



# Upper Mississippi River Clean Water Act Monitoring Strategy

## Why is a UMR CWA Monitoring Strategy Needed?

To date, there is no coordinated or comprehensive Clean Water Act (CWA) water quality monitoring strategy for the Upper Mississippi River (UMR). The states' current CWA monitoring relies on a relatively small number of fixed sites where physical and chemical data are periodically collected. There are considerable spatial gaps and limited data available to assess the River's condition and to measure change.

The net result of current monitoring approaches is CWA assessments of the UMR that are neither comprehensive nor consistent among states. This severely limits the states' ability to identify problem areas, target management actions, and measure progress in protecting water quality.

Simply put, better information via improved, coordinated monitoring is needed for the states' CWA programs to be as efficient and effective as possible on the UMR.

## What is the Purpose of CWA Monitoring Strategy?

The purpose of the strategy is to provide the states with a sound, comprehensive, consistent data set in order to:

- ✓ address information gaps;
- ✓ better characterize the River's condition in CWA assessments;
- ✓ better identify stressors and water quality impairments;
- ✓ target CWA-related management actions; and
- ✓ track changes and improvements over time.

By establishing a shared template for UMR monitoring, the strategy should also help improve efficiencies by reducing duplication of effort and increasing data compatibility.

## Who Has Authored the Strategy?

The states have worked through the Upper Mississippi River Basin Association (UMRBA) to develop the strategy. UMRBA is the regional interstate organization formed by the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin to coordinate the states' river-related programs.

Most specifically, UMRBA's interagency Water Quality Task Force (WQTF) engaged in a collaborative process to develop the strategy with input from regional water quality experts

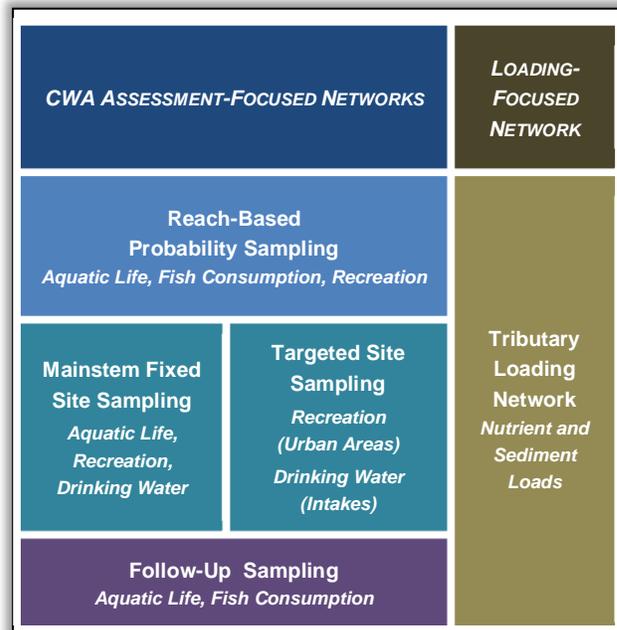
and assistance from the Midwest Biodiversity Institute, the project contractor.

UMRBA's Governor-appointed Board adopted the strategy's *Recommended Monitoring Plan* on February 25, 2014.

## What is the Plan for Monitoring under the Strategy?

The strategy's *Recommended Monitoring Plan* is structured as a series of networks that uniquely and comprehensively support assessment of aquatic life, fish consumption, recreation, and drinking water use attainment on the UMR's main channel and side channels. This includes a reach-based probabilistic sampling network, fixed sites, targeted recreation and drinking water sites, and follow-up sampling when needed. These networks incorporate chemical, physical, and biological measures. The inclusion of biological parameters in particular is a very significant advancement in the ability of CWA monitoring to directly measure the health of the River's aquatic communities.

An additional network is proposed to aid the calculation of nutrient and sediment loading in major UMR tributaries and its mainstem. This network interlinks with existing monitoring programs and may aid in measuring the impacts of ongoing conservation and nutrient reduction efforts.



