Chippewa			79	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Halls Branch	887220	1184300	RIVER	Crawford	2	5	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Halls Creek	18612	1710600	RIVER	Jackson	0	13	13	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Hamann Creek	18334	1429900	RIVER	Marathon	0	10	10	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Hancock Lake	128130	1517900	LAKE	Oneida			259	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Hardies Creek	14072	1686900	RIVER	Trempealeau	0	2	2	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Hardies Creek	14073	1686900	RIVER	Trempealeau	2	4	2	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Harkner Flowage	14169	1704100	IMPOUNDMENT	Jackson			53	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Harmon Lake	18809	1852500	LAKE	Washburn			96	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Harper Lake, South	14618	2204100	LAKE	Taylor			80	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Harpt Lake	10149	84600	LAKE	Manitowoc			31	04/01/2016	NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Harrington Creek	11016	143700	RIVER	Green Lake	0	3	3	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Hartlaub Lake	9871	67200	LAKE	Manitowoc			34	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Harvey Creek	5514178	1819300	RIVER	Buffalo, Pepin	7	11	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Harvey Creek	5541777	1819300	RIVER	Buffalo	6	7	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Hawkinson Creek	14386	1785500	RIVER	Trempealeau	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Hay Creek	13001	1279000	RIVER	Sauk	0	5	5	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Hay Creek	1453560	2133300	RIVER	Eau Claire, Chippewa	13	21	8	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Hay Creek	1453605	2133300	RIVER	Eau Claire	0	13	13	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Hay Creek (T25N R6W)	16110	2131900	RIVER	Eau Claire	0	7	7	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community, Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Hay Creek (T28N, R5W)	16116	2133300	RIVER	Chippewa	21	26	5	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Hay River	15684	2068600	RIVER	Barron, Dunn	0	38	38	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Hay River	1500711	2068600	RIVER	Barron	38	64	26	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Hefty Creek, Center Branch	13643	882200	RIVER	Green	0	5	5	04/01/2014	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Hefty Creek, South Branch	13642	882000	RIVER	Green	0	3	3	04/01/2014	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Hemlock Creek	12224	1366300	RIVER	Wood	0	28	28	04/01/2012	NPS	Total Phosphorus	Degraded Biological Community, Impairment Unknown	TMDL Development	High	TMDL Needed (5A)
Hemlock Lake	16230	1853400	LAKE	Chippewa			28	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Hemlock Lake	128137	989200	LAKE	Oneida			39	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Hemlock Lake	16230	1853400	LAKE	Chippewa			28	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Hemlock Slough	424051	1286100	LAKE	Sauk			22	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	High	TMDL Needed (5A)
High Falls Reservoir	18285	540600	IMPOUNDMENT	Marinette			1,498	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Hika Park Bay Beach, Lake Michigan	481845	20	GREAT LAKES BEACH	Manitowoc			0	04/01/1998	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Hill Creek	11024	146200	RIVER	Green Lake	0	2	2	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Hill Creek	11024	146200	RIVER	Green Lake	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Addition	High	TMDL Needed (5A)
Hills Creek	18434	1288800	RIVER	Juneau, Vernon	0	10	10	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Hills Lake	10758	182100	LAKE	Waushara			133	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Hodstradt Lake	128143	990700	LAKE	Oneida			126	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Hog Island Inlet	891512	2751300	BAY/HARBOR	Douglas			19	04/01/1998	Contam. Sed.	PAHs	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Hog Island Inlet	891512	2751300	BAY/HARBOR	Douglas			19	04/01/1998	Contam. Sed.	Foam/Flocs/Scum/Oil Slicks	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Hog Island Inlet	891512	2751300	BAY/HARBOR	Douglas			19	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Holcombe Flowage- HWY 27 Embayment	18659	2184900	IMPOUNDMENT	Rusk, Chippewa			985	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Holcombe Flowage- HWY 27 Embayment	18659	2184900	IMPOUNDMENT	Rusk, Chippewa			985	04/01/1998	NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Holly Lake, Upper (Holly)	15376	2394600	LAKE	Sawyer			33	04/01/2016	Atm. Dep.	Mercury	Contaminated Fish Tissue	Proposed for List	Low	Mercury Atm. Dep. (5B)
Holmes Avenue Creek	9979	15550	RIVER	Milwaukee	0	2	2	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Honey Creek	13672	892300	RIVER	Green	1	10	9	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Honey Creek	352889	892300	RIVER	Green	10	16	7	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Honey Creek	10021	16300	RIVER	Milwaukee	0	9	9	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Honey Creek	10021	16300	RIVER	Milwaukee	0	9	9	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Honey Creek	10486	751500	RIVER	Racine, Walworth	0	21	21	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Honey Creek	13455	1253900	RIVER	Sauk	0	26	26	04/01/2012	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Honey Creek	13456	1253900	RIVER	Sauk	26	30	5	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Honey Creek	13672	892300	RIVER	Green	1	10	9	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Honey Creek	352889	892300	RIVER	Green	10	16	7	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Hoopers Millpond	11384	830300	IMPOUNDMENT	Jefferson			19	04/01/1998	Contam. Sed.	PCBs	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Horicon Marsh	11565	861200	WETLANDS	Dodge			1,000	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Horicon Marsh	11565	861200	WETLANDS	Dodge			1,000	04/01/2006	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Horseshoe Lake	14519	1854300	LAKE	Chippewa			24	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Horseshoe Lake	16574	2630100	LAKE	Polk, Barron			377	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Howe Lake	18858	1855100	LAKE	Chippewa			68	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Hudson Park Beach	1488247	804600	INLAND BEACH	Dane			0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Hulbert Creek	13050	1298500	RIVER	Sauk	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Hulls Lake	14303	1762700	LAKE	Taylor			70	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Addition	Low	Natural Conditions (5C)
Hulls Lake	14303	1762700	LAKE	Taylor			70	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	Deletion	Not Applicable	Removed: Recovery Unknown
Husher Creek (Hoosier)	18118	3500	RIVER	Racine	0	3	3	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Indian Creek	10005	19600	RIVER	Milwaukee	0	3	3	04/01/1998	NPS	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Indian Creek	10005	19600	RIVER	Milwaukee	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Indian Creek	10005	19600	RIVER	Milwaukee	0	3	3	04/01/1998	NPS	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Inlet of Lake Ripley	5476766	809700	RIVER	Jefferson	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Irish Creek	11569	861600	RIVER	Dodge	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Irish Creek	11569	861600	RIVER	Dodge	0	4	4	04/01/2006	NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Irish Creek	11569	861600	RIVER	Dodge	0	4	4	04/01/2006	NPS	Ammonia (Unionized) - Toxin	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Irish Valley Creek	14452	1811400	RIVER	Buffalo	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Irvin Creek	14392	1792200	RIVER	Trempealeau	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Irvin Creek	14392	1792200	RIVER	Trempealeau	0	5	5	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Irving Lake	15236	2340900	LAKE	Vilas			403	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Island Lake (Eagle Chain)	128153	1610500	LAKE	Oneida			295	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Island Lake T44 R1e S25	891296	2945500	LAKE	Iron			344	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Jackson Creek	10065	23900	RIVER	Washington	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Jackson Creek	11619	793800	RIVER	Walworth	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Jag Lake	15126	1855900	LAKE	Vilas			158	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Jahns Valley Creek	14449	1810800	RIVER	Buffalo	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Jarrett Creek at Schneider Ave	3991015	2067800	RIVER	Dunn	0	3	3	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Jennie Webber Lake	128156	1574300	LAKE	Oneida			226	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Jersey Valley Lake	13167	1191600	LAKE	Vernon			52	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Jockey Hollow Creek	13690	899500	RIVER	Green, Lafayette	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Johnson Coulee Creek	14059	1676400	RIVER	La Crosse	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Johnson Creek	11449	846700	RIVER	Jefferson	0	18	18	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Johnson Creek	11449	846700	RIVER	Jefferson	0	18	18	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Johnson Lake	16866	2471600	LAKE	Burnett			397	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Jordan Creek	13680	895000	RIVER	Green	0	6	6	04/01/2010	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Jordon Creek	18046	80200	RIVER	Calumet	0	1	1	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	EAP Project	Not Applicable	TMDL Needed (5A)
Juda Branch	13614	877500	RIVER	Green	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Juda Branch	13614	877500	RIVER	Green	0	4	4	04/01/2016	Habitat/Physical	Sediment/Total Suspended Solids	Degraded Habitat	Proposed for List	Medium	TMDL Needed (5A)
Jug Creek	13192	1195500	RIVER	Vernon	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Julia Lake	128160	1614300	LAKE	Forest, Oneida			401	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Julia Lake	128167	995000	LAKE	Oneida			238	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Kankapot Creek	10844	126800	RIVER	Outagamie	0	3	3	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Kankapot Creek	10844	126800	RIVER	Outagamie	0	3	3	04/01/2008	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Kankapot Creek	357763	126800	RIVER	Calumet, Outagamie	3	10	7	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Kankapot Creek	357763	126800	RIVER	Calumet, Outagamie	3	10	7	04/01/2008	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Kawaguesaga Lake	128163	1542300	LAKE	Oneida			670	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Kelsey Br	13839	936600	RIVER	Lafayette	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Kentuck Lake	128505	716800	LAKE	Forest, Vilas			957	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Kentuck Lake	128505	716800	LAKE	Forest, Vilas			957	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Kewaunee Inner Harbor	482755	90700	BAY/HARBOR	Kewaunee			36	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Kewaunee Inner Harbor	482755	90700	BAY/HARBOR	Kewaunee			36	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Kewaunee River	10170	90700	RIVER	Kewaunee	14	16	3	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Kewaunee River	18061	90700	RIVER	Kewaunee	3	14	11	04/01/2006	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Kewaunee River	482871	90700	RIVER	Brown, Kewaunee	16	28	12	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Kewaunee River And Marsh	10169	90700	RIVER	Kewaunee	0	3	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Kewaunee River And Marsh	10169	90700	RIVER	Kewaunee	0	3	2	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Kewaunee River And Marsh	10169	90700	RIVER	Kewaunee	0	3	2	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Kickapoo River	887065	1182400	RIVER	Crawford	19	25	6	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Kickapoo River	13169	1182400	RIVER	Richland, Vernon	61	108	47	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Kickapoo River	887065	1182400	RIVER	Crawford	19	25	6	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Killsnake River	18043	78200	RIVER	Calumet	0	20	20	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Kinnickinnic River	9973	15100	RIVER	Milwaukee	0	3	3	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	9973	15100	RIVER	Milwaukee	0	3	3	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	9973	15100	RIVER	Milwaukee	0	3	3	04/01/1998	PS/NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	9973	15100	RIVER	Milwaukee	0	3	3	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	9973	15100	RIVER	Milwaukee	0	3	3	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	9974	15100	RIVER	Milwaukee	3	6	3	04/01/2014	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	9974	15100	RIVER	Milwaukee	3	6	3	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	9974	15100	RIVER	Milwaukee	3	6	3	04/01/2012	PS/NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	3899425	15100	RIVER	Milwaukee	6	10	4	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Kinnickinnic River	3899425	15100	RIVER	Milwaukee	6	10	4	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Kohler Andrae Beach, Lake Michigan	1452754	20	GREAT LAKES BEACH	Sheboygan			4	04/01/2006	Unknown	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Kohlsville River	11595	865400	RIVER	Washington	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kohlsville River	11595	865400	RIVER	Washington	0	8	8	04/01/2012	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kroenke Creek	11107	326700	RIVER	Shawano	5	9	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Krok Creek	10162	86700	RIVER	Kewaunee	0	1	1	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Krok Creek	903433	86700	RIVER	Kewaunee	1	3	3	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Kuenster Creek	13910	957900	RIVER	Grant	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Kuenster Creek	18564	957900	RIVER	Grant	1	10	9	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Kummel Creek	11592	863500	RIVER	Dodge	0	10	10	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kummel Creek	11592	863500	RIVER	Dodge	0	10	10	04/01/2006	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kummel Creek	11593	863500	RIVER	Dodge	10	12	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kummel Creek	11593	863500	RIVER	Dodge	10	12	1	04/01/2006	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kummel Creek	358204	863500	RIVER	Dodge, Fond du Lac	12	14	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Kummel Creek	358204	863500	RIVER	Dodge, Fond du Lac	12	14	2	04/01/2006	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kummel Creek	358235	863500	RIVER	Fond du Lac	14	18	4	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kummel Creek	358235	863500	RIVER	Fond du Lac	14	18	4	04/01/2006	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Kummel Creek	11592	863500	RIVER	Dodge	0	10	10	04/01/2006	PS/NPS	Ammonia (Unionized) - Toxin	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Kusel Lake	10761	189600	LAKE	Waushara			79	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
La Crosse River	14023	1650200	RIVER	Monroe, La Crosse	0	34	40	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Lac La Belle	11489	848800	LAKE	Waukesha			1,154	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lac Sault Dore (Soo Lake)	14708	2236800	LAKE	Price			561	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Lake Alice	127972	1555900	IMPOUNDMENT	Lincoln			1,438	04/01/1998	Other	BOD, sediment load (Sediment Oxygen Demand)	Low DO	303d Listed	Low	TMDL Needed (5A)
Lake Altoona	16084	2128100	LAKE	Eau Claire			840	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Lake Arrowhead	1851405	1377700	IMPOUNDMENT	Adams			295	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Lake Butte Des Morts	11004	139900	LAKE	Winnebago			8,569	04/01/1998	NPS	Sediment/Total Suspended Solids	Eutrophication	TMDL Development	High	TMDL Needed (5A)
Lake Butte Des Morts	11004	139900	LAKE	Winnebago			8,569	04/01/1998	NPS	Total Phosphorus	Low DO, Eutrophication, Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Lake Butte Des Morts	11004	139900	LAKE	Winnebago			8,569	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lake Chetac	16054	2113300	LAKE	Sawyer			1,920	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Lake Content	128514	1592000	LAKE	Vilas			244	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Lake Desair	15983	2104500	LAKE	Barron			79	04/01/1998	NPS	Sediment/Total Suspended Solids	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Lake Desair	15983	2104500	LAKE	Barron			79	04/01/1998	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Lake DuBay	3900358	1412200	IMPOUNDMENT	Marathon, Portage			4,045	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	Deletion	Not Applicable	Removed: Recovery Unknown
Lake DuBay	3900358	1412200	IMPOUNDMENT	Marathon, Portage			4,045	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
Lake Emily	1525397	161600	LAKE	Dodge			268	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Lake George	15644	2059800	IMPOUNDMENT	Pierce, Saint Croix			135	04/01/2002	NPS	Total Phosphorus	Elevated pH	303d Listed	Low	TMDL Needed (5A)
Lake Kegonsa	11643	802600	LAKE	Dane			3,209	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Lake Koshkonong	11710	808700	LAKE	Dane, Jefferson, Rock			10,596	04/01/2002	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat, Turbidity	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Lake Koshkonong	11710	808700	LAKE	Dane, Jefferson, Rock			10,596	04/01/2002	PS/NPS	Total Phosphorus	Low DO, Eutrophication	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Lake Lorraine	11774	777500	LAKE	Walworth			133	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Lake Menomin	15651	2065900	IMPOUNDMENT	Dunn			1,009	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth, Elevated pH	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Lake Michigan	892521	20	GREAT LAKES SHORELINE	Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan			103	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lake Michigan	892521	20	GREAT LAKES SHORELINE	Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan			103	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lake Mohawksin	127977	1515400	IMPOUNDMENT	Lincoln			1,515	04/01/1998	Other	BOD, sediment load (Sediment Oxygen Demand)	Low DO	303d Listed	Low	TMDL Needed (5A)
Lake Nebagamon	20304	2865000	LAKE	Douglas			986	04/01/2010	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lake Pepin	4704964	731800	LAKE	Buffalo, Pepin, Pierce			25,503	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Lake Sherwood	1851420	1377900	IMPOUNDMENT	Adams			215	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Lake Superior	892439	2751220	GREAT LAKES SHORELINE	Douglas			156	04/01/2006	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lake Superior	892439	2751220	GREAT LAKES SHORELINE	Douglas			156	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lake Superior (mouth of Bois Brule River)	1855784	2751220	LAKE	Douglas			66	04/01/2006	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lake Superior (mouth of Bois Brule River)	1855784	2751220	LAKE	Douglas			66	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lake Three	891194	2915800	LAKE	Ashland			61	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lake Waubesa	11661	803700	LAKE	Dane			2,075	04/01/2012	PS/NPS	Total Phosphorus	Water Quality Use Restrictions, Impairment Unknown	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Lake Wingra	11667	805000	LAKE	Dane			345	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	Deletion	Not Applicable	Removed: Recovery Unknown
Lake Wingra	11667	805000	LAKE	Dane			345	04/01/2012	Unknown	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lake Winnebago	358400	131100	LAKE	Calumet, Winnebago, Fond du Lac			131,871	04/01/1998	NPS	Sediment/Total Suspended Solids	Turbidity	TMDL Development	High	TMDL Needed (5A)
Lake Winnebago	358400	131100	LAKE	Calumet, Winnebago, Fond du Lac			131,871	04/01/1998	NPS	Total Phosphorus	Low DO, Eutrophication, Water Quality Use Restrictions, Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Lake Winnebago	358400	131100	LAKE	Calumet, Winnebago, Fond du Lac			131,871	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lake Wisconsin	13500	1260600	IMPOUNDMENT	Sauk, Columbia			9,000	04/01/2010	NPS	Total Phosphorus	Low DO, Eutrophication, Recreational Restrictions - Blue Green Algae	TMDL Development	High	TMDL Needed (5A)
