



Upper Mississippi River Basin Association

ILLINOIS, IOWA, MINNESOTA, MISSOURI, WISCONSIN

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Upper Mississippi River States Seek a Strategic, Integrated Path Forward for Managing Floods, Sediment, and Extended Drought

Managing floods, droughts, and sediment on the Upper Mississippi River System, with its vast geographic scale, tremendous economic productivity, and globally significant resources, presents extraordinary challenges and opportunities. Through UMRBA, the Governors' joint interstate collaborative, the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin are bringing together those who live and work in the floodplain to improve disaster preparedness, economic growth and resilience, and ecological health.

Purpose

- 1) Increase the economic, ecological, and social resilience of the Upper Mississippi River to major flood events, prolonged drought, and excessive sediment
- 2) Foster dynamic, balanced, objective, and adaptive approaches to flood, drought, and sediment management in a multi-purpose management context

Objectives

- 1) Develop an integrated, comprehensive, and systems-based approach to minimize the threat to health and safety resulting from flooding by using structural and nonstructural floodplain management measures
- 2) Develop new, or renew existing, comprehensive long-term channel management strategies that are sustainable, cost-effective, and ecologically sensitive
- 3) Make communities and economies adjacent to, or dependent on, the Upper Mississippi and Illinois Rivers more resilient to flood and drought events and sedimentation
- 4) Seek opportunities to support environmental sustainability, restoration, and water quality goals for the Upper Mississippi and Illinois Rivers

Action Priorities

Flood management

Build 2-D hydraulic modeling
Renew flow frequency profiles

Drought management

Define drought characteristics
Support interstate cooperation

Integrated actions

Assess economic vulnerabilities
Facilitate information exchange

Sediment management

Maintain jurisdictional agreements
Market of dredged material
Facilitate beneficial use of
dredged material

Watershed management

Improve climate prediction tools
Invest in nutrient reduction strategies

Resilience Planning Questions

Substantial changes in land use throughout the Upper Mississippi River watershed compounded with climate-driven shifts in precipitation are threatening public safety and critical infrastructure, impeding the safety and reliability of commercial navigation, limiting the economic resilience of communities, industries, and agriculture and degrading fish and wildlife habitat in the river floodplain. Solutions will primarily focus on actions in the river-floodplain but will also illuminate where and how actions in the watershed would be most effective for improving the river's resilience.

1. Which tributaries and sub-watersheds have the greatest impact on the river's long term resilience?
2. How might current land use patterns in sub-watersheds and the river-floodplain be sustained or changed to enhance the river's long term resilience?
3. How might the river-floodplain be physically altered to enhance flood water storage and conveyance, sediment deposition, and drought risk reduction?
4. How can management actions minimize the economic and social vulnerabilities to flood, drought, and sediment?

Key Explanations

Informed Consent

The Upper Mississippi River involves a complex array of human uses and interactions that require thoughtful and inclusive dialogue among the diverse suite of stakeholder representatives throughout the region. Solutions reside in our ability to work together and integrate science-based knowledge of watershed and floodplain dynamics. Developing a commonly-held vision with shared goals, objectives, and implementation strategies that are regionally supported among stakeholders will require a collaborative, consent-based planning process to:

- a) Build understanding and mutual acceptance and empathy of the challenges affected interests face living and working in a highly dynamic river-floodplain and ideas for addressing local and regional issues
- b) Guide deliberations that foster productive discourse among affected interests and state and federal government agencies in the development of solutions and prioritization of investments
- c) Improve, leverage, and better utilize knowledge that is used to inform the deliberation of solutions
- d) Establish and maintain the legitimacy of the planning process, outcomes (including decisions and assumptions), and public and private agencies/entities that will work to advance the outcomes
- e) Motivate productive action that advances the path forward following the plan's acceptance

Next Steps (as of March 4, 2021)

UMRBA put together a summary of the actions and questions listed above into a draft "Keys to the River 2020" report, dated January 14, 2021. This is the first time in several years that action-oriented ideas and a description of geography and socio-political dynamics were provided in a written report as well as a recommended approach for long term resilience planning. UMRBA received incredibly insightful feedback from a several people and organizations and is now reviewing that feedback and considering ways to improve the report presentation and content. UMRBA will also be working with regional partners to develop a more detailed scope of work for implementing the actions and answering the questions listed above. This information will be provided at the UMRBA's May 25, 2021 quarterly meeting.

About the Upper Mississippi River Basin Association — The Upper Mississippi River Basin Association (UMRBA) is a five-state interstate organization formed by the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin to coordinate the states' river-related programs and policies and work with federal agencies that have river responsibilities. The UMRBA is structured as a 501(c) non-profit association, with the Board of Directors composed of all duly Governor-appointed representatives and alternatives. For more information about UMRBA, visit its website at www.umrba.org.