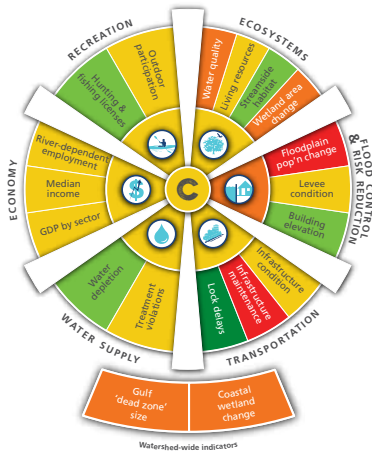


Upper Mississippi River Conference 2016 Action Agenda: *Raise the Grade*



December 16, 2016

On Oct. 13–14, 2016, a partnership of river stakeholders hosted the ninth annual Upper Mississippi River Conference, entitled “Raise the Grade,” in Moline, Illinois. The conference brought together over 200 participants from 95 organizations to develop solutions to overcome the many challenges identified in the 2015 America’s Watershed Initiative (AWI) Report Card for the Mississippi River watershed. The AWI Report Card gave the Upper Mississippi River (UMR) basin a C grade. This was the highest grade among the Mississippi River sub-basins, but a C is unacceptable and immediate action is necessary to improve this score.



The AWI Report Card rated the UMR in six goal areas: Ecosystems, Flood Control and Risk Reduction, Transportation, Water Supply, Economy, Watershed-wide Indicators, and Recreation. The UMR basin received a C in each of these goal areas except in Flood Control and Risk Reduction, which received a D.

Over the two days of the UMRC, participants identified actions that could be completed within 1-5 years to raise the grade in each of these areas, as well as an energy area, with emphasis on those that would support multiple goals. Over 100 suggestions were identified; and selections for action made with priority given to those that would have high impact, and could be acted upon quickly. The 2015 America’s Watershed Initiative Report Card for the Mississippi watershed evaluated Economy as one of the measured goals. The 2020 AWI Report Card will broaden this analysis and include a focus on sustainable energy production from diverse sources in the Mississippi watershed. Here we have referenced both, but in future documents Energy will be studied.

One action recognized by every sector was the need for education and outreach. The major achievement of the 2016 UMR Conference was in bringing different river stakeholders together to open dialog and discuss issues across sectors. This Action Agenda will serve as the basis for maintaining communications across sectors and approaching strategies for “Raising the Grade” through multi-sector education and outreach. An update report on the Action Agenda will be given at successive conferences, starting in 2017.

Priority objectives for the UMR Basin emerging from the conference are:

1. Restoring and building resilience in riverine ecosystems
2. Nutrient reduction and assessment
3. Improved ability to measure and track watershed conditions
4. Comprehensive planning for watershed and flood management
5. Improved resilience in transportation system infrastructure
6. Improved opportunities for recreation
7. Improved awareness of hydropower opportunities

These priority objectives and actions identified to achieve them represent immediate steps that can be taken to improve conditions in the UMR, and thereby raise the 2020 report card grade. They represent a holistic approach that can improve multiple sectors within the basin with many of the priorities benefitting multiple sectors simultaneously.

In addition to the priority objectives and actions reported on the following pages, numerous additional suggestions were made to improve the metrics and interpretation of the Report Card itself. These suggestions have been recorded for consideration as the AWI report card process is revised for the next release of the Mississippi Report Card, currently expected in 2020.

Lastly, and perhaps most importantly, UMR Conference participants consistently expressed a need for shared messages to be voiced as an outcome of their discussions. This Action Agenda is the first expression of shared goals for the UMR, acting as a living document with plans and steps to guide stakeholders and raise the grade with one voice.



Restoring and building resilience in riverine ecosystems



The Upper Mississippi River System is a nationally-treasured dynamic floodplain ecosystem that is rich in biodiversity, providing the largest contiguous area of freshwater wildlife habitat in the central United States. The river is the essential flyway for migratory waterfowl, ensuring world-class outdoor recreational experiences throughout the Midwest and coastal states along the Gulf of Mexico. However, sedimentation is filling in important wetland habitat, excess nutrients are impacting water quality, and invasive species are competing with native fish and wildlife. There is clear evidence that habitat restoration improves ecological health, creating large areas with clearer water, more vegetation, and increased fish and wildlife populations. It is essential that restoration efforts on the mainstem river, as well as throughout the basin, be continued and enhanced in order to provide ongoing benefits and enhance the ecological systems' resilience in responding to multiple stressors. Importantly, as restoration is implemented, monitoring and research must be conducted alongside in order to improve ecosystem understanding, assess outcomes and design better restoration projects going forward.