Lake Wisconsin	13500	1260600	IMPOUNDMENT	Sauk, Columbia			9,000	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lake Wisconsin	13500	1260600	IMPOUNDMENT	Sauk, Columbia			9,000	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lannon Creek	424314	773700	RIVER	Waukesha	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Lau Creek	11399	831600	RIVER	Dodge	0	6	6	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Lazy Lake (Fall R Millpond)	11442	843400	LAKE	Columbia			161	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Legler School Branch	13646	882900	RIVER	Green	0	6	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Lehner Creek	10067	24400	RIVER	Washington	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Lemonweir River	13059	1301700	RIVER	Juneau	0	26	26	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Lemonweir River	13060	1301700	RIVER	Juneau	26	31	5	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Lemonweir River	201397	1301700	RIVER	Juneau, Monroe	31	56	25	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Leota Lake	902198	884700	LAKE	Rock			36	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Lilly Creek	10042	18400	RIVER	Waukesha	0	5	5	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Lilly Creek	10042	18400	RIVER	Waukesha	0	5	5	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Lily River	10555	370900	RIVER	Forest, Langlade	0	10	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Limestone Creek	11601	866800	RIVER	Washington	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Limestone Creek	11602	866800	RIVER	Washington	2	5	3	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Lincoln Creek	9999	19400	RIVER	Milwaukee	0	10	10	04/01/2014	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Lincoln Creek	9999	19400	RIVER	Milwaukee	0	10	10	04/01/1998	Other	PAHs	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Lincoln Creek	9999	19400	RIVER	Milwaukee	0	10	10	04/01/2012	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lincoln Creek	9999	19400	RIVER	Milwaukee	0	10	10	04/01/1998	Other	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Lincoln Creek	9999	19400	RIVER	Milwaukee	0	10	10	04/01/1998	Other	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Lincoln Creek	9999	19400	RIVER	Milwaukee	0	10	10	04/01/1998	Other	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Lipsett Lake	16977	2678100	LAKE	Burnett			393	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Little Arbor Vitae Lake	128524	1545300	LAKE	Vilas			534	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	High	Natural Conditions (5C)
Little Arbor Vitae Lake	128524	1545300	LAKE	Vilas			534	04/01/2016	PS/NPS	Unknown Pollutant	Eutrophication	Proposed for List	Low	Natural Conditions (5C)
Little Baraboo River	13007	1282500	RIVER	Richland, Sauk	0	12	12	04/01/2014	PS/NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Little Bear Creek	12360	1416900	RIVER	Wood	2	8	7	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Little Bear Creek	15571	2048000	RIVER	Buffalo	0	4	4	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Little Bear Creek	12359	1416900	RIVER	Wood	0	2	2	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community, Impairment Unknown	TMDL Development	High	TMDL Needed (5A)
Little Bear Creek	18505	1234700	RIVER	Richland, Sauk	0	7	7	04/01/2010	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Little Bear Creek	18505	1234700	RIVER	Richland, Sauk	0	7	7	04/01/2010	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Little Bearskin Lake	128180	1523500	LAKE	Oneida			164	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Little Crooked Lake	128530	2335500	LAKE	Vilas			153	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Little Dummy Lake	15835	1861400	LAKE	Barron			31	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Little Eau Pleine River	12354	1412600	RIVER	Marathon, Portage	0	29	29	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Little Eau Pleine River	12355	1412600	RIVER	Clark, Marathon	29	57	28	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Little Green Lake	18120	162500	LAKE	Green Lake			466	04/01/2006	NPS	Total Phosphorus	Low DO, Eutrophication, Water Quality Use Restrictions, Degraded Habitat, Elevated pH	TMDL Development	High	TMDL Needed (5A)
Little Hemlock Creek	12225	1367100	RIVER	Wood	0	11	11	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Little La Crosse River	14008	1655900	RIVER	Monroe	0	10	10	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Little Lake Wissota	1521682	2152800	BAY/HARBOR	Chippewa			364	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Eutrophication	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2010 (4A)
Little Lake Wissota	1521682	2152800	BAY/HARBOR	Chippewa			364	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Elevated pH	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2010 (4A)
Little Lemonweir River	18456	1306100	RIVER	Juneau	0	5	5	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Little Lemonweir River	948033	1306100	RIVER	Juneau	5	12	8	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Little Lemonweir River	948058	1306100	RIVER	Juneau, Monroe	12	23	11	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Little Lemonweir River	948085	1306100	RIVER	Monroe	23	25	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Little Menomonee	10038	17600	RIVER	Ozaukee, Milwaukee	0	9	9	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Little Menomonee	10038	17600	RIVER	Ozaukee, Milwaukee	0	9	9	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Little Menomonee	10038	17600	RIVER	Ozaukee, Milwaukee	0	9	9	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Little Menomonee	10038	17600	RIVER	Ozaukee, Milwaukee	0	9	9	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Little Menomonee	10038	17600	RIVER	Ozaukee, Milwaukee	0	9	9	04/01/1998	Contam. Sed.	Creosote	Chronic Aquatic Toxicity	EAP Project	Not Applicable	TMDL Needed (5A)
Little Menomonee River	10039	17900	RIVER	Ozaukee	0	4	4	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Little Muskego Lake	18103	762700	LAKE	Waukesha			470	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)
Little Platte River	1527892	943800	RIVER	Grant	0	34	34	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Little Rice Lake	10668	406400	LAKE	Forest			1,219	04/01/2010	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Little River	10881	441300	RIVER	Oconto	0	10	10	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Little Sand Lake	10609	389700	LAKE	Forest, Langlade			243	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Little Sand Lake	16827	2661600	LAKE	Barron			101	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Little Suamico River	10862	411800	RIVER	Brown, Oconto, Shawano	0	24	24	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Little Sugar River	13633	880100	RIVER	Green	0	19	19	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Little Sugar River, West Branch	13639	881400	RIVER	Green	0	7	7	04/01/2014	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Little Waumandee Creek	14446	1810300	RIVER	Buffalo	0	11	11	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Little Willow Creek	13349	1221300	RIVER	Richland	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Little Willow Creek	13349	1221300	RIVER	Richland	0	8	8	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Little Willow Creek	13349	1221300	RIVER	Richland	0	8	8	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Little Yellow Lake	16927	2674800	LAKE	Burnett			348	04/01/2014	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Livingston Branch	13828	932700	RIVER	Iowa	0	12	12	04/01/1998	NPS	Ammonia (Unionized) - Toxin	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Livingston Branch	13828	932700	RIVER	Iowa	0	12	12	04/01/1998	NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
Livingston Branch	13828	932700	RIVER	Iowa	0	12	12	04/01/1998	NPS	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Local Water	3991645	870400	RIVER	Fond du Lac	0	7	7	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Local Water	3992057	917800	RIVER	Lafayette	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Local Water	3994614	138800	RIVER	Fond du Lac	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Local Water	1524881	323500	RIVER	Shawano	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Local Water	3894716	737350	RIVER	Kenosha	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Local Water	3991618	870800	RIVER	Fond du Lac	0	8	8	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Local Water	3991787	2450	RIVER	Racine	0	1	1	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Local Water	3992334	441100	RIVER	Oconto	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Local Water	3993962	5022162	RIVER	Calumet, Outagamie	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Local Water	3993990	3000558	RIVER	Brown, Shawano	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Local Water	3994803	5010743	RIVER	Oconto	0	5	5	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Local Water	3994857	5020832	RIVER	Manitowoc	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Local Water	4700332	2833500	RIVER	Douglas	0	7	7	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Lomira Creek	18236	864100	RIVER	Dodge	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Long Coulee Creek	14057	1676100	RIVER	La Crosse	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Long Lake	11325	38700	LAKE	Sheboygan, Fond du Lac			427	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Lake	14719	2239300	IMPOUNDMENT	Price			418	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Lake	14983	2303500	LAKE	Iron			373	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Lake	127980	1001000	LAKE	Lincoln			132	04/01/2012	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Lake	128190	1001300	LAKE	Oneida			113	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Lake	128193	1609000	LAKE	Oneida			620	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Lake	14556	2351400	LAKE	Chippewa			1,062	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Long Lake	9816	321300	LAKE	Shawano			86	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Long Lake	15992	2106800	LAKE	Washburn			3,290	04/01/2014	NPS	Total Phosphorus	Eutrophication, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Long Lake (Big Long)	18042	77500	LAKE	Manitowoc			120	04/01/2010	NPS	Total Phosphorus	Eutrophication, Degraded Biological Community, Excess Algal Growth	303d Listed	Medium	TMDL Needed (5A)
Long Lake Br	17655	2894900	RIVER	Bayfield	0	17	17	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Long Lake Branch	1494187	2894900	RIVER	Bayfield	17	22	5	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Long Lake T34n R17w S06	16477	2478200	LAKE	Polk			272	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Long Lake T47 R8w S2	890905	2767100	LAKE	Bayfield			280	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Lake T47 R8w S2	890905	2767100	LAKE	Bayfield			280	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
Long Lake T48 R5w S6	890956	2767200	LAKE	Bayfield			32	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Long Trade Lake	16678	2640500	LAKE	Polk			153	04/01/2012	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Long Trade Lake	16678	2640500	LAKE	Polk			153	04/01/2014	NPS	Unknown Pollutant	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Loon Lake	16518	2478600	LAKE	Barron			94	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Loretta Lake (Burnett Flowage)	15330	2382700	IMPOUNDMENT	Sawyer			12	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lost Lake	11419	837100	LAKE	Dodge			245	04/01/2016	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Lost Lake on Ranch Creek	35458	5586673	LAKE	Monroe			18	04/01/2014	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lotus Lake	16460	2616900	LAKE	Polk			246	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Louisburg Cr	13856	943000	RIVER	Grant	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Loveless Lake (Bass)	18885	2620000	LAKE	Polk			141	04/01/2012	Unknown	Total Phosphorus	Excess Algal Growth	Deletion	Not Applicable	Removed: Recovery Unknown
Loveless Lake (Bass)	18885	2620000	LAKE	Polk			141	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
Lower Barstow Impoundment	296926	742500	IMPOUNDMENT	Waukesha	175	176	25	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Low DO, Turbidity	303d Listed	Low	TMDL Needed (5A)
Lower Barstow Impoundment	296926	742500	IMPOUNDMENT	Waukesha	175	176	25	04/01/2016	Contam. Sed.	PCBs	Contaminated Fish Tissue	Addition	Low	TMDL Needed (5A)
Lower Barstow Impoundment	296926	742500	IMPOUNDMENT	Waukesha	175	176	25	04/01/1998	PS/NPS	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Lower Barstow Impoundment	296926	742500	IMPOUNDMENT	Waukesha	175	176	25	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Turbidity	303d Listed	Low	TMDL Needed (5A)
Lower Bass Lake	127876	1002300	LAKE	Langlade			89	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lower Buckatabon Lake	128547	1621000	LAKE	Vilas			352	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Lower Devils Lake	15907	1864000	LAKE	Barron			162	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Lower Fox River (Appleton Dam To L. Winnebago Outlet)	357364	117900	RIVER	Outagamie, Winnebago	32	40	8	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Lower Fox River (Appleton Dam To L. Winnebago Outlet)	357364	117900	RIVER	Outagamie, Winnebago	32	40	8	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	EAP Project	Not Applicable	TMDL Needed (5A)
Lower Fox River (Depere Dam To Middle Appleton Dam)	357301	117900	RIVER	Brown, Outagamie	7	32	25	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Lower Fox River (Depere Dam To Middle Appleton Dam)	357301	117900	RIVER	Brown, Outagamie	7	32	25	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	EAP Project	Not Applicable	TMDL Needed (5A)
Lower Fox River (Mouth To Depere Dam)	10678	117900	RIVER	Brown	0	7	7	04/01/2008	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Lower Fox River (Mouth To Depere Dam)	10678	117900	RIVER	Brown	0	7	7	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Lower Fox River (Mouth To Depere Dam)	10678	117900	RIVER	Brown	0	7	7	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	EAP Project	Not Applicable	TMDL Needed (5A)
Lower Koshkonong Creek	304950	808800	RIVER	Dane, Jefferson	0	27	27	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Lower Merrillan Pond	18613	1711500	LAKE	Jackson			38	04/01/1998	NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Lower Nemadji River	17456	2835300	RIVER	Douglas	0	38	38	04/01/2010	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Lower Pine Creek	15755	2085300	RIVER	Dunn	0	7	7	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Lower Pine Creek	1457751	2085300	RIVER	Barron, Dunn	14	17	3	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Lower Turtle Lake	15710	2079700	LAKE	Barron			276	04/01/2010	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Lowes Creek	16354	2123900	RIVER	Eau Claire	1	12	11	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Lyman Lake	890854	2856400	LAKE	Douglas			370	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lyndon Creek	13054	1300700	RIVER	Juneau	0	6	6	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Lyndon Creek	13055	1300700	RIVER	Juneau	6	9	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Lynx Lake	128549	2954500	LAKE	Vilas			339	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Lyons Park Creek	9982	15950	RIVER	Milwaukee	0	2	2	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Machickanee Flowage (Imp)	10949	448200	IMPOUNDMENT	Oconto			435	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Mackaysee Lake (Muckayee)	10196	93500	LAKE	Door			347	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Madden Br	13847	939100	RIVER	Lafayette	0	8	8	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Magnor Lake (Richardson)	16596	2624600	LAKE	Polk			231	04/01/2010	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Maiden Lake	18259	487500	LAKE	Oconto			269	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Mallalieu Lake	16400	2607100	IMPOUNDMENT	Saint Croix			289	04/01/2004	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth, Elevated pH	TMDL Development	High	TMDL Needed (5A)
Manitowoc R. So. Branch	9924	77900	RIVER	Calumet, Manitowoc	0	13	13	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Manitowoc R. So. Branch	9924	77900	RIVER	Calumet, Manitowoc	0	13	13	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Manitowoc R. So. Branch	9924	77900	RIVER	Calumet, Manitowoc	0	13	13	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Manitowoc R. So. Branch	3990110	77900	RIVER	Calumet, Fond du Lac	13	37	24	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Manitowoc River	482064	71000	RIVER	Manitowoc	2	21	19	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Manitowoc River	482064	71000	RIVER	Manitowoc	2	21	19	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Manitowoc River	482116	71000	RIVER	Calumet, Manitowoc	21	36	15	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Manitowoc River (Main Stem)	9882	71000	RIVER	Manitowoc	0	2	2	04/01/2002	Contam. Sed.	PAHs	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Manitowoc River (Main Stem)	9882	71000	RIVER	Manitowoc	0	2	2	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Marengo River	17712	2911900	RIVER	Ashland, Bayfield	12	39	27	04/01/2016	PS/NPS	Fecal Coliform	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Marinuka Lake	14080	1678200	LAKE	Trempealeau			117	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Marinuka Lake	14080	1678200	LAKE	Trempealeau			117	04/01/2010	NPS	Total Phosphorus	Eutrophication, Impairment Unknown	303d Listed	Low	TMDL Needed (5A)
Markham Creek	18247	796400	RIVER	Rock	0	7	7	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Marlowe Branch	18565	959400	RIVER	Grant	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Martin Branch	13926	963400	RIVER	Grant	4	5	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Martin Branch	13927	963400	RIVER	Grant	5	10	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Martin Branch	18569	963400	RIVER	Grant	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Martinville Cr	13887	955100	RIVER	Grant	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Martinville Cr	13888	955100	RIVER	Grant	3	5	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Martinville Cr	13887	955100	RIVER	Grant	0	3	3	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Martinville Cr	13887	955100	RIVER	Grant	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Martinville Cr	13888	955100	RIVER	Grant	3	5	2	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Martinville Cr	13888	955100	RIVER	Grant	3	5	2	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Mary Park Beach	3894231	2608800	INLAND BEACH	Saint Croix			0	04/01/2012	Unknown	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Maslowski Beach, Lake Superior	1452812	2751220	GREAT LAKES BEACH	Ashland			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Mason Creek	11498	851100	RIVER	Waukesha	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Mason Creek	11498	851100	RIVER	Waukesha	0	4	4	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Mason Creek	11499	851100	RIVER	Washington	4	6	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO, Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Mason Creek	11499	851100	RIVER	Washington	4	6	2	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Mason Lake	10733	175700	LAKE	Adams, Marquette			847	04/01/2002	NPS	Total Phosphorus	Excess Algal Growth, Elevated pH	TMDL Development	High	TMDL Needed (5A)
Master Disposal Drainage Channel	424266	773300	RIVER	Waukesha	0	1	1	04/01/1998	Contam. Sed.	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Maunesha River	11426	837500	RIVER	Dodge, Jefferson	0	6	6	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Maunesha River	11426	837500	RIVER	Dodge, Jefferson	0	6	6	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Maunesha River	356833	837500	RIVER	Dodge, Jefferson	5	13	8	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Maunesha River	356833	837500	RIVER	Dodge, Jefferson	5	13	8	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Maunesha River	356857	837500	RIVER	Dane	13	32	19	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Maunesha River	356857	837500	RIVER	Dane	13	32	19	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Mauthe Lake	11324	38200	LAKE	Fond du Lac			78	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Mayflower Lake	9757	310500	LAKE	Marathon			98	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Mcgrath Lake	128215	1003900	LAKE	Oneida			53	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Mead Lake	16142	2143900	IMPOUNDMENT	Clark			310	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Mead Lake	16142	2143900	IMPOUNDMENT	Clark			310	04/01/1998	NPS	Total Phosphorus	Low DO, Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Meadow Creek	14660	2227900	RIVER	Rusk	0	5	5	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Medicine Lake	128218	1611700	LAKE	Oneida			372	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Meeme R.	207459	62900	RIVER	Manitowoc	0	12	12	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Memorial Drive Wayside Beach, Lake Michigan	481945	20	GREAT LAKES BEACH	Manitowoc			3	04/01/1998	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Mendota County Park Beach	5475513	805400	INLAND BEACH	Dane			0	04/01/2016	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Mendota Lake	11672	805400	LAKE	Dane			9,781	04/01/2012	PS/NPS	Total Phosphorus	Water Quality Use Restrictions, Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Mendota Lake	11672	805400	LAKE	Dane			9,781	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Menominee River	12050	609000	RIVER	Marinette	0	3	3	04/01/1998	Contam. Sed.	Arsenic	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Menominee River	12050	609000	RIVER	Marinette	0	3	3	04/01/1998	Contam. Sed.	PAHs	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Menominee River	12050	609000	RIVER	Marinette	0	3	3	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Menominee River	12050	609000	RIVER	Marinette	0	3	3	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Menominee River	12089	609000	RIVER	Marinette	3	43	40	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Menominee River	12090	609000	RIVER	Marinette	43	88	45	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Menomonee River	3884139	16000	RIVER	Washington, Waukesha, Milwaukee	6	30	24	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Menomonee River	10017	16000	RIVER	Milwaukee	3	6	4	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Menomonee River	426506	16000	RIVER	Milwaukee	0	3	3	04/01/2010	PS/NPS	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Menomonee River	426506	16000	RIVER	Milwaukee	0	3	3	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Menomonee River	426506	16000	RIVER	Milwaukee	0	3	3	04/01/1998	PS/NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Menomonee River	426506	16000	RIVER	Milwaukee	0	3	3	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Menomonee River	426506	16000	RIVER	Milwaukee	0	3	3	04/01/1998	PS/NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
