

**Upper Mississippi River Basin Association
2022-2035 Water Quality Program Plan**

*A Vision and Long Term Plan for Improving Water Quality Conditions
on the Upper Mississippi River System
through Interstate Cooperative Management*

Acknowledgements

The Upper Mississippi River Basin Association (UMRBA) Water Quality Executive Committee convenes the water quality administrators for Illinois, Iowa, Minnesota, Missouri, and Wisconsin for the primary purpose of cooperatively implementing the states' shared responsibilities under the Clean Water Act on the interstate portion of the main stem of the Mississippi River, north of its confluence with the Ohio River. The Water Quality Executive Committee also convenes around shared goals related to nutrient management. The U.S. Environmental Protection Agency (Regions 5 and 7) participates as a non-voting member.

The Water Quality Executive Committee developed this water quality program plan as a means to guide their collaborative work in managing water quality on the Mississippi River through UMRBA. This plan was developed by the members of the Water Quality Executive Committee between 2020 and 2022. It will serve as a tool for focusing UMRBA's water quality-related annual work plans, including through the Water Quality Executive Committee. While this process did not involve an input process to the Water Quality Executive Committee, the Committee recognizes that achieving any success in this work will require partnerships with federal and local entities, land managers, and affected interests.

Questions or suggestions about the UMRBA 2022-2035 Water Quality Program Plan may be submitted to umrba@umrba.org.

Upper Mississippi River Basin Association 2022-2035 Water Quality Program Framework

Mission

Clean water in the Upper Mississippi River System watershed, floodplain, and mainstem provides the foundation for a healthy ecosystem that is beneficial for people, fish, and wildlife

Purpose

The UMRBA Water Quality Program provides a cooperative forum for leveraging the layered and interwoven authorities and approaches to water quality protection by:

- Developing information, tools and products that enhance awareness and understanding of water quality issues
- Facilitating collaborative problem-solving and cooperative action to realize water quality improvements
- Fostering public dialogue and discussion of water quality issues
- Communicating the value of clean water
- Advocating for investments that will improve water quality within the Upper Mississippi River System

Summary of Goals and Objectives

Goal 1: Water quality conditions are better understood and improved

- Objective 1.1: By 2031, water quality on the Upper Mississippi River will be uniformly and collaboratively monitored and evaluated for Clean Water Act purposes
- Objective 1.2: By 2031, knowledge of nonpoint source loading trends and reduction measures is improved and informs adaptive management
- Objective 1.3: By 2031, knowledge of water quality conditions through focused research and analysis will be significantly improved
- Objective 1.4: By 2031, collection, analysis, storage, and dissemination of data will maintain integrity, long-term consistency, relevance, and usability

Goal 2: Water quality management is aligned towards a strategic vision

- Objective 2.1 By 2031, a regional approach to the Clean Water Act and nutrient reduction is implemented on the Upper Mississippi River and throughout the watershed
- Objective 2.2 By 2031, multi-jurisdictional responses to Harmful Algal Blooms (HAB) events are well-coordinated and effective
- Objective 2.3: By 2031, chloride loading to the Upper Mississippi River will trend downward
- Objective 2.4: On an ongoing basis, implement fair and consistent enforcement and compliance programs across the states

Goal 3: UMRBA effectively serves as the Governors'-established organization to support interstate water quality management on the Upper Mississippi River

Objective 3.1: On an ongoing basis, the WQEC and WQTF provide effective forums for interstate cooperation and coordination among state, local, regional, and federal water quality management responsibilities

Goal 4: UMRBA fosters and works through strategic partnerships

Objective 4.1: On an ongoing basis, UMRBA will engage and collaborate with other organizations and individuals to help achieve the water quality desired future condition

Objective 4.2: On a routine basis, UMRBA will provide information gained in Goals 1 and 2 to targeted audiences in an effort to inform decision making