Component Networks of the *Recommended Monitoring Plan*

## Can Existing UMR Monitoring Programs Provide the Information Needed for CWA Purposes?

Yes, but only in part. While several federal, state, and regional programs conduct significant UMR monitoring, producing important and extensive data sets to meet their own objectives, none of these programs is designed both for CWA purposes and to cover the River's full spatial extent. As such, they are limited in their ability to support the states' CWA programs. However, in implementing the CWA monitoring strategy, the states are committed to integrating and utilizing existing program data and information to the greatest extent possible and anticipate working closely with other programs in data sharing.

## How Will States Use Data Collected Under the Strategy?

Data acquired under the strategy will support the states' assessment of the flowing mainstem (i.e., main channel and side channels) to determine whether CWA goals for the UMR's four major designated uses (aquatic life, drinking water, fish consumption, and recreation) are being met. Most specifically, it provides enhanced data to improve the states' abilities to carry out their CWA Section 305(b) assessment and 303(d) listing responsibilities, with the expectation that these characterizations become more accurate in reflecting the River's condition. This data can also inform the states' decision-making in regard to permits, TMDLs, and other CWA-related management activities.

Importantly, data collected under the strategy will help detect changes and improvements in conditions over time in response to policy and management actions. Further, data will be available to users outside of CWA programs, thereby contributing to the broader knowledge base regarding the River.

## Are States Required to Conduct Monitoring as Described in the Strategy?

The strategy and its *Recommended Monitoring Plan* in particular lay out a shared template of the states' desired CWA monitoring on the River. However, the UMR states are not compelled to immediately or individually carry out the monitoring described in the *Plan*. Rather, the states expect to collaborate in implementing the strategy as resources allow, taking advantage of opportunities to conduct monitoring as they arise, leveraging existing resources and

infrastructure to the greatest extent possible while also pursuing new funding opportunities. As a result, monitoring may be conducted by various entities (e.g., state programs, federal programs, universities, local partners) and may begin in pilot areas, with an eventual goal of covering the UMR's full spatial extent.

## What is the Impact on States' CWA Assessment and Listing Processes? On Water Quality Standards?

Data collected under the strategy will be utilized by the states in their existing CWA Section 305(b) assessment and 303(d) listing processes, as is the case for other readily available data sets. The chief and immediate impact will be state assessments and listings that are informed by an enhanced, comprehensive underlying data set and therefore are more reflective of the River's water quality condition. Additionally, as the amount of data accumulated under the strategy grows, assessment and listing outcomes are expected to be increasingly consistent among states as the shared data set becomes more central to their decision-making.

Adoption of the monitoring strategy itself does not directly or immediately impact the states' assessment and listing methodologies, nor their water quality standards. States will continue to conduct their own assessment and listing processes for the UMR using their own water quality standards, though these decisions will increasingly be informed by a more robust, shared data set. Additionally, the WQTF is examining the feasibility and potential scope of a shared UMR CWA assessment. However, the states will continue to retain their independence and "final say" in implementing their CWA programs on the UMR even as they pursue their shared, collaborative work.

## Next Steps

In pursuing implementation of the *Recommended Monitoring Plan*, the WQTF has initiated a comparison of existing program data to *Plan* specifications, begun to consider data management alternatives, and started to identify areas in which to pilot monitoring strategy implementation. The WQTF also plans to engage in outreach to regional monitoring partners to gather their input and explore data sharing opportunities.



Upper Mississippi River Basin Association

415 Hamm Building  
408 St. Peter Street  
St. Paul, MN 55102  
[www.UMRBA.org](http://www.UMRBA.org)

### For more information:

Visit UMRBA's water quality web page at:

[www.UMRBA.org/wq.htm](http://www.UMRBA.org/wq.htm)

OR

Contact Dave Hokanson (651-224-2880 or  
[dhokanson@UMRBA.org](mailto:dhokanson@UMRBA.org))