Merrill Flowage	127986	1481100	IMPOUNDMENT	Lincoln			284	04/01/1998	Contam. Sed.	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Meyers Valley Creek	14353	1776700	RIVER	Trempealeau	2	6	4	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Michigan Boulevard Beach, Lake Michigan	3894230	20	GREAT LAKES BEACH	Racine			0	04/01/2012	Unknown	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Middle Branch Of O'Neill Creek	14266	1749700	RIVER	Clark	0	8	8	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Middle River Beach, Lake Superior	1489001	2751220	GREAT LAKES BEACH	Douglas			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Mill Creek	11412	835500	RIVER	Dodge	0	3	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mill Creek	13296	1215600	RIVER	Richland	0	15	15	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mill Creek	13418	1242200	RIVER	Iowa	0	16	16	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mill Creek	18452	1326700	RIVER	Monroe	6	8	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Mill Creek	11412	835500	RIVER	Dodge	0	3	3	04/01/2014	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Mill Creek	11571	867700	RIVER	Dodge	0	13	13	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Mill Creek	12318	1398600	RIVER	Portage	0	16	16	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Mill Creek	12319	1398600	RIVER	Wood, Portage	16	33	17	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Mill Creek	14109	1688500	RIVER	Jackson	3	5	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Milwaukee Harbor	426424	15010	RIVER	Milwaukee	0	0	0	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Milwaukee Harbor	426424	15010	RIVER	Milwaukee	0	0	0	04/01/1998	PS/NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Milwaukee Harbor	426424	15010	RIVER	Milwaukee	0	0	0	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Milwaukee River	1854856	15000	RIVER	Ozaukee	19	29	10	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Milwaukee River	426381	15000	RIVER	Ozaukee, Milwaukee	3	19	16	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Milwaukee River	481566	15000	RIVER	Ozaukee, Washington	29	69	39	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Milwaukee River	426339	15000	RIVER	Milwaukee	0	3	3	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Milwaukee River	426339	15000	RIVER	Milwaukee	0	3	3	04/01/1998	PS/NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Milwaukee River	426339	15000	RIVER	Milwaukee	0	3	3	04/01/1998	Contam. Sed.	Unspecified Metals	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Milwaukee River	426339	15000	RIVER	Milwaukee	0	3	3	04/01/1998	PS/NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
Milwaukee River	426381	15000	RIVER	Ozaukee, Milwaukee	3	19	16	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Milwaukee River	426381	15000	RIVER	Ozaukee, Milwaukee	3	19	16	04/01/1998	PS/NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Milwaukee River	426381	15000	RIVER	Ozaukee, Milwaukee	3	19	16	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Milwaukee River	481566	15000	RIVER	Ozaukee, Washington	29	69	39	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Milwaukee River	481605	15000	RIVER	Washington, Fond du Lac	69	103	35	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Milwaukee River	1854856	15000	RIVER	Ozaukee	19	29	10	04/01/1998	PS/NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Milwaukee River North Branch	10071	27100	RIVER	Ozaukee, Sheboygan, Washington	0	24	24	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Mineral Lake	891211	2916900	LAKE	Ashland			227	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Natural Conditions (5C)
Mineral Point Branch	13810	927900	RIVER	Lafayette, Iowa	0	29	29	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Mink Creek	10081	30600	RIVER	Sheboygan	0	13	13	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Minnesuing Lake	890871	2866200	LAKE	Douglas			450	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Minocqua Lake	128227	1542400	LAKE	Oneida			1,360	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Mississippi (Reach 1) Rush-Vermillion - St. Croix R to Chippewa R(Pools 3- lower Pool 4, Lake Pepin)	892119	721000	RIVER	Pierce, Pepin	763	812	48	04/01/2008	NPS	Sediment/Total Suspended Solids	Degraded Submerged Aquatic Vegetation (SAV)	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 1) Rush-Vermillion - St. Croix R to Chippewa R(Pools 3- lower Pool 4, Lake Pepin)	892119	721000	RIVER	Pierce, Pepin	763	812	48	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 1) Rush-Vermillion - St. Croix R to Chippewa R(Pools 3- lower Pool 4, Lake Pepin)	892119	721000	RIVER	Pierce, Pepin	763	812	48	04/01/1998	Other	Mercury	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 1) Rush-Vermillion - St. Croix R to Chippewa R(Pools 3- lower Pool 4, Lake Pepin)	892119	721000	RIVER	Pierce, Pepin	763	812	48	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 1) Rush-Vermillion - St. Croix R to Chippewa R(Pools 3- lower Pool 4, Lake Pepin)	892119	721000	RIVER	Pierce, Pepin	763	812	48	04/01/2008	Other	PFOs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 2) Buffalo-Whitewater - Chippewa River to LD 6 (lower Pool 4 to Pool 6)	892047	721000	RIVER	Buffalo, La Crosse, Pepin, Trempealeau	714	763	49	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mississippi (Reach 2) Buffalo-Whitewater - Chippewa River to LD 6 (lower Pool 4 to Pool 6)	892047	721000	RIVER	Buffalo, La Crosse, Pepin, Trempealeau	714	763	49	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 2) Buffalo-Whitewater - Chippewa River to LD 6 (lower Pool 4 to Pool 6)	892047	721000	RIVER	Buffalo, La Crosse, Pepin, Trempealeau	714	763	49	04/01/1998	Other	Mercury	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 2) Buffalo-Whitewater - Chippewa River to LD 6 (lower Pool 4 to Pool 6)	892047	721000	RIVER	Buffalo, La Crosse, Pepin, Trempealeau	714	763	49	04/01/2008	Other	PFOs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 3) LaCrosse-Pine - LD 6 to Root River (Pool 7 to upper Pool 8)	892011	721000	RIVER	La Crosse, Trempealeau	694	714	21	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mississippi (Reach 3) LaCrosse-Pine - LD 6 to Root River (Pool 7 to upper Pool 8)	892011	721000	RIVER	La Crosse, Trempealeau	694	714	21	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 3) LaCrosse-Pine - LD 6 to Root River (Pool 7 to upper Pool 8)	892011	721000	RIVER	La Crosse, Trempealeau	694	714	21	04/01/1998	Other	Mercury	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 4) Coon-Yellow - Pool 10 portion - Wis R to LD 9)	891939	721000	RIVER	Crawford, Grant	631	648	17	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mississippi (Reach 4) Coon-Yellow - Pool 10 portion - Wis R to LD 9)	891939	721000	RIVER	Crawford, Grant	631	648	17	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 4) Coon-Yellow - Pool 10 portion - Wis R to LD 9)	891939	721000	RIVER	Crawford, Grant	631	648	17	04/01/1998	Other	Mercury	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 4) Coon-Yellow - Pool 8 portion - LD 8 to Root R.)	1848773	721000	RIVER	Vernon, La Crosse	679	694	15	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mississippi (Reach 4) Coon-Yellow - Pool 8 portion - LD 8 to Root R.)	1848773	721000	RIVER	Vernon, La Crosse	679	694	15	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 4) Coon-Yellow - Pool 8 portion - LD 8 to Root R.)	1848773	721000	RIVER	Vernon, La Crosse	679	694	15	04/01/1998	Other	Mercury	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 4) Coon-Yellow - Pool 9 portion - LD 9 to LD 8)	1848750	721000	RIVER	Crawford, Vernon	648	679	31	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Mississippi (Reach 4) Coon-Yellow - Pool 9 portion - LD 9 to LD 8)	1848750	721000	RIVER	Crawford, Vernon	648	679	31	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 4) Coon-Yellow - Pool 9 portion - LD 9 to LD 8)	1848750	721000	RIVER	Crawford, Vernon	648	679	31	04/01/2010	Other	Mercury	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 5) Grant-Maquoketa Wisconsin River to LD 11 (mid Pool 10 to LD 12)	16323	721000	RIVER	Crawford, Grant	583	631	48	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Mississippi (Reach 5) Grant-Maquoketa Wisconsin River to LD 11 (mid Pool 10 to LD 12)	16323	721000	RIVER	Crawford, Grant	583	631	48	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 5) Grant-Maquoketa Wisconsin River to LD 11 (mid Pool 10 to LD 12)	16323	721000	RIVER	Crawford, Grant	583	631	48	04/01/1998	Other	Mercury	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 6) Apple-Plum LD 11 to Wisconsin State Line (upper Pool 12)	18638	721000	RIVER	Grant	581	583	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Mississippi (Reach 6) Apple-Plum LD 11 to Wisconsin State Line (upper Pool 12)	18638	721000	RIVER	Grant	581	583	2	04/01/1998	Other	PCBs	Contaminated Fish Tissue, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Mississippi (Reach 6) Apple-Plum LD 11 to Wisconsin State Line (upper Pool 12)	18638	721000	RIVER	Grant	581	583	2	04/01/1998	Other	Mercury	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Missouri Creek	15619	2055700	RIVER	Pierce	14	18	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Missouri Creek	18774	2055700	RIVER	Dunn	9	14	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Moen Lake	128230	1573800	LAKE	Oneida			460	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Moen Lake	128230	1573800	LAKE	Oneida			460	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Addition	High	Natural Conditions (5C)
Molash Creek	10164	90100	RIVER	Manitowoc	0	8	8	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Monona Lake	11665	804600	LAKE	Dane			3,358	04/01/2012	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Monona Lake	11665	804600	LAKE	Dane			3,358	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Moon Bay	1521808	2152800	BAY/HARBOR	Chippewa			361	04/01/2008	PS/NPS	Total Phosphorus	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Moose Lake	15532	2420600	LAKE	Sawyer			1,670	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Moose Lake	11147	337600	LAKE	Langlade			105	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Moose Lake	15532	2420600	LAKE	Sawyer			1,670	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Moquah Lake	20895	2918200	LAKE	Ashland			65	04/01/2014	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Morris Creek	13209	1200000	RIVER	Monroe	0	14	14	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Mosher Creek	18156	133500	RIVER	Fond du Lac	0	3	3	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Mud (Ojaski) Lake	15818	2094600	LAKE	Barron			577	04/01/2006	NPS	Total Phosphorus	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Mud Creek	11387	840800	RIVER	Dane, Dodge	0	11	11	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Mud Creek	10846	129500	RIVER	Outagamie, Winnebago	0	4	4	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Mud Creek	10846	129500	RIVER	Outagamie, Winnebago	0	4	4	04/01/2008	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Mud Creek	10847	129500	RIVER	Outagamie	4	7	3	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Mud Creek	14539	2344100	RIVER	Rusk, Chippewa	0	13	13	04/01/2014	Other	Total Phosphorus	Impairment Unknown	303d Listed	Low	Natural Conditions (5C)
Mud Creek	10259	131600	RIVER	Calumet	0	3	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Mud Creek	10846	129500	RIVER	Outagamie, Winnebago	0	4	4	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Mud Creek	11387	840800	RIVER	Dane, Dodge	0	11	11	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Addition	Low	TMDL Needed (5A)
Mud Creek (Left, Hills) T18n, R21e, S12	9888	73600	RIVER	Manitowoc	0	10	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Mud Hen Lake	16714	2649500	LAKE	Burnett			563	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Mud Lake	15473	2434800	LAKE	Sawyer			480	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Mud Lake	128234	1612500	LAKE	Oneida			124	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	Natural Conditions (5C)
Mullet River	9839	53400	RIVER	Sheboygan	0	18	18	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Murbou Creek	11937	541800	RIVER	Marinette	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Murphy (Wingra) Creek	11666	804700	RIVER	Dane	0	1	1	04/01/1998	Contam. Sed.	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Murray Creek	9826	323000	RIVER	Shawano	0	2	2	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Muskellunge Creek	13908	957600	RIVER	Grant	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Addition	Low	TMDL Needed (5A)
Muskellunge Creek	13908	957600	RIVER	Grant	0	1	1	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Muskellunge Creek	13909	957600	RIVER	Grant	1	5	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Muskellunge Lake	128570	1596600	LAKE	Vilas			272	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Musky Bay	1850472	2390800	BAY/HARBOR	Sawyer			302	04/01/2012	PS/NPS	Total Phosphorus	Non-Native Aquatic Plants, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Musser Lake	14741	2245100	IMPOUNDMENT	Price			563	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Musser Lake	14741	2245100	IMPOUNDMENT	Price			563	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Myrtle Lake	128571	1626000	LAKE	Vilas			28	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
N. Fork Juda Branch	13615	877700	RIVER	Green	0	4	4	04/01/1998	PS/NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
N. Fork Juda Branch	13615	877700	RIVER	Green	0	4	4	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Namekagon Lake	17437	2732600	LAKE	Bayfield			2,607	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Narrows Creek	12996	1276400	RIVER	Sauk	0	23	23	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Neenah Channel	5720096	130600	LAKE	Winnebago			102	04/01/2016	Contam. Sed.	PCBs	Contaminated Fish Tissue	Proposed for List	Low	TMDL Needed (5A)
Neenah Slough	10848	130800	RIVER	Winnebago	0	3	3	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Neenah Slough	357915	130800	RIVER	Winnebago	3	4	1	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Neenah Slough	357955	130800	RIVER	Winnebago	4	6	3	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Neenah Slough	10848	130800	RIVER	Winnebago	0	3	3	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Neenah Slough	357915	130800	RIVER	Winnebago	3	4	1	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Neenah Slough	357955	130800	RIVER	Winnebago	4	6	3	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Nelson Lake	18973	2704200	LAKE	Sawyer			2,503	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Neshonoc Lake	13999	1653500	IMPOUNDMENT	La Crosse			607	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Neshonoc Lake	13999	1653500	IMPOUNDMENT	La Crosse			607	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Neshonoc Lake	13999	1653500	IMPOUNDMENT	La Crosse			607	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Impairment Unknown, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Neshota River	18054	88200	RIVER	Brown, Kewaunee	3	17	14	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
New Lisbon Lake	13550	1306000	LAKE	Juneau			60	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Newcomb Valley Creek	14357	1777400	RIVER	Trempealeau	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Newman Lake	14762	1870200	LAKE	Price			91	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Newton Creek	305141	2843650	RIVER	Douglas	0	2	2	04/01/1998	Contam. Sed.	PAHs	Chronic Aquatic Toxicity	EAP Project	Not Applicable	TMDL Needed (5A)
Newton Creek	305141	2843650	RIVER	Douglas	0	2	2	04/01/1998	Contam. Sed.	Foam/Flocs/Scum/Oil Slicks	Chronic Aquatic Toxicity	EAP Project	Not Applicable	TMDL Needed (5A)
Newton Creek	305141	2843650	RIVER	Douglas	0	2	2	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	EAP Project	Not Applicable	TMDL Needed (5A)
Newton Lake	900376	450600	LAKE	Oconto			19	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Nine Springs Creek	11664	804200	RIVER	Dane	0	6	6	04/01/2004	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Nine Springs Creek	11664	804200	RIVER	Dane	0	6	6	04/01/2004	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Ninemile Creek	11255	366800	RIVER	Langlade	0	13	13	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Noquebay Lake	11872	525900	LAKE	Marinette			2,409	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
North Br Duck Creek	13526	1267500	RIVER	Columbia	0	21	21	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
North Branch Manitowoc River	9911	75900	RIVER	Calumet	0	7	7	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Low DO, Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
North Branch Manitowoc River	9911	75900	RIVER	Calumet	0	7	7	04/01/1998	PS/NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
North Branch Of Pike River	10532	1900	RIVER	Racine, Kenosha	0	5	5	04/01/2008	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
North Branch Of Pike River	10532	1900	RIVER	Racine, Kenosha	0	5	5	04/01/1998	PS/NPS	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
North Branch O'Neill Creek	14265	1749600	RIVER	Clark	0	17	17	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
North Branch Wayne Creek	207448	865500	RIVER	Washington	4	5	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
North Creek	14360	1778600	RIVER	Trempealeau	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
North Flowage	14153	1700300	IMPOUNDMENT	Monroe			211	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
North Fork Beaver Creek	1181543	1682500	RIVER	Jackson	12	19	8	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
North Fork Of Beaver Creek	14094	1682500	RIVER	Trempealeau	0	12	12	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
North Lake	16578	2630800	LAKE	Barron			89	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
North Lake	11496	850800	LAKE	Waukesha			437	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
North Nokomis Lake	128242	1595800	LAKE	Oneida			468	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
North Spirit Lake	425815	1515200	LAKE	Price, Taylor			224	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
North Spirit Lake	425815	1515200	LAKE	Price, Taylor			224	04/01/2012	Unknown	Total Phosphorus	Excess Algal Growth	TMDL Development	High	Natural Conditions (5C)
North Tributary to Silver Creek	936838	147400	RIVER	Fond du Lac	0	4	4	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
North Two Lakes	128244	1007500	LAKE	Oneida			146	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Nor-X-Way Channel	10043	18450	RIVER	Ozaukee, Washington, Waukesha	0	5	5	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Nor-X-Way Channel	10043	18450	RIVER	Ozaukee, Washington, Waukesha	0	5	5	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Nugget Lake	18769	2053400	IMPOUNDMENT	Pierce			116	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Oak Creek	9969	14500	RIVER	Milwaukee	0	13	13	04/01/2014	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Oak Creek	9969	14500	RIVER	Milwaukee	0	13	13	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Oak Creek	9969	14500	RIVER	Milwaukee	0	13	13	04/01/1998	NPS	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Oconomowoc Lake	11491	849600	LAKE	Waukesha			795	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Oconto River	10870	440200	RIVER	Oconto	0	10	10	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Oconto River	884729	440200	RIVER	Oconto	10	15	4	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Oconto River	1440776	440200	RIVER	Shawano	31	36	4	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Odana Pond	34522	3000513	LAKE	Dane			14	04/01/2012	PS/NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Odana Pond	34522	3000513	LAKE	Dane			14	04/01/2012	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Ok Creek	13611	877200	RIVER	Green	0	7	7	04/01/2016	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	Proposed for List	Medium	TMDL Needed (5A)