Objective 4.3: On a routine basis, UMRBA will create awareness of the states' nutrient reduction strategies among the public and interested parties

Goal 5: Water quality management is appropriately resourced

Objective 5.1: On an annual basis and as needed, the necessary resources will be available to implement the states' work priorities for UMRBA (including their individual respective contributions)

Upper Mississippi River Basin Association 2022-2035 Water Quality Program Detailed Plan

Goal 1: Water quality conditions are better understood and improved

Objective 1.1: By 2031, water quality on the Upper Mississippi River will be measured for Clean Water Act purposes

Strategy 1: In spring 2022, publish a condition assessment and evaluation report for the Interstate WQ Monitoring Plan Reaches 8-9 Pilot

Action A. Complete sampling by September 30, 2021

Action B. Analyze data and prepare the report from October 2021 through February 2022

Strategy 2: On January 1, 2026, begin implementation of a five-year, full-scale UMRBA Interstate Water Quality Monitoring Strategy for the entire Upper Mississippi River

Action A. Update the UMRBA Interstate WQ Recommended Monitoring Plan with insights from the Reaches 0-3 and 8-9 pilots (2022-2023)

Action B. Resolve the fish sampling methodology – i.e., UMRR long term resource monitoring vs Environmental Monitoring and Assessment Program Grate River Ecosystems (EMAP-GRE) (2022)

Action C. Identify sources of funding for UMRBA and member states (ongoing)

Action D. Update the field operations manual and provisional assessment (2022-2023)

Action E. Develop a data management system for file storage, backing up systems, QA/QC processes, and serving publicly available data (2022)

[Note: This could include evaluating the potential integrating the UMRBA Interstate Water Quality Monitoring data into an existing database(s).

Action F. Develop a communications and outreach strategy to utilize through the planning and implementation process and for results (2022-2023)

Action G. Coordinate sampling for 2026 implementation (2024)

Action H. Coordinate sampling for 2027 implementation (2025)

Action I. Implement a field methods test and incorporate any insights into the Field Operations Manual (2025).

Objective 1.2: By 2031, knowledge of nonpoint source loading trends and reduction measures is improved and informs adaptive management

Strategy 1: UMRBA develops recommendations regarding baselines for monitoring and assessments, including for the purposes of analyses at the watershed scale

Strategy 2. Individual states adopt the Hypoxia Task Force’s recommended baseline monitoring (i.e., 1985 to 1996) and other progress tracking systems to enhance consistency

Strategy 3. Estimate the potential influence of climate change on the effectiveness of 3-5 best management practices (2023-2031)

Strategy 4. Connect main stem monitoring (UMRR, Illinois long term electrofishing (LTEF), UMRBA water quality monitoring, other) to tributary monitoring (2021-2022) through the UMRR 2021 Status and Trends Report and UMRBA How Clean is the River Report

Action A. Propose research ideas to the UMRR partnership

Action B. Explore additional grant opportunities to leverage partner actions

Objective 1.3: By 2031, knowledge of water quality conditions through focused research and analysis will be significantly improved

Strategy 1: Prioritize information needs (ongoing)

Strategy 2: Identify funding sources and potential partnership or leveraging opportunities (ongoing)

Strategy 3: Implement project-specific monitoring and research objectives (2023-2031)

Objective 1.4: By 2031, collection, analysis, storage, and dissemination of data will maintain integrity, long-term consistency, relevance, and usability

Strategy 1: Utilize data collection portals such as USEPA Water Quality Exchange (WQX)

Strategy 2: Work within and among states and with USEPA to resolve challenges associated with aggregating the states’ nutrient reduction strategy data

Action A. If it is not possible to aggregate data, explore options to provide a comprehensive assessment utilizing the states’ unique datasets

Upper Mississippi River Basin Association 2022-2035 Water Quality Program Detailed Plan

Goal 2: Water quality management is aligned towards a strategic vision

Objective 2.1: By 2031, a regional approach to the Clean Water Act and nutrient reduction is implemented on the Upper Mississippi River and throughout the watershed