Where this raises the grade

Ecosystems (C), Water Supply (C), Recreation (C), Watershed-Wide Indicators: Gulf Hypoxia and Wetland Loss (D).

Actions

This objective includes two immediate action steps:

- Continued implementation of the U.S. Army Corps of Engineers' Upper Mississippi River Restoration (UMRR) program, with funding at its fully authorized level of \$33.17 million in order to continue creating the natural infrastructure needed for the river to function as a healthy large-river ecosystem and to conduct science to understand how best to improve the ecosystem's health and resilience.
- Funding the U.S. Army Corps of Engineers' Navigation and Ecosystem Sustainability Program (NESP) so that it may begin to make on-the-ground improvements to the river ecosystem while also providing for comparable progress in improvements for the navigation system.

Partners

Restoration and science implementers: USACE (UMRR and NESP Programs), USGS, USFWS, state environmental and conservation departments.

Key partners and supporters: River Action, environmental and conservation NGOs (TNC, Audubon, and others), UMRBA, AWI, citizens and river users, elected officials, colleges, universities, and others.



Nutrient reduction and assessment



Clean water is central to the quality of life in UMR as communities rely on it for drinking, as well as for industry and agriculture. Clean water also supports the river ecosystem which in turn provides for tourism, hunting, fishing, and other recreation. Excess nutrients can lead to compromised drinking water quality, trigger harmful algal blooms, and damage aquatic ecosystems. Targeted action is necessary to reduce nutrient input to the Upper Mississippi River Basin from agricultural and urban areas to improve water quality in the waterways of the UMR, downstream in the Mississippi River, and in the Gulf of Mexico. This objective includes actions reducing nutrient input from both agricultural and urban areas. Further, this objective emphasizes the importance of standardized monitoring and assessment of water quality and nutrient levels in particular.

Where this raises the grade

Ecosystems (C), Water Supply (C), Recreation (C), Watershed-Wide Indicators: Gulf Hypoxia and Wetland Loss (D).

Actions

This objective includes two immediate action steps:

- Ensure that states' Nutrient Reduction Strategies contain implementation plans detailing point and nonpoint source reductions needed, responsible parties, funding mechanisms, milestones, measurement metrics, and reasonable timelines to meet reduction goals established by the Gulf Hypoxia Task Force. Also support state and federal funding and programs (e.g., state conservation programs, Farm Bill, NWQI, RCCP, NRCS, private and NGO initiatives) that aid and accelerate the implementation of nutrient reduction strategies.
- Dedicate funding for standardized nutrient and water quality monitoring throughout the Upper Mississippi River Basin, such as via USGS' Mississippi River Basin continuous monitoring initiative.

Partners

Implementers of nutrient reduction strategies, management practices and monitoring: State environmental, agriculture, and natural resource agencies, USDA-NRCS, US EPA, USGS, farmers, agriculture groups, and waste water treatment plants.

Key partners and supporters: River Action, conservation and environmental NGOs (TNC, Mississippi River Collaborative, others), UMRBA, AWI, MRCTI, citizens and river users, elected officials, colleges, universities, and others.



Improve our ability to measure and track watershed conditions



The UMR requires a coordinated and comprehensive monitoring framework, and improved assessment of current and baseline conditions for water quantity and quality and ecosystem condition. Establishing a strong monitoring network for the region will allow better planning for water supply and tracking of efforts to reduce nutrient input to the Gulf of Mexico. This objective both builds on existing monitoring and data compilation efforts while seeking to add additional capacities where needed.

Where this raises the grade

Ecosystems (C), Flood Control and Risk Reduction (D), Water Supply (C), Watershed-Wide Indicators: Gulf Hypoxia and Wetland Loss (D).