Ok Creek	13611	877200	RIVER	Green	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Okauchee Lake	902156	850300	LAKE	Waukesha			1,210	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Olbrich Park Beach	1491088	804600	INLAND BEACH	Dane			0	04/01/2008	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Old Elk Lake	16070	1871400	LAKE	Dunn			90	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Old Elk Lake	16070	1871400	LAKE	Dunn			90	04/01/1998	NPS	Total Phosphorus	Low DO, Eutrophication	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Old Taylor Lake	10274	195000	LAKE	Waupaca			55	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Olin Park Beach	1491113	804600	INLAND BEACH	Dane			0	04/01/2008	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Oliver Creek	11463	859000	RIVER	Dodge	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
O'Neill Creek	14264	1748800	RIVER	Clark	0	3	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Onemile Creek	13063	1303400	RIVER	Juneau	1	4	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Onemile Creek	18445	1303400	RIVER	Juneau	0	1	1	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Onemile Creek	947890	1303400	RIVER	Juneau	4	6	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Onemile Creek	947914	1303400	RIVER	Juneau	7	13	6	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Onemile Creek	1517524	1303400	RIVER	Juneau	6	7	1	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Oneonta Lake	12049	503300	LAKE	Marinette			66	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Onion River	3987353	51200	RIVER	Sheboygan	0	32	32	04/01/2012	PS/NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Oregon Branch	11656	800700	RIVER	Dane	0	5	5	04/01/2012	Unknown	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Osman Trib to Meeme River	481039	5025264	RIVER	Manitowoc	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Osman Trib to Meeme River	481039	5025264	RIVER	Manitowoc	0	1	1	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)
Oswego Lake	15139	1871800	LAKE	Vilas			66	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Otter Creek	13322	1237100	RIVER	Iowa	21	23	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Otter Creek	13449	1237100	RIVER	Iowa	15	20	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Otter Creek	18477	1237100	RIVER	Iowa	0	15	15	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2008 (4A)
Otter Creek	18477	1237100	RIVER	Iowa	0	15	15	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Otter Creek	13449	1237100	RIVER	Iowa	15	20	5	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Otter Creek	13470	1258400	RIVER	Sauk	0	17	17	04/01/2014	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Otter Creek	13798	923300	RIVER	Lafayette, Iowa	0	11	11	04/01/2016	PS/NPS	Ammonia (Unionized) - Toxin	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Otter Creek	13798	923300	RIVER	Lafayette, Iowa	0	11	11	04/01/2016	PS/NPS	BOD	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Otter Creek	16364	2125700	RIVER	Eau Claire	0	27	27	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Otter Creek	18215	56400	RIVER	Sheboygan	0	4	4	04/01/2002	NPS	E. coli	Recreational Restrictions - Pathogens	EAP Project	Not Applicable	TMDL Needed (5A)
Otter Lake	16197	2157000	LAKE	Chippewa			602	04/01/2002	NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Owl Lake	14996	2307600	LAKE	Iron			125	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Oxbow Lake	128581	2954800	LAKE	Vilas			523	04/01/2014	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Oxbow Lake	128581	2954800	LAKE	Vilas			523	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Pages Slough (L. Poygan)	26906	251700	LAKE	Winnebago			150	04/01/2006	Other	Sediment/Total Suspended Solids	Degraded Habitat, Turbidity	TMDL Development	High	TMDL Needed (5A)
Pages Slough (L. Poygan)	26906	251700	LAKE	Winnebago			150	04/01/2006	Other	Total Phosphorus	Eutrophication	TMDL Development	High	TMDL Needed (5A)
Palmer Lake	128841	2962900	LAKE	Vilas			635	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Park Creek	11410	834400	RIVER	Dodge	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Park Falls Flowage, Lower	14891	2290100	IMPOUNDMENT	Price			62	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue, Chronic Aquatic Toxicity, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Park Falls Flowage, Lower	14891	2290100	IMPOUNDMENT	Price			62	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Park Lake	18131	180300	LAKE	Columbia			312	04/01/2006	NPS	Sediment/Total Suspended Solids	Eutrophication	TMDL Development	High	TMDL Needed (5A)
Park Lake	18131	180300	LAKE	Columbia			312	04/01/2006	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Parsons Creek	18157	136000	RIVER	Fond du Lac	0	3	3	04/01/2002	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Parsons Creek	18157	136000	RIVER	Fond du Lac	0	3	3	04/01/2002	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Pats Creek	13848	939800	RIVER	Lafayette	0	9	9	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Pattison Beach (State Park)	1455339	2838000	INLAND BEACH	Douglas	0	0	0	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Pecatonica River	13677	889100	RIVER	Green, Lafayette, Iowa	0	102	102	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Pelican Lake	128252	1579900	LAKE	Oneida			3,585	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Pennoyer Park Beach, Lake Michigan	1452836	20	GREAT LAKES BEACH	Kenosha			1	04/01/2006	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Pensaukee River	10866	412900	RIVER	Oconto, Shawano	0	60	60	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Perch Lake T45 R7w S5	890922	2770700	LAKE	Bayfield			69	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Perch Lake, Bass	15275	2368500	LAKE	Rusk			23	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Perennial Stream A (Spp1)	425015	753100	RIVER	Walworth	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Perennial Stream B (Tm2)	425131	755100	RIVER	Walworth	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Turbidity	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Perennial Stream C (Pb018)	425595	3000119	RIVER	Waukesha	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Perennial Stream C (Sc011)	425628	3000121	RIVER	Waukesha	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Perennial Stream C (Sc011)	425628	3000121	RIVER	Waukesha	0	3	3	04/01/1998	NPS	Total Phosphorus	Elevated Water Temperature	303d Listed	Low	TMDL Needed (5A)
Perennial Stream D (B4)	425054	753500	RIVER	Walworth	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Perennial Stream D (Pb016)	425544	3000120	RIVER	Waukesha	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Perennial Stream E (B5)	425097	753600	RIVER	Racine, Walworth	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Pesabic Lake	127995	1481600	LAKE	Lincoln			156	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Peshtigo Flowage	11845	515800	IMPOUNDMENT	Marinette			393	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Peshtigo River	11844	515500	RIVER	Marinette	54	60	6	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Peshtigo River	884803	515500	RIVER	Marinette	0	12	12	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Petenwell Flowage	424132	1377100	IMPOUNDMENT	Adams, Juneau			23,001	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Petenwell Flowage	424132	1377100	IMPOUNDMENT	Adams, Juneau			23,001	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Petenwell Flowage	424132	1377100	IMPOUNDMENT	Adams, Juneau			23,001	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Petenwell Flowage	424132	1377100	IMPOUNDMENT	Adams, Juneau			23,001	04/01/1998	Contam. Sed.	Dioxin	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Peterson Creek	10395	275400	RIVER	Waupaca	0	8	8	04/01/2016	NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Phantom Lake	10500	766000	LAKE	Waukesha			107	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Pheasant Branch	11695	805900	RIVER	Dane	0	1	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Pheasant Branch	11695	805900	RIVER	Dane	0	1	1	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Pheasant Branch	11696	805900	RIVER	Dane	1	9	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Pheasant Branch	11696	805900	RIVER	Dane	1	9	8	04/01/1998	NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Pheasant Branch	11695	805900	RIVER	Dane	0	1	1	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Pheasant Branch	11696	805900	RIVER	Dane	1	9	8	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Pickerel Lake	128257	1590400	LAKE	Oneida			736	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Pickerel Lake	128257	1590400	LAKE	Oneida			736	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Pidgeon Creek	5688313	1792500	RIVER	Trempealeau	8	8	0	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Pigeon Creek	13916	959600	RIVER	Grant	0	14	14	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Pigeon Creek	13916	959600	RIVER	Grant	0	14	14	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Addition	Low	TMDL Needed (5A)
Pigeon Creek	14158	1700800	RIVER	Jackson	0	5	5	04/01/1998	Habitat/Physical	Other flow regime alterations	Elevated Water Temperature	303d Listed	Low	TMDL Needed (5A)
Pigeon Creek	14393	1792500	RIVER	Trempealeau	0	8	8	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Pigeon Lake	18022	64000	LAKE	Manitowoc			77	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Pigeon River	9711	293100	RIVER	Waupaca	0	11	11	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Pigeon River	1496062	62300	RIVER	Manitowoc, Sheboygan	0	18	18	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Pike Creek	896190	1200	RIVER	Kenosha	0	4	4	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Pike Lake	18227	858300	LAKE	Washington			461	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Pike Lake Chain	14813	2268300	LAKE	Price			806	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Pike River	1523844	1300	RIVER	Kenosha	0	1	1	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Pike River	1523844	1300	RIVER	Kenosha	0	1	1	04/01/2014	Unknown	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Pike River	1523844	1300	RIVER	Kenosha	0	1	1	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Pike River	4696818	1300	RIVER	Kenosha	1	10	8	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Pike River	4696818	1300	RIVER	Kenosha	1	10	8	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Pine Creek	9866	66300	RIVER	Manitowoc	2	6	4	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Pine Creek	9931	79900	RIVER	Calumet	0	6	6	04/01/1998	Contam. Sed.	PCBs	Contaminated Sediment	EAP Project	Not Applicable	TMDL Needed (5A)
Pine Creek	9932	79900	RIVER	Calumet	6	9	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Addition	Medium	TMDL Needed (5A)
Pine Creek	9932	79900	RIVER	Calumet	6	9	4	04/01/1998	Contam. Sed.	PCBs	Contaminated Sediment	EAP Project	Not Applicable	TMDL Needed (5A)
Pine Lake	14536	2092900	LAKE	Rusk, Chippewa			262	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Pine Lake	127787	406900	LAKE	Forest			1,670	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Pine Lake, T29n R17w S01	16410	2489700	LAKE	Saint Croix			102	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Pine River	18493	1220600	RIVER	Richland	0	22	22	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Pioneer Lake	128589	1623400	LAKE	Vilas			427	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Pioneer Valley Creek	13647	883100	RIVER	Green	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Pipe Lake	16528	2490500	LAKE	Polk			270	04/01/2014	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Pipe Lake, North	16525	2485700	LAKE	Polk			55	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Pixley Flowage	14889	2288900	IMPOUNDMENT	Price			182	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Planting Ground Lake	128261	1609100	LAKE	Oneida			1,012	04/01/2012	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Platte River	13865	943600	RIVER	Grant	0	38	38	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Plum Creek	357670	125100	RIVER	Brown, Calumet	14	16	3	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Plum Creek	10841	125100	RIVER	Brown	0	14	14	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Plum Creek	10841	125100	RIVER	Brown	0	14	14	04/01/2008	PS/NPS	Total Phosphorus	Degraded Biological Community, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Plum Creek	357719	125100	RIVER	Calumet	16	20	3	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Plum Creek	13021	1287700	RIVER	Sauk	0	8	8	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Plum Creek	18230	868400	RIVER	Dodge	0	14	14	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Pokegama Lake	15817	2094300	LAKE	Barron			506	04/01/2006	NPS	Total Phosphorus	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Poplar Creek	424456	772800	RIVER	Waukesha	4	6	2	04/01/1998	NPS	Unknown Pollutant	Low DO	303d Listed	Low	TMDL Needed (5A)
Poplar Creek	424526	772800	RIVER	Waukesha	6	8	2	04/01/1998	NPS	Unknown Pollutant	Low DO	303d Listed	Low	TMDL Needed (5A)
Poplar River	14276	1752900	RIVER	Clark	0	11	11	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Poplar River	18630	1752900	RIVER	Clark	11	14	3	04/01/2012	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Poplar River (Creek)	10511	772800	RIVER	Waukesha	0	4	4	04/01/1998	NPS	Unknown Pollutant	Low DO	303d Listed	Low	TMDL Needed (5A)
Popple (Poplar) River, North Fork	14283	1754800	RIVER	Clark	0	20	20	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Popple (Poplar) River, North Fork	18632	1754800	RIVER	Clark	20	25	5	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Popple River East Fork	14282	1754500	RIVER	Clark	0	7	7	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Portage Canal	5534667	179500	RIVER	Columbia			16	04/01/2016	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	Proposed for List	Low	TMDL Needed (5A)
Portage Canal	5534667	179500	RIVER	Columbia			16	04/01/2016	Contam. Sed.	Lead	Contaminated Sediment	Proposed for List	Low	TMDL Needed (5A)
Portage Canal	5534667	179500	RIVER	Columbia			16	04/01/2016	Contam. Sed.	Mercury	Contaminated Sediment	Proposed for List	Low	TMDL Needed (5A)
Poskin Lake	15866	2098000	LAKE	Barron			150	04/01/2012	Unknown	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Poskin Lake	15866	2098000	LAKE	Barron			150	04/01/2014	NPS	Unknown Pollutant	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Post Lake, Upper	10650	399200	LAKE	Langlade, Oneida			757	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Potato Lake	897942	2355300	LAKE	Rusk			540	04/01/2014	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Potter Flowage	14212	1722000	IMPOUNDMENT	Jackson			348	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Potter Lake	891228	2917200	LAKE	Ashland			29	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Potter Lake	10491	753800	LAKE	Walworth			162	04/01/2010	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Poygan Lake	18137	242800	LAKE	Waushara, Winnebago			14,014	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat, Turbidity	TMDL Development	High	TMDL Needed (5A)
Poygan Lake	18137	242800	LAKE	Waushara, Winnebago			14,014	04/01/1998	NPS	Total Phosphorus	Water Quality Use Restrictions, Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Poygan Lake	18137	242800	LAKE	Waushara, Winnebago			14,014	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Prairie Brook	13701	901500	RIVER	Green	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Prairie Lake	15816	2094100	LAKE	Barron			1,534	04/01/2006	NPS	Total Phosphorus	Eutrophication, Degraded Habitat, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Printz Creek	14126	1693100	RIVER	Monroe	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Puchyan River	11018	145200	RIVER	Green Lake	0	14	14	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Puckaway Lake	11081	158700	LAKE	Green Lake, Marquette			5,039	04/01/2010	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Puckaway Lake	11081	158700	LAKE	Green Lake, Marquette			5,039	04/01/2010	NPS	Total Phosphorus	Eutrophication, Water Quality Use Restrictions, Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Pumpkinseed Creek	10766	243300	RIVER	Waushara, Winnebago	0	3	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Pumpkinseed Creek	10767	243300	RIVER	Waushara, Winnebago	3	6	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Racine Harbor	481367	25	BAY/HARBOR	Racine			84	04/01/1998	Other	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Raeder Creek	18335	1430800	RIVER	Marathon	0	3	3	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Randall Creek	12407	1431800	RIVER	Marathon	9	10	1	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Randall Creek	18336	1431800	RIVER	Marathon	0	9	9	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Range Line Lake	128265	1610300	LAKE	Oneida			123	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Range Line Lake	127791	478200	LAKE	Forest			82	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	Deletion	Not Applicable	Removed: Recovery Unknown
Range Line Lake	127791	478200	LAKE	Forest			82	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
Rat River	10752	251800	RIVER	Outagamie, Winnebago	13	25	12	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Rat River	18133	251800	RIVER	Winnebago	0	13	13	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Rat River	18133	251800	RIVER	Winnebago	0	13	13	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Rattlesnake Creek	13905	957300	RIVER	Grant	0	21	21	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Red Arrow Park Beach, Lake Michigan	481879	20	GREAT LAKES BEACH	Manitowoc			0	04/01/1998	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Red Cedar Lake	11715	813100	LAKE	Jefferson			359	04/01/2012	PS/NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Red Cedar Lake	16042	2109600	LAKE	Washburn, Barron			1,841	04/01/2014	NPS	Total Phosphorus	Eutrophication, Water Quality Use Restrictions, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Red Cedar River	15741	2063500	RIVER	Dunn	0	9	9	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Red Cedar River	15856	2063500	RIVER	Barron, Dunn	29	74	45	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Red Cedar River	888812	2063500	RIVER	Dunn	14	16	3	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Red Cedar River	15741	2063500	RIVER	Dunn	0	9	9	04/01/2006	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Red Cedar River	18785	2063500	RIVER	Barron	74	79	5	04/01/1998	PS/NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Red Cedar River	888574	2063500	RIVER	Dunn	16	19	2	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Red Cedar River	888648	2063500	RIVER	Dunn	23	29	6	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Red Cedar River	888773	2063500	RIVER	Dunn	9	14	4	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Red Cedar River	888773	2063500	RIVER	Dunn	9	14	4	04/01/1998	NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Red Cedar River	888812	2063500	RIVER	Dunn	14	16	3	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Red Lake	17251	2492100	LAKE	Douglas			258	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Red River	10250	101000	RIVER	Kewaunee	0	9	9	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Redstone Lake	13542	1280400	LAKE	Sauk			612	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Redstone Lake	13542	1280400	LAKE	Sauk			612	04/01/2016	PS/NPS	Unknown Pollutant	Eutrophication	Addition	Low	TMDL Needed (5A)
Reservoir Pond (Imp)	11811	466700	IMPOUNDMENT	Oconto			409	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Rice Lake	15977	2103900	LAKE	Barron			939	04/01/2012	Point Source	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Richland Creek	13669	889200	RIVER	Green	0	14	14	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Richter Lake	18635	1760000	LAKE	Taylor			45	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Riley School Branch	18519	877600	RIVER	Green	0	4	4	04/01/2016	NPS	Sediment/Total Suspended Solids	Degraded Habitat	Proposed for List	Medium	TMDL Needed (5A)
Riley School Branch	18519	877600	RIVER	Green	0	4	4	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Roaring Creek	14136	1695200	RIVER	Jackson	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Roaring Creek	14136	1695200	RIVER	Jackson	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Addition	Medium	TMDL Needed (5A)