Strategy 1: Develop a common set of designated uses

Strategy 2: Develop strategies for establishing shared standards and assessment protocols for agreed-upon designated uses held among the states

Action A. Develop research plan/improve knowledge of existing research that could be used to establish standards and assessment protocols

Note: For commonly-held designated uses (and at the point they are agreed upon), UMRBA will work to set strategies for establishing shared standards and assessment protocols. Once standards and protocols are developed, strategies will be developed for

Strategy 3: In 2022-2025, develop recommendations for impairment listings on two to three priority water quality parameters that are most impactful to the river's designated uses

Action A. By May 2022, determine the priority water quality parameters

Action B. By September 2022, develop meta-analysis of existing knowledge and identify information needs

Action C. By November 2022, develop a set of research questions needed to inform an impairment recommendation

Action D. By spring 2023, develop a research plan with potential contributors and funding sources

Action E. By December 2025, publish a report with recommendations for impairments related to the select two to three parameters

Strategy 4: On an as needed basis, evaluate the inclusion of an emerging contaminant in the UMRBA Interstate Water Quality Monitoring Plan as well as UMRBA's other efforts to align the states' water quality programs (as determined by the states)

Action A. On an ongoing basis, utilize state and other monitoring to detect emerging contaminants

Action B. If emerging contaminants are detected and are deemed a priority concern among the states, host a regional forum to integrate and assess known information and determine information needs

Action C. Create baseline information for contaminant of interest

Strategy 5: Assess how future precipitation and discharge projections might affect the effectiveness of best management practices, particularly related to nonpoint source runoff (nutrients, sediment, and chloride)

Action A. Participate in a USGS Midwest Climate Adaptation Center Workshop to establish research and modeling needs (fall 2022)

Action B. Facilitate information sharing during the WQEC's and WQTF's meetings and other forums as appropriate

Objective 2.2: By 2031, multi-jurisdictional responses to Harmful Algal Blooms (HAB) events are well-coordinated and effective

Strategy 1: On a biennial basis, update the HABs Resource Response Manual

Strategy 2: On an ongoing basis, improve knowledge of influencing factors of HAB occurrences

Action A. By 2023 and on a biennial basis, publish a "state of HAB knowledge" executive summary for policy makers and non-technical audiences

Action B. On an ongoing basis and as appropriate, engage in the USGS Illinois River Basin NGWOS and IWS and serve as a resource to USGS

Action C. Research influencing factors of HAB occurrences – e.g., climate change, chloride, nutrients (2022-2023)

Strategy 3: On an ongoing basis, consider advocacy strategies and priorities related to potential federal legislation potential to advance the states' interests regarding HAB -focused science and monitoring or planning

Strategy 4: By 2023, assess existing capacities to respond to HAB events – e.g., laboratory analysis

Strategy 5: By 2023 and on a biennial basis, publish a "state of HAB knowledge" executive summary for policy makers and non-technical audiences

Action A. Develop and prioritize research objectives – e.g., better understand how increasing chloride trends and warmer winters might increase the occurrences of harmful algal blooms

Strategy 6: By 2024, develop a unified risk management procedure for HAB responses

Strategy 7: By 2024, develop a guidance document for regional HAB advisories

Strategy 8: By 2025, incorporate HAB management needs in state hazardous mitigation plans

Action A. WQEC submit recommendations to the UMRBA Board

Strategy 9: Increase citizen science monitoring on the UMR

Action A. Engage with entities on the river that implement citizen science monitoring such as River Action to leverage mutual goals

Objective 2.3: By 2031, chloride loading to the Upper Mississippi River will trend downward

Strategy 1: By November 2021, finalize the UMRBA chloride resolution

Action A. Obtain feedback from state DOTs and incorporate any suggested feedback

Strategy 2: On an ongoing basis, improve knowledge of chloride-related impacts to designated uses

