

# Wisconsin's DRAFT Water Monitoring Strategy 2015 to 2020

## Cladophora/Nutrient

In spring 2004, the Wisconsin DNR initiated a Cladophora Working Group to address the nuisance algal problem on Lake Michigan. The group's objectives include researching environmental factors causing the algal blooms to assist with developing long-term management plans, identifying short-term beach clean-up and odor mitigation options, and addressing public information needs. The Cladophora Working Group collaborates with others, including the University of Wisconsin-Extension, University of Wisconsin-Milwaukee's WATER Institute, UW Sea Grant, county health departments, and Centerville Cares, a Manitowoc County citizen's organization. This monitoring depends on the available resources and positions allocated through state and federal funding.

## Public Water Intake Monitoring

- ▶ <http://dnr.wi.gov/topic/drinkingwater/ereportpublic.html>



## Section 3.9 Source Water Assessment Monitoring

Table 28: Source Water Assessment Monitoring Studies

Study	Purpose, Supports: Public Health & Welfare, Fish and Aquatic Life
Lake Winnebago Assessment Monitoring	Develop a plan to routinely assess drinking water uses of Lake Winnebago, which was a recommendation from the US EPA Region 5 sponsored Public Water Supply Designated Use Assessment Workshop with Wisconsin DNR staff held in fall 2014. Meet the goals and requirements of the CWA as they relate to the Public Health and Welfare Designated Use.
Public Water Intake monitoring (See Great Lakes Monitoring)	Lakes Superior and Michigan have 15 public water intakes that are monitored according to the Safe Drinking Water Act, using the same protocols as Public Drinking Water Well Monitoring.

### Study Descriptions

#### Lake Winnebago

##### Study objectives

The goal of this project is to develop a long term monitoring and assessment strategy for Lake Winnebago that addresses recreational, public health, and drinking water uses of the lake, with a particular focus on Harmful Algal Blooms and associated toxins. This work will also allow DNR to explore how to implement results from various studies that demonstrate linkages with commonly measured nutrient parameters, specifically Chlorophyll-a, to post-

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treatment generation of disinfection byproduct and presence of cyanotoxins.

## **Monitoring design**

The monitoring and assessment strategy is expected to draw on data generated by the DNR, water utilities, and researchers working on Lake Winnebago, as well as results from the US EPA Region 5 sponsored Public Water Supply Designated Use Assessment Workshop with Wisconsin DNR staff held in fall 2014. The primary focus of the project will be to develop a monitoring and assessment strategy for determining risk of exposure to algal toxins from lake water used by public water utilities based on the US EPA's health advisory levels for microcystin and cylindrospermopsin, and to help guide treatment strategies to reduce these risks in finished water.

## **Water quality indicators**

State guidance for public water utilities based on US EPA health advisory levels for microcystin and cylindrospermopsin will be developed, as well as a state response and communication plan for events in which source or finished water exceed advisory levels for cyanobacterial toxins. The Lake Winnebago Public Water Supply Designated Use assessment methodology will be adapted to include the EPA's microcystin and cylindrospermopsin health advisory levels, released in May 2015. Recreational guidelines will also be drafted that can later incorporate federal recreational advisory levels when those are developed by the US EPA. USEPA would like Wisconsin to explore how to implement results from various studies that demonstrate linkages with commonly measured nutrient parameters, specifically chlorophyll a, to post treatment generation of disinfection byproduct and presence of cyanotoxins.

## **Outcomes**

Additional monitoring and assessment of Lake Winnebago for harmful algal blooms and associated toxins will hopefully lead to additional endpoints for the ongoing TMDL development efforts in the Upper and Lower Fox River, and potentially lead to additional resources for implementation of best management practices in the watershed to protect human health, as well as other surface waters used for drinking water in Wisconsin.

## **Data management**

Data collected from this project will be stored in the SWIMS data management system and reported assessments will be stored in the WATERS database.

## **Reporting**

Collected data are shared on the DNR website, transmitted through the ATTAINS reporting network as well as provided in the biennial Integrated Clean Water Act Report to Congress.

## **Section 4.0 Partner Agency Monitoring**

### ***Partner Agencies Conducting Monitoring Critical to WDNR Mission***

#### **Federal Energy Regulatory Commission (FERC) Licensed Operator Monitoring**

Several operators around the state are licensed through the FERC program. Each license identifies recommended monitoring to ascertain impacts to aquatic systems. Often cooperative reviews and design of recommended monitoring works provide an opportunity to obtain baseline, trend, and impact analyses over the lifetime of the permit. .

<http://www.ferc.gov/>

#### **USGS Flow Gaging and Water Quality Monitoring**

The USGS is active in water quality monitoring and research across Wisconsin. USGS maintains a large network of flow gaging stations, including many long-term sites across the state that provide information used in a number of water