Robinson Creek	14142	1696300	RIVER	Jackson	0	12	12	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Rock Creek	16348	2119000	RIVER	Dunn	3	5	2	04/01/2002	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Rock Creek	18628	1750800	RIVER	Clark	0	21	21	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Rock Dam Lake	18828	2139000	IMPOUNDMENT	Clark			125	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Rock Dam Lake	18828	2139000	IMPOUNDMENT	Clark			125	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Rock Lake	11386	830700	LAKE	Jefferson			1,365	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Rock Lake	15017	2311700	LAKE	Vilas			122	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Rock River	11455	788800	RIVER	Rock	171	183	12	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	11455	788800	RIVER	Rock	171	183	12	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	354476	788800	RIVER	Rock	183	193	10	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	354476	788800	RIVER	Rock	183	193	10	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	354542	788800	RIVER	Rock	193	201	8	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	354542	788800	RIVER	Rock	193	201	8	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	354592	788800	RIVER	Rock	201	207	6	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	354592	788800	RIVER	Rock	201	207	6	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	356113	788800	RIVER	Dodge, Jefferson	214	249	36	04/01/2002	PS/NPS	Total Phosphorus	Low DO, Eutrophication, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	356190	788800	RIVER	Jefferson	249	270	21	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	356190	788800	RIVER	Jefferson	249	270	21	04/01/2006	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	356250	788800	RIVER	Dodge, Jefferson	270	293	24	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	356250	788800	RIVER	Dodge, Jefferson	270	293	24	04/01/2006	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	356322	788800	RIVER	Dodge	296	305	8	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River	356322	788800	RIVER	Dodge	296	305	8	04/01/2006	PS/NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River, South Branch	11580	869800	RIVER	Green Lake, Fond du Lac	4	20	16	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River, South Branch	11580	869800	RIVER	Green Lake, Fond du Lac	4	20	16	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River, South Branch	18232	869800	RIVER	Fond du Lac	0	4	4	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River, South Branch	18232	869800	RIVER	Fond du Lac	0	4	4	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River, West Branch	11566	861300	RIVER	Dodge, Fond du Lac	50	88	38	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rock River, West Branch	11566	861300	RIVER	Dodge, Fond du Lac	50	88	38	04/01/2006	NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Rocky Creek	12233	1370800	RIVER	Wood	0	12	12	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Rogers Branch	13930	964300	RIVER	Grant	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Rogers Branch	13930	964300	RIVER	Grant	0	8	8	04/01/1998	NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Rogers Branch	13931	964300	RIVER	Grant	8	12	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Rogers Branch	13931	964300	RIVER	Grant	8	12	4	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2007 (4A)
Rogers Branch	13930	964300	RIVER	Grant	0	8	8	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Rolling Stone Lake	10607	389300	LAKE	Langlade			672	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Root River	10533	2900	RIVER	Racine	0	6	6	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Root River	10533	2900	RIVER	Racine	0	6	6	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Root River	425682	2900	RIVER	Racine, Waukesha, Milwaukee	26	44	18	04/01/2014	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Root River	425682	2900	RIVER	Racine, Waukesha, Milwaukee	26	44	18	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Low DO	303d Listed	Low	TMDL Needed (5A)
Root River	425682	2900	RIVER	Racine, Waukesha, Milwaukee	26	44	18	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Root River	896175	2900	RIVER	Racine, Milwaukee	6	20	15	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Root River	4714703	2900	RIVER	Milwaukee, Racine	20	26	5	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Low DO	303d Listed	Medium	TMDL Needed (5A)
Root River	4714703	2900	RIVER	Milwaukee, Racine	20	26	5	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Root River Canal	10535	4300	RIVER	Racine, Milwaukee	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO	303d Listed	Medium	TMDL Needed (5A)
Root River Canal	10535	4300	RIVER	Racine, Milwaukee	0	6	6	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
Round Lake	9910	68600	LAKE	Calumet			11	04/01/2016	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Round Lake T32 R9w S14	891353	2169200	LAKE	Chippewa			216	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Round Lake T37n R18w S27	16676	2640100	LAKE	Burnett			204	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Round Lake T37n R18w S27	16676	2640100	LAKE	Burnett			204	04/01/2012	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Round Lake T37n R18w S27	16676	2640100	LAKE	Burnett			204	04/01/2014	NPS	Unknown Pollutant	Eutrophication	Addition	Low	TMDL Needed (5A)
Rouse Creek	17755	2925000	RIVER	Iron	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Roxbury Creek	13496	1259900	RIVER	Dane	0	4	4	04/01/2014	PS/NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Roy Creek	11030	148200	RIVER	Green Lake	0	7	7	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Roy Creek	11030	148200	RIVER	Green Lake	0	7	7	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Rubicon River	11555	856500	RIVER	Dodge, Washington	0	29	29	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Running Valley Creek	15745	2082700	RIVER	Dunn	0	5	5	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Sackett Lake	14316	1764500	LAKE	Taylor			63	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sailor Creek Flowage	18678	2252200	IMPOUNDMENT	Price			215	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sand Creek	14017	1689700	RIVER	Jackson, Monroe, La Crosse	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Sand Lake	16240	1880000	LAKE	Chippewa			15	04/01/2004	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sand Lake	18665	2353600	LAKE	Rusk, Chippewa			262	04/01/2012	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sand Lake	127700	591600	LAKE	Florence			50	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sand Lake (Sugar Camp Chain)	128276	1597000	LAKE	Oneida			540	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Addition	High	Natural Conditions (5C)
Sand Lake (Sugar Camp Chain)	128276	1597000	LAKE	Oneida			540	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	Deletion	Not Applicable	Removed: Recovery Unknown
Sand Lake T40n R15w S25	16889	2495100	LAKE	Burnett			962	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sandy Creek	18576	966100	RIVER	Grant	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Sauk Creek	11342	49500	RIVER	Ozaukee	0	16	16	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Schoenick Creek	5513393	321000	RIVER	Shawano	4	4	1	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Schoenick Creek	5513424	321000	RIVER	Shawano	4	8	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
School Section Lake	10346	283600	LAKE	Waupaca			39	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	Natural Conditions (5C)
School Section Lake	11752	825000	LAKE	Waukesha			117	04/01/2014	NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Schultz Creek	11406	833800	RIVER	Dodge	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Scotch Creek	12460	1455600	RIVER	Marathon	0	4	4	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Scotch Creek	12461	1455600	RIVER	Marathon	10	18	8	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Scotch Creek	18354	1455600	RIVER	Marathon	4	10	6	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Scott Lake	16577	2630700	LAKE	Barron			81	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Scout Lake	207466	6100	LAKE	Milwaukee			8	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Scuppernong River	11789	817600	RIVER	Jefferson, Waukesha	0	13	13	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Searles Creek	13618	879500	RIVER	Green	0	10	10	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Second Lake	128279	1572300	LAKE	Oneida			111	04/01/2014	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Seeley Creek	12990	1275300	RIVER	Sauk	0	13	13	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Sevenmile Creek	13061	1302400	RIVER	Juneau	0	15	15	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Sevenmile Creek	10994	136800	RIVER	Fond du Lac	0	11	11	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Sevenmile Creek	16088	2128700	RIVER	Eau Claire	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Sevenmile Creek	16089	2128700	RIVER	Chippewa	5	7	2	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Sevenmile Lake	128281	1605800	LAKE	Forest, Oneida			503	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Seymour Creek	13024	1291400	RIVER	Juneau	0	3	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Seymour Creek	946527	1291400	RIVER	Juneau, Vernon	3	6	4	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Seymour Creek	946550	1291400	RIVER	Monroe, Vernon	6	11	5	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Shannahan Valley Creek	13466	1257900	RIVER	Sauk	0	1	1	04/01/2002	Habitat/Physical	Ammonia (Unionized) - Toxin	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Shannahan Valley Creek	13466	1257900	RIVER	Sauk	0	1	1	04/01/2002	Habitat/Physical	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
Shannahan Valley Creek	13466	1257900	RIVER	Sauk	0	1	1	04/01/2002	Habitat/Physical	Elevated Water Temperature	Elevated Water Temperature	303d Listed	Low	TMDL Needed (5A)
Shannon Lake	128610	1016800	LAKE	Vilas			35	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Shattuck Lake, North	18859	1869300	LAKE	Chippewa			39	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Shawano Lake	9825	322800	LAKE	Shawano			6,063	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Shawano Lake	9825	322800	LAKE	Shawano			6,063	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Addition	High	TMDL Needed (5A)
Sheboygan River	11354	50700	RIVER	Sheboygan	0	14	14	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Sheboygan River	11354	50700	RIVER	Sheboygan	0	14	14	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
Sherman Creek	16080	2125100	RIVER	Eau Claire, Chippewa	0	14	14	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Sherwood Lake	14240	1736200	IMPOUNDMENT	Clark			117	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Shioc River	9800	316800	RIVER	Outagamie, Shawano	0	28	28	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Shoop Park Beach, Lake Michigan	3992139	20	GREAT LAKES BEACH	Racine			0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Silver Birch Lake	15605	2054600	LAKE	Pepin			145	04/01/1998	NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
Silver Creek	9872	67300	RIVER	Manitowoc	0	18	18	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Silver Creek	11028	146800	RIVER	Green Lake, Fond du Lac	1	12	11	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Silver Creek	13004	1280000	RIVER	Sauk	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO, Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Silver Creek	13004	1280000	RIVER	Sauk	0	4	4	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Silver Creek	359092	146800	RIVER	Fond du Lac	12	14	2	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Silver Creek Mouth	896230	146800	LAKE	Green Lake			156	04/01/2012	Unknown	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Silver Lake	18028	67400	LAKE	Manitowoc			73	04/01/1998	PS/NPS	Total Phosphorus	Fish Kills, Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Silver Lake	15841	1881100	LAKE	Barron			337	04/01/2012	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Silver Lake	17171	2496900	LAKE	Washburn			188	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Silver School Branch	13637	880400	RIVER	Green	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Silver Spring Creek	13777	917700	RIVER	Lafayette	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Silver Spring Creek	13777	917700	RIVER	Lafayette	0	6	6	04/01/2012	PS/NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Simmons Island Beach, Lake Michigan	1452862	20	GREAT LAKES BEACH	Kenosha			0	04/01/2006	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Sinissippi Lake	11467	859900	IMPOUNDMENT	Dodge			1,648	04/01/2006	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Sinissippi Lake	11467	859900	IMPOUNDMENT	Dodge			1,648	04/01/2006	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Sinsinawa River	13850	940200	RIVER	Grant	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Siskiwit Lake	890939	2882300	LAKE	Bayfield			285	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sissabagama Lake	15374	2393500	LAKE	Sawyer			719	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	Deletion	Not Applicable	Removed: Recovery Unknown
Sissabagama Lake	15374	2393500	LAKE	Sawyer			719	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
Six Lake	14899	2294500	LAKE	Iron			148	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Six Mile Creek	11691	805500	RIVER	Dane	0	9	9	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Skinner Creek	13678	894500	RIVER	Green	0	14	14	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Slaughterhouse Creek	12806	1568100	RIVER	Oneida	0	1	1	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Slim Lake	16000	2109300	LAKE	Washburn			224	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Snipe Lake	128615	1018500	LAKE	Vilas			239	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Solberg Lake	14731	2242500	LAKE	Price			859	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Solberg Lake	14731	2242500	LAKE	Price			859	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Somo Lake	128861	1547700	LAKE	Lincoln			424	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Soper Creek	14129	1693400	RIVER	Monroe	0	8	8	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
South 43rd Street Ditch	9981	15900	RIVER	Milwaukee	0	1	1	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
South 43rd Street Ditch	9981	15900	RIVER	Milwaukee	0	1	1	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
South Br Creek (S Br Baraboo)	13029	1289800	RIVER	Vernon	0	1	1	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
South Branch Creek	3899370	3000073	RIVER	Milwaukee	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
South Branch Creek	3899370	3000073	RIVER	Milwaukee	0	2	2	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
South Branch O'Neil Creek	18626	1749300	RIVER	Clark, Wood	0	18	18	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
South Fish Creek	17624	2889900	RIVER	Bayfield	0	25	25	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
South Fork Eau Claire River	5542093	2137000	RIVER	Clark, Taylor	39	49	10	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
South Fork Eau Claire River	5542152	2137000	RIVER	Clark	20	39	19	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
South Fork Lemonweir River	3870704	1338500	RIVER	Monroe	13	22	9	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
South Fork Lemonweir River	888023	1338500	RIVER	Monroe	6	12	6	04/01/1998	PS/NPS	Total Phosphorus	Low DO, Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
South Fork Lemonweir River	888023	1338500	RIVER	Monroe	6	12	6	04/01/1998	PS/NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
South Fork Popple (Poplar) River	14280	1754100	RIVER	Clark	0	10	10	04/01/2012	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
South Fork Popple River	14281	1754100	RIVER	Clark	10	20	10	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
South Shore Beach, Lake Michigan	481411	20	GREAT LAKES BEACH	Milwaukee			1	04/01/2004	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Southbranch Of Underwood Creek	10028	16800	RIVER	Waukesha, Milwaukee	0	1	1	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Southport Park Beach, Lake Michigan	1491250	20	GREAT LAKES BEACH	Kenosha			0	04/01/2008	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Spider Lake	891245	2918600	LAKE	Ashland			86	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Spider Lake (Whispering)	14992	2306300	LAKE	Iron			352	04/01/2012	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Spillerberg Lake	891279	2936200	LAKE	Ashland			75	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Spirit Lake	425781	1513000	LAKE	Price, Taylor			137	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Spirit Lake	425781	1513000	LAKE	Price, Taylor			137	04/01/2012	Unknown	Total Phosphorus	Impairment Unknown, Excess Algal Growth	TMDL Development	High	Natural Conditions (5C)
Spirit River Flowage	128009	1506800	IMPOUNDMENT	Lincoln			1,564	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Spirit River Flowage	128009	1506800	IMPOUNDMENT	Lincoln			1,564	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Spring (Dorn) Creek	11694	805600	RIVER	Dane	1	6	5	04/01/2002	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Spring (Dorn) Creek	11694	805600	RIVER	Dane	1	6	5	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Low	Phosphorus Listed (5P)
Spring (Dorn) Creek	11694	805600	RIVER	Dane	1	6	5	04/01/2002	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Spring Brook	11005	140300	RIVER	Winnebago	0	2	2	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Spring Brook Creek	12431	1440800	RIVER	Langlade, Marathon	0	10	10	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Spring Brook Creek	12432	1440800	RIVER	Langlade	10	13	2	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Spring Brook Creek	12432	1440800	RIVER	Langlade	10	13	2	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Spring Brook Creek	18345	1440800	RIVER	Langlade	13	15	2	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Spring Brook Creek	18345	1440800	RIVER	Langlade	13	15	2	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Spring Brook, North Branch	425450	752500	RIVER	Walworth	0	2	2	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Spring Creek	10492	753900	RIVER	Walworth	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat, Turbidity	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Spring Creek	13609	877000	RIVER	Green	0	10	10	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Spring Creek	11795	819100	RIVER	Jefferson	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Spring Creek	11795	819100	RIVER	Jefferson	0	5	5	04/01/1998	NPS	Total Phosphorus	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Spring Creek	10482	773400	RIVER	Waukesha	0	7	7	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)
Spring Creek (S29)	1444913	2085900	RIVER	Barron	0	5	5	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Spring Creek (Solon Spring Creek)	1497732	2748100	RIVER	Douglas	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Spring Harbor Beach	1491284	805400	INLAND BEACH	Dane			0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Spring Lake	10311	267200	SPRINGS-LAKE	Portage			37	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Spring Lake Lower	902136	820800	LAKE	Jefferson			105	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Squaw Creek	12363	1420700	RIVER	Marathon, Wood	0	9	9	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Squaw Lake	16606	2499000	LAKE	Saint Croix			110	04/01/1998	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Squaw Lake	18693	2271600	LAKE	Oneida, Vilas			785	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
St Croix Creek	17123	2749100	RIVER	Douglas	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
St Croix River	16373	2601400	RIVER	Pierce, Saint Croix	0	17	17	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
St Croix River	890644	2601400	RIVER	Polk, Saint Croix	17	44	27	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
St Croix River	890677	2601400	RIVER	Polk	44	54	10	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
St. Croix Flowage	17084	2740300	IMPOUNDMENT	Douglas			1,913	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
St. Croix Lake	16398	2601500	LAKE	Pierce, Saint Croix			4,668	04/01/2008	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
St. Louis River AOC, Howards Bay	1527203	2843800	BAY/HARBOR	Douglas			141	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, Howards Bay	1527203	2843800	BAY/HARBOR	Douglas			141	04/01/2010	Contam. Sed.	Lead	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, Howards Bay	1527203	2843800	BAY/HARBOR	Douglas			141	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, St. Louis River	17465	2843800	BAY/HARBOR	Douglas			5,902	04/01/2006	Other	PAHs	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, St. Louis River	17465	2843800	BAY/HARBOR	Douglas			5,902	04/01/2010	Other	2,3,7,8-Tetrachlorodibenzo-p-dioxin (only)	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, St. Louis River	17465	2843800	BAY/HARBOR	Douglas			5,902	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, St. Louis River	17465	2843800	BAY/HARBOR	Douglas			5,902	04/01/2010	Other	DDT	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, St. Louis River	17465	2843800	BAY/HARBOR	Douglas			5,902	04/01/1998	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, St. Louis River	17465	2843800	BAY/HARBOR	Douglas			5,902	04/01/2010	Other	Dieldrin	Contaminated Sediment	303d Listed	Low	TMDL Needed (5A)
St. Louis River AOC, St. Louis River	17465	2843800	BAY/HARBOR	Douglas			5,902	04/01/2006	Other	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Starkweather Creek	11668	805100	RIVER	Dane	0	4	4	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Starkweather Creek	11668	805100	RIVER	Dane	0	4	4	04/01/1998	NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
Starkweather Creek	11668	805100	RIVER	Dane	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Starkweather Creek	11668	805100	RIVER	Dane	0	4	4	04/01/1998	Contam. Sed.	Unspecified Metals	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Steel Brook	11794	817800	RIVER	Jefferson	2	3	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Steel Brook	11794	817800	RIVER	Jefferson	2	3	1	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Stevens Creek	11632	796300	RIVER	Rock	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Stillwell Creek	14037	1662600	RIVER	Monroe	0	2	2	04/01/2002	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2006 (4A)