Action A. Conduct a meta-analysis and publish a report of the findings

Action B. Develop key research needs and explore opportunities to pursue them

Strategy 3: On an ongoing basis, coordinate with the UMRCC Water Quality Tech Section to collaborate on mutual priorities

Strategy 6: By 2022, develop an issue assessment related to limited liability coverage for private road salt applicators

Strategy 5: By 2023, develop a communications strategy of knowledge related to status, trends, impacts, and efforts to achieve runoff reduction

Strategy 4: By 2024, submit a recommendation to USEPA for updating its chloride criteria

Action A. Evaluate chloride-related impacts to designated uses

Strategy 7: By 2025 and on an ongoing basis, develop practical solutions to chloride loading in collaboration with state DOTs, local entities (e.g., county highway departments), commercial applicators, the general public, and researchers

Action A. Host a “salt summit” to facilitate information exchange and dialogue about practical solutions

Action B. Work with wastewater treatment plants to dilute ion water exchange byproduct

Action C. Employ an ongoing outreach and engagement campaign

Objective 2.4: On an ongoing basis, ensure fair and consistent enforcement and compliance programs across the states

Strategy 1: USEPA provides direction to states regarding permit quality reviews (PQRs) and state review frameworks (SFRs)

**Upper Mississippi River Basin Association
2022-2035 Water Quality Program
Detailed Plan**

Goal 3: UMRBA effectively serves as the Governors'-established organization to support interstate water quality management on the Upper Mississippi River

Objective 3.1: On an ongoing basis, the WQEC and WQTF provide effective forums for interstate coordination with federal engagement

Strategy 1: At the November 2022 joint UMRBA and WQEC meeting, the WQEC recommends changes (if any) to the Charter to the UMRBA Board

Action A. Review the WQEC Charter and direct UMRBA staff to make revisions to the Charter (if necessary) (Spring-Summer FY 2022)

Action B. Evaluate the appropriate annual meeting cycle (frequency and location) (Spring – Summer FY 2022)

Strategy 2: At the November 2022 joint UMRBA and WQEC meeting, the WQEC presents a “roles and responsibilities” document for the WQTF to the UMRBA Board

Action A. UMRBA staff develop a starting draft document based on historic roles and responsibilities and strategies embedded in this strategic plan (Spring 2021)

Action B. In June 2022 through August 2022, the WQTF reviews the draft document and provides detailed feedback

Action C. In August and September 2021, the WQEC reviews the draft document and offers comments

Action D. In October 2022, the UMRBA Board reviews the draft comment and offers comments

Strategy 3: On an ongoing basis, UMRBA staff communicate water quality-related news to the UMRBA Board, WQEC, and WQTF as appropriate

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Goal 4: UMRBA fosters and works through strategic partnerships

Objective 4.1: On an ongoing basis, UMRBA will engage and collaborate with other organizations and individuals to help achieve the water quality desired future condition

Strategy 1: Provide forums for exchanging information regarding nonpoint source runoff reduction best management practices, including related to nutrients, sediment, and chloride runoff

Strategy 2: Leverage the UMRBA member states joint state perspectives as a member of the Hypoxia Task Force and aid in its capacity to advance the Gulf Hypoxia Action Plan

Strategy 3: Engage in UMRBA's long term flood, drought, and sediment management planning]

Strategy 4: Annually, identify important relationships with individuals and organizations based current and planned UMRBA work and priority water quality issues
[Note: This Strategy will inform Strategies 5-7]

Strategy 5: Partner with key watershed programs and projects in ongoing communications and outreach based on their ability to advance UMRBA's water quality goals and objectives

Strategy 6: Seek knowledge from other organizations and individuals for the purposes of i) being aware of activities that may influence the vision and ii) enhance UMRBA's and the individual states' actions

Strategy 7: Consider expanding UMRBA's network by being involved (in whatever extent appropriate) in relevant state and interstate organizations (e.g., Association of Clean Water Administrators) and other forums