Stony Brook	11427	837600	RIVER	Dane, Dodge, Jefferson	0	15	15	04/01/2006	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Stony Creek	10219	96100	RIVER	Door, Kewaunee	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Stream C, trib to Flambeau River	3924686	7215137	RIVER	Rusk	2	2	1	04/01/2012	Unknown	Copper	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Stream C, trib to Flambeau River	3924686	7215137	RIVER	Rusk	2	2	1	04/01/2012	Unknown	Zinc	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Sucker Creek	11343	50100	RIVER	Ozaukee, Sheboygan	0	10	10	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Medium	TMDL Needed (5A)
Sugar Camp Lake	128310	1020400	LAKE	Oneida			545	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sugar Camp Lake	128310	1020400	LAKE	Oneida			545	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Addition	Low	Natural Conditions (5C)
Sugar Creek	10247	100500	RIVER	Door	0	9	9	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Sugar Creek	10488	752100	RIVER	Walworth	0	27	27	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Sugar River	13651	875300	RIVER	Dane, Green	11	56	45	04/01/2014	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Sugar River	1855695	875300	RIVER	Rock	0	11	11	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Sugar River East Channel	5476700	878400	RIVER	Green	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Summit Lake	127905	1445600	LAKE	Langlade			282	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Swan Creek	13608	876700	RIVER	Rock	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Swan Lake	10744	179800	LAKE	Columbia			406	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Swinns Valley Creek	14351	1776000	RIVER	Buffalo	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Sylvan Lake (Pipe)	15843	1884800	LAKE	Barron			67	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Sylvan Lake (Pipe)	15843	1884800	LAKE	Barron			67	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
T22n, R22e, S23 Sesw (Denmark Creek)	10131	89100	RIVER	Brown	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Tahkodah Lake	890990	2473500	LAKE	Bayfield			148	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Tainter Lake	18791	2068000	IMPOUNDMENT	Dunn			1,387	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth, Elevated pH	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2012 (4A)
Tamarack Creek	14332	1770300	RIVER	Trempealeau	0	6	6	04/01/2012	Unknown	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Tappen Coulee Creek	14409	1800300	RIVER	Trempealeau	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Taylor Creek	13605	876300	RIVER	Rock	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Teal Lake	15519	2417000	LAKE	Sawyer			1,049	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Tenmile Creek	15797	2089400	RIVER	Rusk, Barron	0	21	21	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Tenmile Lake	15798	2089500	LAKE	Barron			376	04/01/2006	NPS	Total Phosphorus	Eutrophication	303d Listed	Low	TMDL Needed (5A)
Tenny Park Beach, Lake Mendota	1527026	805400	INLAND BEACH	Dane			0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Third Lake	128317	1572200	LAKE	Oneida			103	04/01/2014	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Thompson Lake	128748	1569900	LAKE	Oneida			382	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Thompson Lake	128748	1569900	LAKE	Oneida			382	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Addition	Low	TMDL Needed (5A)
Thompson Valley Creek	16106	2131100	RIVER	Eau Claire	3	10	7	04/01/2014	NPS	Unknown Pollutant	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Thompson Valley Creek	16106	2131100	RIVER	Eau Claire	3	10	7	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Thompson Valley Creek	16107	2131100	RIVER	Eau Claire	0	3	3	04/01/2014	NPS	Unknown Pollutant	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Thompson Valley Creek	16107	2131100	RIVER	Eau Claire	0	3	3	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Thunder Lake Inlet	11916	533700	RIVER	Marinette	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Tichigan Lake	10476	763600	LAKE	Racine			1,132	04/01/2014	Unknown	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Tichigan Lake	10476	763600	LAKE	Racine			1,132	04/01/2012	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Timber Creek	14401	1796700	RIVER	Jackson, Trempealeau	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Token Cr	310734	806600	RIVER	Dane	6	7	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Sediment/Total Suspended Solids	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Token Cr	310734	806600	RIVER	Dane	6	7	1	04/01/1998	Habitat/Physical	Fish Barriers (Fish Passage)	Fish Barriers (Fish Passage)	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Token Creek	11676	806600	RIVER	Dane	3	6	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Sediment/Total Suspended Solids	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2002 (4A)
Token Creek	5546058	806600	RIVER	Dane	7	10	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Sediment/Total Suspended Solids	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Token Creek	5546058	806600	RIVER	Dane	7	10	3	04/01/1998	Habitat/Physical	Fish Barriers (Fish Passage)	Fish Barriers (Fish Passage)	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Token Creek	5546058	806600	RIVER	Dane	7	10	3	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	Medium	Phosphorus Listed (5P)
Token Creek	5546125	806600	RIVER	Dane	10	11	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Tomah Lake	13599	1342100	IMPOUNDMENT	Monroe			245	04/01/1998	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth, Elevated pH	EAP Project	Not Applicable	TMDL Needed (5A)
Tomorrow/Waupaca River	315909	257400	RIVER	Portage	33	39	6	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Tomorrow/Waupaca River	315930	257400	RIVER	Portage	39	46	7	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Tomorrow/Waupaca River	1493981	257400	RIVER	Portage	51	65	14	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Town Creek	14181	1708100	RIVER	Jackson	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Town Line Flowage	18607	1717300	IMPOUNDMENT	Jackson			143	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Tree Lake	10324	289400	LAKE	Portage			74	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Trempealeau River	14412	1769900	RIVER	Trempealeau	0	31	31	04/01/2002	Other	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Trempealeau River	14412	1769900	RIVER	Trempealeau	0	31	31	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Medium	TMDL Needed (5A)
Trib To Brewery Creek	353179	928700	RIVER	Iowa	0	2	2	04/01/1998	PS/NPS	Zinc	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Trib To Brewery Creek	353179	928700	RIVER	Iowa	0	2	2	04/01/1998	PS/NPS	Lead	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Trib To Brewery Creek	353179	928700	RIVER	Iowa	0	2	2	04/01/1998	PS/NPS	Mercury	Contaminated Fish Tissue, Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Trib To Brewery Creek	353179	928700	RIVER	Iowa	0	2	2	04/01/1998	PS/NPS	Cadmium	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Trib To Livingston Br	353406	932800	RIVER	Iowa	0	4	4	04/01/1998	NPS	Ammonia (Unionized) - Toxin	Acute Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Trib To Livingston Br	353406	932800	RIVER	Iowa	0	4	4	04/01/1998	NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
Trib To Livingston Br	353406	932800	RIVER	Iowa	0	4	4	04/01/1998	NPS	Total Phosphorus	Degraded Biological Community, Acute Aquatic Toxicity	303d Listed	Medium	TMDL Needed (5A)
Trib To The East River	890826	5018099	RIVER	Brown	1	1	1	04/01/1998	Contam. Sed.	PCBs	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Tributary (E.BR) to Denuveau Creek	1517827	139100	RIVER	Fond du Lac	0	9	9	04/01/2002	PS/NPS	Total Phosphorus	Elevated Water Temperature, Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
TRIBUTARY TO DEAD CREEK TO THE ROCK RIVER	1517006	860400	RIVER	Dodge	0	1	1	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Tributary to S Br Yellow River	1516846	1372800	RIVER	Clark	0	1	1	04/01/2014	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Tripp Lake	11781	816000	LAKE	Walworth			113	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Trout Brook	17721	2913900	RIVER	Ashland	0	3	3	04/01/2016	PS/NPS	Fecal Coliform	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Trout Run	361621	1695500	RIVER	Jackson	2	8	5	04/01/1998	NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
Trout Run	361621	1695500	RIVER	Jackson	2	8	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	303d Listed	Low	TMDL Needed (5A)
Trout Run Creek	14344	1775000	RIVER	Trempealeau	0	4	4	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Trout Run Creek	14344	1775000	RIVER	Trempealeau	0	4	4	04/01/2014	NPS	Unknown Pollutant	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Trout Run Creek	14345	1775000	RIVER	Trempealeau	4	6	2	04/01/2014	NPS	Unknown Pollutant	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Trude Lake	14946	2295200	LAKE	Iron			786	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Trump Coulee Creek	14414	1800600	RIVER	Jackson, Trempealeau	0	8	8	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2004 (4A)
Trump Coulee Creek	14414	1800600	RIVER	Jackson, Trempealeau	0	8	8	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)
Tug Lake	128014	1482400	LAKE	Lincoln			151	04/01/2010	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Turtle Creek	338091	790300	RIVER	Walworth	25	36	11	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Turtle Lake, North	15010	2310400	LAKE	Vilas			369	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Turtle Lake, South	15009	2310200	LAKE	Vilas			454	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Turtle-Flambeau Flowage	14944	2294900	IMPOUNDMENT	Iron			12,943	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Turtle-Flambeau Flowage	14944	2294900	IMPOUNDMENT	Iron			12,943	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Turton Creek (American Valley Creek)	14354	1777100	RIVER	Trempealeau	3	4	1	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Twin Creek	18426	1279400	RIVER	Sauk	0	9	9	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Twin Grove Branch	13671	891300	RIVER	Green	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Twin Lakes	128574	1623800	LAKE	Vilas			2,788	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Twin Valley Lake	13431	1245800	LAKE	Iowa			152	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Two Axe Lake	15398	1887200	LAKE	Sawyer			57	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Two Island Lake	14529	1887500	LAKE	Chippewa			29	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Two Rivers Harbor	482709	47	BAY/HARBOR	Manitowoc			11	04/01/1998	Other	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Ulao Creek	10012	21200	RIVER	Ozaukee	0	9	9	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Ulao Creek	10012	21200	RIVER	Ozaukee	0	9	9	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Un Creek (T22n-R16e-S22)	9793	316100	RIVER	Outagamie	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Un Tr To Shullsburg Br	13845	937800	RIVER	Lafayette	0	4	4	04/01/1998	NPS	Zinc	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Un Tr To Shullsburg Br	13845	937800	RIVER	Lafayette	0	4	4	04/01/1998	NPS	Lead	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Un Tr To Shullsburg Br	13845	937800	RIVER	Lafayette	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Un Trib To Sinsinawa River	13851	941100	RIVER	Grant	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Un. Creek (T14n R18e Nw Ne 27)	11261	44200	RIVER	Fond du Lac	0	6	6	04/01/2016	NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Un. Creek (Trinity Creek)(T09n R21e Se Ne 35)	10010	20400	RIVER	Ozaukee, Milwaukee	0	3	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Un. Creek (Trinity Creek)(T09n R21e Se Ne 35)	10010	20400	RIVER	Ozaukee, Milwaukee	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Un. Trib. To Onion River via Waldo Impoundment	1489156	52600	RIVER	Sheboygan	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Underwood Creek	10026	16700	RIVER	Milwaukee	0	3	3	04/01/2012	PS/NPS	Total Phosphorus	Degraded Biological Community	Deletion	Not Applicable	Removed: Recovery Unknown
Underwood Creek	10026	16700	RIVER	Milwaukee	0	3	3	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Underwood Creek	10026	16700	RIVER	Milwaukee	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community, Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Underwood Creek	10027	16700	RIVER	Waukesha, Milwaukee	3	9	6	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Underwood Creek	10027	16700	RIVER	Waukesha, Milwaukee	3	9	6	04/01/2012	Point Source	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Unnamed	1524901	325000	RIVER	Shawano	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed (Trib To Crawford Creek)	891570	0	RIVER	Douglas				04/01/1998	Contam. Sed.	PAHs	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Unnamed (Trib To Crawford Creek)	891570	0	RIVER	Douglas				04/01/1998	Contam. Sed.	Creosote	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Unnamed Cr 17-6 (T30n, R3e, S17, Nwnw, 37)	12482	1460500	RIVER	Marathon, Taylor	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	Natural Conditions (5C)
Unnamed Creek	482551	3000057	RIVER	Calumet	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Unnamed Creek	1525949	5000547	RIVER	Douglas	0	1	1	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Unnamed Creek (T18n, R21e, S13) Trib To St. Nazianz	9889	73700	RIVER	Manitowoc	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Unnamed Creek (T23n,R3e,S10,Sesw,72)	12234	1371200	RIVER	Wood	0	3	3	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Unnamed Creek (T23n,R3e,S10,Sesw,72)	12235	1371200	RIVER	Wood	3	5	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Unnamed Creek 2065700 - at Third St	3990988	2065700	RIVER	Dunn	0	3	3	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Unnamed Creek 2-13 (T29n, R4e, S2, Nwse, 37)	18359	1458300	RIVER	Marathon	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Unnamed E Trib. to Schoenick Cr	5513459	321200	RIVER	Shawano	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed Stream	5506375	453700	RIVER	Oconto	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	Natural Conditions (5C)
Unnamed Stream	3987535	5016277	RIVER	Wood	0	2	2	04/01/2014	PS/NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Unnamed Stream	3987619	5015142	RIVER	Clark	0	2	2	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Unnamed Stream	5500551	3000212	RIVER	Kewaunee	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Unnamed Stream	5500585	3000213	RIVER	Kewaunee	0	0	0	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Unnamed Stream	5506181	449600	RIVER	Oconto	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Unnamed Stream (R21e S18	10041	18350	RIVER	Waukesha, Milwaukee	0	2	2	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Unnamed Stream (T19n, R22e, S3)	18037	71600	RIVER	Manitowoc	0	3	3	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Unnamed Trib to Burgy Cr	4000228	881000	RIVER	Green	0	4	4	04/01/2014	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Unnamed Trib to Marengo R	5702214	2919600	RIVER	Bayfield	0	6	6	04/01/2016	PS/NPS	Fecal Coliform	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Unnamed Trib To Mason Lake	481686	176300	RIVER	Adams	3	6	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Unnamed Trib to S Fish Creek	5698877	2890200	RIVER	Bayfield	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Unnamed Trib to Silver Creek	5476567	147700	RIVER	Fond du Lac	0	8	8	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Unnamed Trib to Silver Creek	5476590	146900	RIVER	Green Lake	0	3	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed Trib to Trib of S Br Rock R	5514082	871000	RIVER	Fond du Lac	0	5	5	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Unnamed Trib to W Br Shioc R	5513990	319100	RIVER	Shawano	0	1	1	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed Trib to Yahara R	5535982	806300	RIVER	Dane			9	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Unnamed Trib to Yellow River	4699046	1372500	RIVER	Wood	0	1	1	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Unnamed Tributary to Silver Spring Creek	3991302	5040863	RIVER	Lafayette	0	1	1	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Upper Buckatabon Lake	128692	1621800	LAKE	Vilas			494	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Upper Buckatabon Lake	128692	1621800	LAKE	Vilas			494	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Addition	High	Natural Conditions (5C)
Upper Fox River	359244	117900	RIVER	Columbia	161	165	4	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Upper Fox River	359274	117900	RIVER	Marquette, Columbia	144	161	16	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Upper Kaubashine Lake	128366	1535000	LAKE	Oneida			190	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Upper Kelly Lake	207470	7100	LAKE	Waukesha, Milwaukee			12	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Upper Koshkonong	304937	808800	RIVER	Dane, Jefferson	27	48	21	04/01/2012	NPS	Total Phosphorus	Degraded Biological Community, Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Upper Koshkonong	304937	808800	RIVER	Dane, Jefferson	27	48	21	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
Upper Pine Creek	1515438	2087300	RIVER	Barron	2	11	9	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Upper Pixley Flowage	890453	2225000	IMPOUNDMENT	Price			84	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Upper Turtle Lake	15711	2079800	LAKE	Barron			438	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Van Dyne Creek	18155	132600	RIVER	Winnebago, Fond du Lac	1	9	8	04/01/2002	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Van Zile Lake	127822	608400	LAKE	Florence, Forest			78	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Vermont Creek	13482	1249200	RIVER	Dane	0	3	3	04/01/2004	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Vilas Park Beach	1490942	805000	INLAND BEACH	Dane			0	04/01/2008	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Villa Mann Creek	9978	15300	RIVER	Milwaukee	0	1	1	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Virgin Lake	128371	1614100	LAKE	Oneida			276	04/01/2016	Atm. Dep.	Mercury	Contaminated Fish Tissue	Proposed for List	Low	Mercury Atm. Dep. (5B)
W Br Eau Claire River	1496996	1445700	RIVER	Langlade	2	32	30	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
W Branch Big Eau Pleine River	12412	1432700	RIVER	Marathon, Taylor	0	9	9	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
W Branch Big Eau Pleine River	12413	1432700	RIVER	Taylor	9	12	3	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Wapogasset Lake	16486	2618000	LAKE	Polk			1,186	04/01/2012	Unknown	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Ward Lake	18912	2599400	LAKE	Polk			91	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Warm Water Beach, Lake Michigan	1452984	20	GREAT LAKES BEACH	Manitowoc			1	04/01/2006	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Waubeesee Lake	10468	760900	LAKE	Racine			129	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Waukau Creek	18163	140700	RIVER	Winnebago	5	10	5	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Waupaca River	315887	257400	RIVER	Waupaca	17	33	16	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Waxdale Creek	10527	2300	RIVER	Racine	0	3	3	04/01/2008	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Wayne Creek	358286	865500	RIVER	Washington	3	4	1	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Wayne Creek	1438861	865500	RIVER	Washington	0	3	3	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	303d Listed	Low	TMDL Needed (5A)
Wedde Creek	11069	156000	RIVER	Marquette	0	5	5	04/01/2016	NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Weiland Valley Creek	14459	1813000	RIVER	Buffalo	0	3	3	04/01/2004	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2005 (4A)
Welch Coulee Creek	14372	1799300	RIVER	Trempealeau	0	5	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Elevated Water Temperature	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2003 (4A)
Wendt Creek	13480	1248900	RIVER	Dane	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
Wendt Creek	887770	1248900	RIVER	Dane	4	8	5	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Medium	TMDL Needed (5A)
West Br Baraboo River	13026	1288400	RIVER	Juneau, Vernon	0	7	7	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO	TMDL Development	High	TMDL Needed (5A)
West Br Baraboo River	13026	1288400	RIVER	Juneau, Vernon	0	7	7	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
West Br Baraboo River	13026	1288400	RIVER	Juneau, Vernon	0	7	7	04/01/1998	NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
West Br Big Creek	18427	1281200	RIVER	Juneau, Sauk	0	8	8	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
West Br. Menomonee	1526845	5033615	RIVER	Washington	0	2	2	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
West Branch Fond Du Lac River	10990	134000	RIVER	Fond du Lac	0	26	26	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
West Branch Fond Du Lac River	10990	134000	RIVER	Fond du Lac	0	26	26	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
West Branch Milwaukee River	10117	40400	RIVER	Dodge, Washington, Fond du Lac	0	21	21	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
West Branch Root River Canal	9963	4500	RIVER	Racine	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Low DO	303d Listed	Medium	TMDL Needed (5A)
West Branch Root River Canal	9963	4500	RIVER	Racine	0	4	4	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
West Branch Sugar River	13658	886100	RIVER	Dane	0	8	8	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
West Twin Lake	890973	2832200	LAKE	Bayfield			15	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
West Twin Lake	890711	2462300	LAKE	Saint Croix			99	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication, Elevated pH	303d Listed	Low	TMDL Needed (5A)
West Twin River	9948	87000	RIVER	Manitowoc	6	15	10	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
West Twin River	9949	87000	RIVER	Manitowoc	15	16	0	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
West Twin River	9950	87000	RIVER	Manitowoc	16	17	1	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
West Twin River	18050	87000	RIVER	Manitowoc	0	6	6	04/01/2012	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
West Twin River	18050	87000	RIVER	Manitowoc	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
West Twin River	18050	87000	RIVER	Manitowoc	0	6	6	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
West Twin River	18051	87000	RIVER	Manitowoc	17	18	1	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Addition	Low	TMDL Needed (5A)
West Twin River	18051	87000	RIVER	Manitowoc	17	18	1	04/01/1998	NPS	Total Phosphorus	Low DO	303d Listed	Medium	TMDL Needed (5A)
White Ash Lake	16567	2628600	LAKE	Polk			153	04/01/2012	Other	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	Natural Conditions (5C)
White Ash Lake, North	16568	2628800	LAKE	Polk			119	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
White Birch Lake	15234	2340500	LAKE	Vilas			117	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
White Clay Lake	11102	326400	LAKE	Shawano			234	04/01/2012	PS/NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
White Creek	14119	1691700	RIVER	Jackson	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
White Mound Lake	13469	1258100	LAKE	Sauk			104	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
White River	10453	751200	RIVER	Racine, Walworth	3	23	20	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
White Tail Flowage	14201	1717500	IMPOUNDMENT	Jackson			94	04/01/2002	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Whitefish Lake	128378	1613500	LAKE	Oneida			205	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Whitefish Lake	18750	2392000	LAKE	Sawyer			786	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Whitewater Creek	11777	813900	RIVER	Jefferson, Walworth	0	8	8	04/01/2016	Point Source	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Whitewater Lake	11784	816800	LAKE	Walworth			640	04/01/2010	PS/NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Wi-173-Lw18-978900	13489	978900	LAKE	Dane, Columbia			526	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Wild Creek	12361	1420400	RIVER	Marathon	0	10	10	04/01/2014	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Willow Creek	10045	18800	RIVER	Washington, Waukesha	0	3	3	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Willow Creek	10768	243700	RIVER	Waushara	0	10	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Willow Creek (Greendale)	1454972	50740	RIVER	Sheboygan	9	11	2	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Willow Flowage	128380	1528300	LAKE	Oneida			6,306	04/01/2012	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Willow Lake	128381	1529500	LAKE	Oneida			395	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Willow River (140 St to 100th)	16411	2606900	RIVER	Saint Croix	14	16	2	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Willow River (140 St to 100th)	16411	2606900	RIVER	Saint Croix	14	16	2	04/01/1998	PS/NPS	BOD	Low DO	303d Listed	Low	TMDL Needed (5A)
Wilson Creek	15662	2066000	RIVER	Dunn	3	14	11	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Wilson Creek	18788	2066000	RIVER	Dunn	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Wilson Lake (Wilson Ck Fl)	14720	2239400	LAKE	Price			351	04/01/2012	PS/NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Wilson Park Creek	9975	15200	RIVER	Milwaukee	0	4	4	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Wilson Park Creek	9976	15200	RIVER	Milwaukee	4	6	2	04/01/2010	Other	Fecal Coliform	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Wind Lake	10469	761700	LAKE	Racine			919	04/01/1998	NPS	Total Phosphorus	Low DO, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Windigo Lake (Bass)	15354	2046600	LAKE	Sawyer			522	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Winneconne Lake	10749	241600	LAKE	Winnebago			4,528	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Winneconne Lake	10749	241600	LAKE	Winnebago			4,528	04/01/1998	NPS	Total Phosphorus	Excess Algal Growth	TMDL Development	High	TMDL Needed (5A)
Winneconne Lake	10749	241600	LAKE	Winnebago			4,528	04/01/2008	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Winter Lake (Price Flowage)	15324	2381100	IMPOUNDMENT	Sawyer			676	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Wisconsin Point Beach #2, Lake Superior	1490997	2751220	GREAT LAKES BEACH	Douglas			0	04/01/2008	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Wisconsin Point Beach 1, Lake Superior	3897974	2751220	GREAT LAKES BEACH	Douglas			0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Wisconsin Point Beach 3, Lake Superior	3897996	2751220	GREAT LAKES BEACH	Douglas			0	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	12919	1179900	RIVER	Crawford, Grant	0	28	28	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	12919	1179900	RIVER	Crawford, Grant	0	28	28	04/01/2002	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	12920	1179900	RIVER	Sauk, Columbia	91	116	25	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	12920	1179900	RIVER	Sauk, Columbia	91	116	25	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885432	1179900	RIVER	Crawford, Grant, Richland, Iowa	28	58	30	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885476	1179900	RIVER	Dane, Sauk, Columbia, Iowa	58	91	33	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885546	1179900	RIVER	Sauk, Columbia	116	138	22	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885546	1179900	RIVER	Sauk, Columbia	116	138	22	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885619	1179900	RIVER	Adams, Juneau, Sauk, Columbia	138	159	21	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885619	1179900	RIVER	Adams, Juneau, Sauk, Columbia	138	159	21	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885921	1179900	RIVER	Adams, Juneau, Wood	188	204	16	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885964	1179900	RIVER	Wood, Portage	204	223	19	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	885964	1179900	RIVER	Wood, Portage	204	223	19	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	886006	1179900	RIVER	Portage	223	237	14	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	886006	1179900	RIVER	Portage	223	237	14	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	886337	1179900	RIVER	Marathon, Portage	237	268	31	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	886337	1179900	RIVER	Marathon, Portage	237	268	31	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	886383	1179900	RIVER	Lincoln, Marathon	268	289	21	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	886383	1179900	RIVER	Lincoln, Marathon	268	289	21	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River	886523	1179900	RIVER	Lincoln	289	294	5	04/01/1998	Contam. Sed.	Unknown Pollutant	Chronic Aquatic Toxicity	303d Listed	Low	TMDL Needed (5A)
Wisconsin River (At Castle Rock Lake)	885667	1179900	RIVER	Adams, Juneau	159	173	15	04/01/1998	Contam. Sed.	Dioxin	Contaminated Fish Tissue	Deletion	Not Applicable	Removed: Recovery Unknown
Wisconsin River (At Castle Rock Lake)	885667	1179900	RIVER	Adams, Juneau	159	173	15	04/01/1998	PS/NPS	Total Phosphorus	Eutrophication	TMDL Development	High	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Wisconsin River (At Castle Rock Lake)	885667	1179900	RIVER	Adams, Juneau	159	173	15	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River (At Castle Rock Lake)	885667	1179900	RIVER	Adams, Juneau	159	173	15	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River (At Petenwell Lake)	885864	1179900	RIVER	Adams, Juneau	173	188	15	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Wisconsin River (At Petenwell Lake)	885864	1179900	RIVER	Adams, Juneau	173	188	15	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River (At Petenwell Lake)	885864	1179900	RIVER	Adams, Juneau	173	188	15	04/01/1998	Contam. Sed.	Mercury	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wisconsin River (At Petenwell Lake)	885864	1179900	RIVER	Adams, Juneau	173	188	15	04/01/1998	Contam. Sed.	Dioxin	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wissota Lake	16248	2152800	IMPOUNDMENT	Chippewa			6,300	04/01/1998	Atm. Dep.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wissota Lake	16248	2152800	IMPOUNDMENT	Chippewa			6,300	04/01/2014	NPS	Total Phosphorus	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Wolf Lake	899093	241100	LAKE	Portage			22	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Wolf River	889163	2146000	RIVER	Clark, Chippewa	7	16	9	04/01/1998	PS/NPS	Unknown Pollutant	Low DO	303d Listed	Low	TMDL Needed (5A)
Wolf River-Main Stem	11237	241300	RIVER	Winnebago	0	9	9	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	303d Listed	Low	Mercury Atm. Dep. (5B)
Wolf River-Main Stem	11237	241300	RIVER	Winnebago	0	9	9	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Wolf River-Main Stem	11237	241300	RIVER	Winnebago	0	9	9	04/01/1998	NPS	Total Phosphorus	Low DO	TMDL Development	High	TMDL Needed (5A)
Wolf River-Main Stem	11237	241300	RIVER	Winnebago	0	9	9	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wolf River-Main Stem	314842	241300	RIVER	Waupaca, Winnebago	9	41	32	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wolf River-Main Stem	314890	241300	RIVER	Outagamie, Waupaca	41	66	25	04/01/1998	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wolf River-Main Stem	314921	241300	RIVER	Outagamie, Shawano, Waupaca	66	86	20	04/01/2002	Contam. Sed.	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wolf River-Main Stem	315333	241300	RIVER	Shawano, Waupaca	86	105	20	04/01/1998	Other	PCBs	Contaminated Fish Tissue	303d Listed	Low	TMDL Needed (5A)
Wolf Valley Creek	14451	1811200	RIVER	Buffalo	0	3	3	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Wood Lake	16715	2649800	LAKE	Burnett			521	04/01/2014	NPS	Unknown Pollutant	Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Woodward Creek	360562	1691900	RIVER	Jackson	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Wuerches Creek	359163	148300	RIVER	Green Lake	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Development	High	TMDL Needed (5A)
Wuerches Creek	359163	148300	RIVER	Green Lake	0	4	4	04/01/2008	NPS	Total Phosphorus	Low DO, Elevated Water Temperature	TMDL Development	High	TMDL Needed (5A)
Yahara R. Badfish Cr To Stoughton	355120	798300	RIVER	Dane, Rock	7	16	9	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Yahara R. Badfish Cr To Stoughton	355120	798300	RIVER	Dane, Rock	7	16	9	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Yahara River	3990161	798300	RIVER	Dane, Columbia	47	63	16	04/01/2014	NPS	Total Phosphorus	Impairment Unknown	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Yahara River	5536043	798300	RIVER	Dane	43	47	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Yahara River	3990161	798300	RIVER	Dane, Columbia	47	63	16	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Addition	Low	TMDL Needed (5A)
Yahara, Rock R. To Badfish Cr.	18255	798300	RIVER	Rock	0	7	7	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Yahara, Rock R. To Badfish Cr.	18255	798300	RIVER	Rock	0	7	7	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Yahara, Stoughton To L. Kegonsa	355202	798300	RIVER	Dane	16	22	6	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Yahara, Stoughton To L. Kegonsa	355202	798300	RIVER	Dane	16	22	6	04/01/1998	PS/NPS	Total Phosphorus	Low DO	TMDL Approved	Not Applicable	TMDL Approved by EPA in 2011 (4A)
Yeager Valley Creek	14445	1810200	RIVER	Buffalo	0	4	4	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Yellow Lake	16930	2675200	LAKE	Burnett			2,287	04/01/2010	Other	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Yellow River	18849	2154500	RIVER	Taylor, Chippewa	0	45	45	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Yellow River	1452311	2096100	RIVER	Barron	0	10	10	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Low	Phosphorus Listed (5P)
Yellow River	5541128	1352800	RIVER	Juneau, Wood	8	39	31	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	TMDL Development	High	Phosphorus Listed (5P)
Yellow River	12205	1352800	RIVER	Clark, Juneau, Wood	39	50	11	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Yellow River	12230	1352800	RIVER	Juneau	0	8	8	04/01/2012	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Yellow River	5541350	1352800	RIVER	Wood	53	57	4	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Yellow River	5541396	1352800	RIVER	Wood	57	74	17	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Yellow River	5541476	1352800	RIVER	Clark, Wood	74	83	9	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Yellow River	5541562	1352800	RIVER	Clark	83	98	15	04/01/2012	NPS	Total Phosphorus	Water Quality Use Restrictions	TMDL Development	High	TMDL Needed (5A)
Yellow River-S. Branch	12238	1372600	RIVER	Clark, Wood	0	18	18	04/01/2014	NPS	Total Phosphorus	Degraded Biological Community	TMDL Development	High	TMDL Needed (5A)
Yellowstone Lake	902228	903700	LAKE	Lafayette			453	04/01/2014	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	303d Listed	Low	TMDL Needed (5A)
Yellowstone River	13711	902500	RIVER	Lafayette	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Yellowstone River	13713	902500	RIVER	Lafayette	14	18	4	04/01/2014	NPS	Unknown Pollutant	Degraded Biological Community	303d Listed	Low	TMDL Needed (5A)
Ymca Beach, Lake Michigan	481912	20	GREAT LAKES BEACH	Manitowoc			0	04/01/2004	Other	E. coli	Recreational Restrictions - Pathogens	303d Listed	Low	TMDL Needed (5A)
Young Branch	13898	946400	RIVER	Grant	0	3	3	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	303d Listed	Medium	Phosphorus Listed (5P)
Zion Creek	424601	772400	RIVER	Waukesha	0	2	2	04/01/1998	PS/NPS	Sediment/Total Suspended Solids	Elevated Water Temperature, Degraded Habitat	303d Listed	Low	TMDL Needed (5A)
Zion Creek	424601	772400	RIVER	Waukesha	0	2	2	04/01/1998	PS/NPS	Total Phosphorus	Low DO	303d Listed	Low	TMDL Needed (5A)

B. 2016 Proposed Listings

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Airport Road Creek	893239	805200	RIVER	Dane	0	3	3	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Allen Creek	5542005	883700	RIVER	Dane, Green, Rock	23	27	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Allen Creek	13625	883700	RIVER	Rock	15	20	5	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Allen Creek	13626	883700	RIVER	Rock	20	23	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Amik Lake, Pike Lake Chain	14815	2268600	LAKE	Vilas			187	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Amnicon River Beach, Lake Superior	1487383	2751220	GREAT LAKES BEACH	Douglas			0.25	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Bad Axe River	13966	1639300	RIVER	Vernon	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Balsam Lake	16052	2112800	LAKE	Washburn			295	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Bark River	5541890	813500	RIVER	Jefferson	0	12	12	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Bay City Creek	17627	2891100	RIVER	Ashland	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Bear Creek	12317	1398700	RIVER	Wood, Portage	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Bear Lake	127730	552100	LAKE	Forest			68	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Bears Grass Creek	16099	2130300	RIVER	Eau Claire	6	16	10	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Bears Grass Creek	1476724	2130300	RIVER	Eau Claire	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Beaver Creek	11418	836500	RIVER	Dodge, Columbia	0	14	14	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Beaver Creek	12479	1459300	RIVER	Marathon	0	5	5	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Becker Lake	9920	77300	LAKE	Calumet			32	04/01/2016	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Belleville Millpond (61 ac)	902204	886000	LAKE	Dane			88	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Big Arbor Vitae Lake	128406	1545600	LAKE	Vilas			1,090	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Big Blake Lake (Blake)	16558	2627000	LAKE	Polk			217	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Black Creek	337866	317100	RIVER	Outagamie, Shawano	16	28	12	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Black Earch Creek	5696531	1248600	RIVER	Dane	7	11	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Black Earth Creek	13475	1248600	RIVER	Dane	11	17	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community, Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Black Earth Creek	13474	1248600	RIVER	Dane, Iowa	0	7	7	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Black Otter Lake (Hortonville)	9789	315600	LAKE	Outagamie			75	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Blackhawk Lake	13338	1239400	LAKE	Iowa			220	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Blockhouse Lake	14782	2256800	LAKE	Price			242	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Blue Harbor Beach, Lake Michigan	3899491	20	GREAT LAKES BEACH	Sheboygan			0.14	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Boice Creek	13902	956200	RIVER	Grant	0	16	16	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Boot Lake	9921	77600	LAKE	Calumet, Manitowoc			11	04/01/2016	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Botana Valley Creek	14350	1775700	RIVER	Buffalo	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Brule River State Forest Beach #3, Lake Superior	1452476	2751220	GREAT LAKES BEACH	Douglas			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Center Creek	13366	1225800	RIVER	Richland	0	2	2	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Circle Lily Lake	15161	2326700	LAKE	Iron, Vilas			223	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Clam Lake, Lower	15559	2429300	LAKE	Sawyer			229	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Coon Branch	13837	936500	RIVER	Lafayette	0	5	5	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Coon Branch	13838	936500	RIVER	Lafayette	5	7	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Coon Branch	1482046	936500	RIVER	Lafayette	7	8	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Coon Fork Flowage	18825	2135600	LAKE	Eau Claire			75	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown, Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Cox Hollow Lake	13432	1246500	LAKE	Iowa			96	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Crawfish River (Jefferson to Rock Creek)	5513911	829700	RIVER	Jefferson	0	11	11	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Creek 20-16 Trib. To Gilbert Creek	15656	2064650	RIVER	Dunn	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Crystal River	10287	258200	RIVER	Waupaca	2	12	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Davis Creek	14111	1689300	RIVER	Jackson, La Crosse	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Dawes Creek	12226	1367400	RIVER	Wood	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Delavan Lake	11618	793600	LAKE	Walworth			2,072	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Delton Lake	13546	1295400	LAKE	Sauk			267	04/01/2016	NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Deneveu Creek	10982	138700	RIVER	Fond du Lac	0	11	11	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Douglas Creek	14116	1691300	RIVER	Jackson	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Douglas Creek	14117	1691300	RIVER	Jackson	2	4	2	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Douglas Creek	14118	1691300	RIVER	Jackson	4	10	6	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Eagle Lake	10466	759800	LAKE	Racine			515	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Eau Claire Lake	16115	2133200	LAKE	Eau Claire			25	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Fall Creek	16095	2129900	RIVER	Eau Claire	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Fall Creek	16096	2129900	RIVER	Eau Claire	3	11	7	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Feather Branch	13776	917400	RIVER	Lafayette	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Fischer Park Beaches, Lake Michigan	481811	20	GREAT LAKES BEACH	Manitowoc			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Fish Lake	13490	985100	LAKE	Dane			216	04/01/2016	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Fisher Creek	18021	62500	RIVER	Sheboygan	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Gass Lake	9870	67100	LAKE	Manitowoc			6	04/01/2016	NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Gelena River	13833	935500	RIVER	Lafayette	3	36	33	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Goose Lake	902174	872600	LAKE	Dane			12	04/01/2016	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Grand River	10702	159300	RIVER	Green Lake, Marquette, Fond du Lac	21	43	22	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Grantosa Creek	3991760	5035175	RIVER	Milwaukee	0	1	1	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Griffin Creek	10403	279000	RIVER	Waupaca	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Harpt Lake	10149	84600	LAKE	Manitowoc			31	04/01/2016	NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Hartlaub Lake	9871	67200	LAKE	Manitowoc			34	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Harvey Creek	5541777	1819300	RIVER	Buffalo	6	7	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Harvey Creek	5514178	1819300	RIVER	Buffalo, Pepin	7	11	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Hawkinson Creek	14386	1785500	RIVER	Trempealeau	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Hemlock Slough	424051	1286100	LAKE	Sauk			22	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	High	TMDL Needed (5A)