Objective 4.2: On a routine basis, UMRBA will provide information (including gained in Goals 1 and 2) to targeted audiences in an effort to inform decision making

Strategy 1: By January 2021, publish the How Clean is the River? Report and implement a strategic communications campaign

Action A. Partner with America's Waterways Initiative to secure funding and contract with a communications expert to develop a communications strategy and materials

Strategy 2: On a biennial basis, publish and disseminate biennial reports on the Upper Mississippi River and watershed water quality status and trends (similar to a Section 305(b) report)
[Note: When available, utilize the Interstate Water Quality Monitoring Plan.]

Strategy 3: Assist the states in their contributions to the Hypoxia Task Force's annual point source reporting

Strategy 4: Evaluate potential recommendations to the Hypoxia Task Force's annual point source reporting

Objective 4.3: On a routine basis, UMRBA will create awareness of the states' nutrient reduction strategies among the public and interested parties

Strategy 1: Develop one to two success stories per year of implementing the states' nutrient reduction strategies, including illustrating the benefits of implementing best management practices

Strategy 2: On an annual basis, integrate the success stories into the Hypoxia Task Force database

Strategy 3: By summer 2022, develop a summary fact sheet of the challenges and opportunities associated with progress tracking

Action A. Utilize the Hypoxia Task Force to identify challenges and publish the summary document

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Goal 5: Water quality management is appropriately resourced

Objective 5.1: On an annual basis and as needed, the necessary resources will be available to implement the states' work priorities for UMRBA (including their individual respective contributions)

Strategy 1: At the August 2022 UMRBA quarterly meeting, the Board is prepared to endorse a water quality assessment for FYs 2023 and 2024 that would support the work outlined in this strategic plan

Action A. Develop a work plan for FYs 2023 and 2024 with options for additional work that could be advanced with supplementary funding (Q2-Q3 FY 2022)

Action B. Develop relationships with key decision makers in each state (Q3-Q4 FY 2022)

Strategy 2: By spring 2022, position UMRBA to utilize American Rescue Plan funds

Action A. Develop a work plan for FYs 2023 and 2024 with options for additional work that could be advanced with supplementary funding (Q2-Q3 FY 2022)

Action B. Develop relationships with key decision makers in each state (Q3-Q4 FY 2022)

Strategy 3: Support the states in advocating within their respective state administrations and legislatures for their respective financial, staffing, and policy needs

Action A. Develop fact sheets and other informational items for the WQEC members to use in their state budget and appropriations processes as well as policy and funding ambassadors (i.e., stakeholders)

Action B. Participate in meetings or other communications venues per request from a WQEC member(s)

Strategy 4: Pending the annual appropriations process, UMRBA advocates for the states' water quality-related priorities before Congress and the Administration

Action A. At the November joint UMRBA and WQEC quarterly meetings, an annual strategy is presented and endorsed that outlines UMRBA's specific advocacy funding and programmatic requests for all relevant federal agencies (Q2-Q3 annually)

Action B. UMRBA staff collaborate with the state agency leadership, UMR Governors' Offices, and relevant state associations (e.g., Association of Clean Water Administrators)

Action C. UMRBA staff collaborate with other stakeholder groups advocating for the same or similar requests

Strategy 5: On an ongoing basis, participate in the Hypoxia Task Force Coordinating Committee including its funding and communications work groups

Strategy 6: By December 2022, begin implementing a fundraising plan

Action A. Develop a fundraising plan (summer-fall 2022)

Action B. Seek information on where and how private entities are investing in water quality on the Mississippi River and its watershed (summer FY 2022)

Action C. Engage in America's Watershed Initiative's fundraising activities

Strategy 7: On an ongoing basis, assist the states in a targeted outreach and education campaign to expand public-private partnership – e.g., Minnesota's Nitrogen Smart Training Program