Holly Lake, Upper (Holly)	15376	2394600	LAKE	Sawyer			33	04/01/2016	Atm. Dep.	Mercury	Contaminated Fish Tissue	Proposed for List	Low	Mercury Atm. Dep. (5B)
Horseshoe Lake	16574	2630100	LAKE	Polk, Barron			377	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Hulbert Creek	13050	1298500	RIVER	Sauk	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Inlet of Lake Ripley	5476766	809700	RIVER	Jefferson	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Jackson Creek	11619	793800	RIVER	Walworth	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Jarrett Creek at Schneider Ave	3991015	2067800	RIVER	Dunn	0	3	3	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Jersey Valley Lake	13167	1191600	LAKE	Vernon			52	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Juda Branch	13614	877500	RIVER	Green	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Juda Branch	13614	877500	RIVER	Green	0	4	4	04/01/2016	Habitat/Physical	Sediment/Total Suspended Solids	Degraded Habitat	Proposed for List	Medium	TMDL Needed (5A)
Kelsey Br	13839	936600	RIVER	Lafayette	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Killsnake River	18043	78200	RIVER	Calumet	0	20	20	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Kroenke Creek	11107	326700	RIVER	Shawano	5	9	4	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Kuenster Creek	13910	957900	RIVER	Grant	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Kuenster Creek	18564	957900	RIVER	Grant	1	10	9	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Lake Altoona	16084	2128100	LAKE	Eau Claire			840	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Lake Lorraine	11774	777500	LAKE	Walworth			133	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Lake Pepin	4704964	731800	LAKE	Buffalo, Pepin, Pierce			25,503	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Leota Lake	902198	884700	LAKE	Rock			36	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Lily River	10555	370900	RIVER	Forest, Langlade	0	10	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Little Arbor Vitae Lake	128524	1545300	LAKE	Vilas			534	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	High	Natural Conditions (5C)
Little Arbor Vitae Lake	128524	1545300	LAKE	Vilas			534	04/01/2016	PS/NPS	Unknown Pollutant	Eutrophication	Proposed for List	Low	Natural Conditions (5C)
Little Bearskin Lake	128180	1523500	LAKE	Oneida			164	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Little Dummy Lake	15835	1861400	LAKE	Barron			31	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Little Hemlock Creek	12225	1367100	RIVER	Wood	0	11	11	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Little Platte River	1527892	943800	RIVER	Grant	0	34	34	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Little Sand Lake	16827	2661600	LAKE	Barron			101	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Local Water	3991787	2450	RIVER	Racine	0	1	1	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Local Water	3994614	138800	RIVER	Fond du Lac	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Local Water	1524881	323500	RIVER	Shawano	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Local Water	3992334	441100	RIVER	Oconto	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Local Water	3894716	737350	RIVER	Kenosha	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Local Water	3991645	870400	RIVER	Fond du Lac	0	7	7	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Local Water	3991618	870800	RIVER	Fond du Lac	0	8	8	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Local Water	3992057	917800	RIVER	Lafayette	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Local Water	4700332	2833500	RIVER	Douglas	0	7	7	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Local Water	3993990	3000558	RIVER	Brown, Shawano	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Local Water	3994803	5010743	RIVER	Oconto	0	5	5	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Local Water	3994857	5020832	RIVER	Manitowoc	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Local Water	3993962	5022162	RIVER	Calumet, Outagamie	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Lomira Creek	18236	864100	RIVER	Dodge	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Long Lake Br	17655	2894900	RIVER	Bayfield	0	17	17	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Long Lake Branch	1494187	2894900	RIVER	Bayfield	17	22	5	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Lost Lake	11419	837100	LAKE	Dodge			245	04/01/2016	PS/NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Lotus Lake	16460	2616900	LAKE	Polk			246	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Lower Buckatabon Lake	128547	1621000	LAKE	Vilas			352	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Madden Br	13847	939100	RIVER	Lafayette	0	8	8	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Manitowoc R. So. Branch	3990110	77900	RIVER	Calumet, Fond du Lac	13	37	24	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Marengo River	17712	2911900	RIVER	Ashland, Bayfield	12	39	27	04/01/2016	PS/NPS	Fecal Coliform	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Marlowe Branch	18565	959400	RIVER	Grant	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Maslowski Beach, Lake Superior	1452812	2751220	GREAT LAKES BEACH	Ashland			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Medicine Lake	128218	1611700	LAKE	Oneida			372	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Middle River Beach, Lake Superior	1489001	2751220	GREAT LAKES BEACH	Douglas			1	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Mill Creek	11571	867700	RIVER	Dodge	0	13	13	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Milwaukee River	481605	15000	RIVER	Washington, Fond du Lac	69	103	35	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Mineral Lake	891211	2916900	LAKE	Ashland			227	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Natural Conditions (5C)
Moose Lake	11147	337600	LAKE	Langlade			105	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Mud Creek	10259	131600	RIVER	Calumet	0	3	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Mud Creek (Left, Hills) T18n, R21e, S12	9888	73600	RIVER	Manitowoc	0	10	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Mud Lake	128234	1612500	LAKE	Oneida			124	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	Natural Conditions (5C)
Murbou Creek	11937	541800	RIVER	Marinette	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Murray Creek	9826	323000	RIVER	Shawano	0	2	2	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Muskellunge Creek	13909	957600	RIVER	Grant	1	5	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Neenah Channel	5720096	130600	LAKE	Winnebago			102	04/01/2016	Contam. Sed.	PCBs	Contaminated Fish Tissue	Proposed for List	Low	TMDL Needed (5A)
Newton Lake	900376	450600	LAKE	Oconto			19	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Ninemile Creek	11255	366800	RIVER	Langlade	0	13	13	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
North Fork Beaver Creek	1181543	1682500	RIVER	Jackson	12	19	8	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
North Fork Of Beaver Creek	14094	1682500	RIVER	Trempealeau	0	12	12	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
North Tributary to Silver Creek	936838	147400	RIVER	Fond du Lac	0	4	4	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Oconto River	1440776	440200	RIVER	Shawano	31	36	4	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Ok Creek	13611	877200	RIVER	Green	0	7	7	04/01/2016	PS/NPS	Sediment/Total Suspended Solids	Degraded Habitat	Proposed for List	Medium	TMDL Needed (5A)
Ok Creek	13611	877200	RIVER	Green	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Oliver Creek	11463	859000	RIVER	Dodge	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Otter Creek	13798	923300	RIVER	Lafayette, Iowa	0	11	11	04/01/2016	PS/NPS	Ammonia (Unionized) - Toxin	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Otter Creek	13798	923300	RIVER	Lafayette, Iowa	0	11	11	04/01/2016	PS/NPS	BOD	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Pats Creek	13848	939800	RIVER	Lafayette	0	9	9	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Pattison Beach (State Park)	1455339	2838000	INLAND BEACH	Douglas	0	0.07	0.07	04/01/2016	PS/NPS	E. coli	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Pelican Lake	128252	1579900	LAKE	Oneida			3,585	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Peshtigo River	11844	515500	RIVER	Marinette	54	60	6	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Peterson Creek	10395	275400	RIVER	Waupaca	0	8	8	04/01/2016	NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Phantom Lake	10500	766000	LAKE	Waukesha			107	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Pike Creek	896190	1200	RIVER	Kenosha	0	4	4	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Pike Lake Chain	14813	2268300	LAKE	Price			806	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Pine Lake, T29n R17w S01	16410	2489700	LAKE	Saint Croix			102	04/01/2016	PS/NPS	Total Phosphorus	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Plum Creek	18230	868400	RIVER	Dodge	0	14	14	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Portage Canal	5534667	179500	RIVER	Columbia			16	04/01/2016	Contam. Sed.	PCBs	Contaminated Fish Tissue, Contaminated Sediment	Proposed for List	Low	TMDL Needed (5A)
Portage Canal	5534667	179500	RIVER	Columbia			16	04/01/2016	Contam. Sed.	Lead	Contaminated Sediment	Proposed for List	Low	TMDL Needed (5A)
Portage Canal	5534667	179500	RIVER	Columbia			16	04/01/2016	Contam. Sed.	Mercury	Contaminated Sediment	Proposed for List	Low	TMDL Needed (5A)
Puchyan River	11018	145200	RIVER	Green Lake	0	14	14	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Pumpkinseed Creek	10766	243300	RIVER	Waushara, Winnebago	0	3	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Pumpkinseed Creek	10767	243300	RIVER	Waushara, Winnebago	3	6	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Rattlesnake Creek	13905	957300	RIVER	Grant	0	21	21	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Riley School Branch	18519	877600	RIVER	Green	0	4	4	04/01/2016	NPS	Sediment/Total Suspended Solids	Degraded Habitat	Proposed for List	Medium	TMDL Needed (5A)
Riley School Branch	18519	877600	RIVER	Green	0	4	4	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Rolling Stone Lake	10607	389300	LAKE	Langlade			672	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	Natural Conditions (5C)
Round Lake	9910	68600	LAKE	Calumet			11	04/01/2016	NPS	Total Phosphorus	Eutrophication, Excess Algal Growth	Proposed for List	Medium	TMDL Needed (5A)
Rouse Creek	17755	2925000	RIVER	Iron	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Sand Creek	14017	1689700	RIVER	Jackson, Monroe, La Crosse	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Schoenick Creek	5513393	321000	RIVER	Shawano	4	4	1	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Schoenick Creek	5513424	321000	RIVER	Shawano	4	8	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Sevenmile Creek	16089	2128700	RIVER	Chippewa	5	7	2	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Sevenmile Creek	16088	2128700	RIVER	Eau Claire	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Sinsinawa River	13850	940200	RIVER	Grant	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Six Mile Creek	11691	805500	RIVER	Dane	0	9	9	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Soper Creek	14129	1693400	RIVER	Monroe	0	8	8	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
South Fish Creek	17624	2889900	RIVER	Bayfield	0	25	25	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
South Fork Eau Claire River	5542152	2137000	RIVER	Clark	20	39	19	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
South Fork Eau Claire River	5542093	2137000	RIVER	Clark, Taylor	39	49	10	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Spring Creek (Solon Spring Creek)	1497732	2748100	RIVER	Douglas	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Spring Lake	10311	267200	SPRINGS-LAKE	Portage			37	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
St Croix Creek	17123	2749100	RIVER	Douglas	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Sugar River East Channel	5476700	878400	RIVER	Green	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Swan Creek	13608	876700	RIVER	Rock	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
T22n, R22e, S23 Sesw (Denmark Creek)	10131	89100	RIVER	Brown	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Taylor Creek	13605	876300	RIVER	Rock	0	6	6	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Teal Lake	15519	2417000	LAKE	Sawyer			1,049	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Thunder Lake Inlet	11916	533700	RIVER	Marinette	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Timber Creek	14401	1796700	RIVER	Jackson, Trempealeau	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Token Creek	5546125	806600	RIVER	Dane	10	11	2	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Tomorrow/Waupaca River	315909	257400	RIVER	Portage	33	39	6	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Tomorrow/Waupaca River	315930	257400	RIVER	Portage	39	46	7	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Tomorrow/Waupaca River	1493981	257400	RIVER	Portage	51	65	14	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Town Creek	14181	1708100	RIVER	Jackson	0	4	4	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Trout Brook	17721	2913900	RIVER	Ashland	0	3	3	04/01/2016	PS/NPS	Fecal Coliform	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Twin Lakes	128574	1623800	LAKE	Vilas			2,788	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Natural Conditions (5C)
Twin Valley Lake	13431	1245800	LAKE	Iowa			152	04/01/2016	PS/NPS	Unknown Pollutant	Excess Algal Growth	Proposed for List	Low	TMDL Needed (5A)
Un Creek (T22n-R16e-S22)	9793	316100	RIVER	Outagamie	0	5	5	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
Un Trib To Sinsinawa River	13851	941100	RIVER	Grant	0	6	6	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Un. Creek (T14n R18e Nw Ne 27)	11261	44200	RIVER	Fond du Lac	0	6	6	04/01/2016	NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Unnamed	1524901	325000	RIVER	Shawano	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed Cr 17-6 (T30n, R3e, S17, Nwnw, 37)	12482	1460500	RIVER	Marathon, Taylor	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	Natural Conditions (5C)
Unnamed Creek (T18n, R21e, S13) Trib To St. Nazianz	9889	73700	RIVER	Manitowoc	0	4	4	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Unnamed Creek 2065700 - at Third St	3990988	2065700	RIVER	Dunn	0	3	3	04/01/2016	NPS	Chloride	Chronic Aquatic Toxicity, Acute Aquatic Toxicity	Proposed for List	Low	TMDL Needed (5A)
Unnamed Creek 2-13 (T29n, R4e, S2, Nwse, 37)	18359	1458300	RIVER	Marathon	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	TMDL Creation Priority	Listing/Delisting Details
Unnamed E Trib. to Schoenick Cr	5513459	321200	RIVER	Shawano	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed Stream	5506181	449600	RIVER	Oconto	0	3	3	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Unnamed Stream	5506375	453700	RIVER	Oconto	0	1	1	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	Natural Conditions (5C)
Unnamed Stream	5500551	3000212	RIVER	Kewaunee	0	2	2	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Unnamed Stream	5500585	3000213	RIVER	Kewaunee	0	0.38	0.38	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Unnamed Trib to Marengo R	5702214	2919600	RIVER	Bayfield	0	6	6	04/01/2016	PS/NPS	Fecal Coliform	Recreational Restrictions - Pathogens	Proposed for List	Low	TMDL Needed (5A)
Unnamed Trib to S Fish Creek	5698877	2890200	RIVER	Bayfield	0	7	7	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Unnamed Trib to Silver Creek	5476590	146900	RIVER	Green Lake	0	3	3	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed Trib to Silver Creek	5476567	147700	RIVER	Fond du Lac	0	8	8	04/01/2016	NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Unnamed Trib to Trib of S Br Rock R	5514082	871000	RIVER	Fond du Lac	0	5	5	04/01/2016	NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Unnamed Trib to W Br Shioc R	5513990	319100	RIVER	Shawano	0	1	1	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	High	TMDL Needed (5A)
Unnamed Trib to Yahara R	5535982	806300	RIVER	Dane			9	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Unnamed Tributary to Silver Spring Creek	3991302	5040863	RIVER	Lafayette	0	1	1	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Medium	TMDL Needed (5A)
Upper Pine Creek	1515438	2087300	RIVER	Barron	2	11	9	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Medium	TMDL Needed (5A)
Virgin Lake	128371	1614100	LAKE	Oneida			276	04/01/2016	Atm. Dep.	Mercury	Contaminated Fish Tissue	Proposed for List	Low	Mercury Atm. Dep. (5B)
Waupaca River	315887	257400	RIVER	Waupaca	17	33	16	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Wedde Creek	11069	156000	RIVER	Marquette	0	5	5	04/01/2016	NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
West Branch Fond Du Lac River	10990	134000	RIVER	Fond du Lac	0	26	26	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	High	TMDL Needed (5A)
West Branch Fond Du Lac River	10990	134000	RIVER	Fond du Lac	0	26	26	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
West Branch Milwaukee River	10117	40400	RIVER	Dodge, Washington, Fond du Lac	0	21	21	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Whitefish Lake	18750	2392000	LAKE	Sawyer			786	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Whitewater Creek	11777	813900	RIVER	Jefferson, Walworth	0	8	8	04/01/2016	Point Source	Total Phosphorus	Impairment Unknown	Proposed for List	Low	Phosphorus Listed (5P)
Wi-173-Lw18-978900	13489	978900	LAKE	Dane, Columbia			526	04/01/2016	PS/NPS	Total Phosphorus	Water Quality Use Restrictions	Proposed for List	Low	TMDL Needed (5A)
Willow Creek	10768	243700	RIVER	Waushara	0	10	10	04/01/2016	PS/NPS	Unknown Pollutant	Elevated Water Temperature	Proposed for List	Low	TMDL Needed (5A)
Willow Creek (Greendale)	1454972	50740	RIVER	Sheboygan	9	11	2	04/01/2016	PS/NPS	Unknown Pollutant	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)
Wilson Creek	18788	2066000	RIVER	Dunn	0	3	3	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Wolf Lake	899093	241100	LAKE	Portage			22	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	High	Phosphorus Listed (5P)
Yahara River	5536043	798300	RIVER	Dane	43	47	4	04/01/2016	PS/NPS	Total Phosphorus	Impairment Unknown	Proposed for List	Medium	Phosphorus Listed (5P)
Yellowstone River	13711	902500	RIVER	Lafayette	0	10	10	04/01/2016	PS/NPS	Total Phosphorus	Degraded Biological Community	Proposed for List	Low	TMDL Needed (5A)

C. 2016 Proposed Delistings

Local Waterbody Name	WATERS ID (AU)	WBIC	Water Type	County	Start Mile	End Mile	Size (Miles or Acres)	Date Listed	Source Category	Pollutant	Impairment Indicator	Impaired Water Status	Listing/Delisting Details
Alford Park Beach, Lake Michigan	1487344	20	INLAND BEACH	Kenosha			0.23	04/01/2008	Other	E. coli	Recreational Restrictions - Pathogens	Delist	Removed: Recovery Unknown
Echo Lake (Sugar Camp Chain)	128106	1597800	LAKE	Oneida			107	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	Delist	Removed: Recovery Unknown
James Madison Park Beach	1488249	805400	INLAND BEACH	Dane			0.36	04/01/2008	NPS	E. coli	Recreational Restrictions - Pathogens	Delist	Removed: Recovery Unknown
Lake Ripley Beach	3894224	809600	INLAND BEACH	Jefferson			0.09	04/01/2012	Unknown	E. coli	Recreational Restrictions - Pathogens	Delist	Removed: Recovery Unknown
Marshall Park Beach	1488597	805400	INLAND BEACH	Dane			0.22	04/01/2014	NPS	E. coli	Recreational Restrictions - Pathogens	Delist	Removed: Recovery Unknown
Pleasant Valley Branch	13732	908500	RIVER	Dane	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	Delist	Removed: Water Restored
Rush Creek	13342	1240100	RIVER	Iowa	0	6	6	04/01/1998	NPS	Sediment/Total Suspended Solids	Degraded Habitat	Delist	Removed: Water Restored
Stone Lake (Sugar Camp Chain)	128309	1597600	LAKE	Oneida			188	04/01/1998	Atm. Dep.	Mercury	Contaminated Fish Tissue	Delist	Removed: Recovery Unknown
Unnamed	3991976	5032576	RIVER	Ozaukee	0	1	1	04/01/2014	NPS	Chloride	Acute Aquatic Toxicity	Delist	Removed: Listing Incorrect
Whitewater Creek	11778	813900	RIVER	Walworth	14	16	2	04/01/2012	NPS	Total Phosphorus	Impairment Unknown	Delist	Removed: Listing Incorrect