Actions

This objective includes three immediate action steps:

- Design and implement an Upper Mississippi River systemic monitoring framework, building from existing monitoring programs including those of USGS, USACE-UMRR, state water quality programs, and others; as well as data compilation efforts such as the Great Lakes to Gulf Observatory.
- Utilizing systemically collected data, evaluate baseline conditions for water quality and quantity throughout the basin.
- To help build systemic monitoring capacity, advocate for increased support for existing programs including water quality monitoring, gages, and continuous monitoring by the USGS to provide baseline data across the region.

Partners

Implementers of monitoring and data compilation/assessment: State environmental and natural resource agencies, USGS, USACE-UMRR program (Long Term Resource Monitoring), USDA-NRCS, US EPA, drinking water utilities, National Great Rivers Research and Education Center (Great Lakes to Gulf Observatory).

Key partners and supporters: River Action, environmental NGOs (TNC, Audubon, Mississippi River Collaborative), UMRBA, AWI, MRCTI, citizens and river users, elected officials, colleges, universities, and others.

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Comprehensive planning for watershed and flood management



The basin would immediately benefit from proactive watershed management to reduce flood risk, and tools to support better planning for flood management when they occur. This can be supported by explicitly linking the planning activities for watershed management and flood control. A comprehensive approach to watershed management would provide benefit across many of the sectors identified in the AWI Report Card.

Where this raises the grade

Ecosystems (C), Flood Control and Risk Reduction (D), Transportation (C), Water Supply (C), Recreation (C), Watershed-Wide: Gulf Hypoxia and Wetland Loss (D), Energy (N/A).

Actions

This objective includes two activities for immediate Action:

- Begin a Comprehensive Watershed Planning Process for the basin, which would engage regional planners and flood plain managers in a planning process that links floodplain and watershed management to better plan infrastructure, development, and natural resource management in the region with the goal of improving connections to natural floodplains, and minimizing at risk development.
- Create an Integrated Flood and Flow Model for the Upper Mississippi River Basin. This will support proactive watershed management to reduce the risk of floods, and better planning for flood events when they do occur.

Partners

Implementers of study, planning, and modeling: USACE, FEMA, USGS, USDA-NRCS, state floodplain managers, and UMRBA.

Key partners, stakeholders and participants in planning process: River Action, levee districts, river communities, state environmental and natural resource agencies agricultural groups, conservation and environmental NGOs (TNC, Mississippi River Collaborative, etc.), citizens and river users, elected officials, colleges, universities, and others.



Improve resilience in transportation system infrastructure



Waterborne transportation in the UMR is a vital component to ensuring the nation's economic prosperity, connecting the inland states to the world economy while also relieving congestion on roads and railways. Lack of investment on the Upper Mississippi has left us with an outdated and deteriorating system that risks catastrophic failure if left unaddressed. There is a critical need to advance infrastructure improvements in the UMR Basin to prevent such catastrophic failures. Addressing this critical need area requires identifying and acting on the most pressing projects to maintain functionality, while also modernizing to ensure the system's vitality and resilience going forward.

Where this raises the grade

Transportation (C), Economy (C).

Actions

This objective includes two activities for immediate action:

- Work with USACE, the navigation industry, and other partners to secure funding for the most critical infrastructure projects in the UMR system and ensure they are undertaken as soon as possible. There is wide consensus that the LaGrange Lock and Dam on the Illinois River is the highest priority for major rehabilitation to prevent system failure, and as such, initial attention can be focused here while other priorities are identified. To ensure progress on La Grange and other critical projects, the federal government must fully match the industry cost share available in the Inland Waterways Trust Fund (IWTF).
- Fund the U.S. Army Corps of Engineers' Navigation and Ecosystem Sustainability Program (NESP), so that it may begin to take on long overdue modernization of the navigation system (e.g., by constructing a second, modern-sized chambers the most congested locks) while also providing for comparable progress in ecosystem restoration.

Partners

Implementer of navigation repair, rehab, and modernization: USACE.

Key partners and stakeholders: River Action, state transportation agencies, state environmental and natural resource agencies, navigation companies and interests (e.g., WCI), agriculture interests/commodity groups, river communities, agricultural groups, conservation and environmental NGOs (TNC, Audubon, etc.), AWI, UMRBA, MRCTI, citizens and river users, elected officials, and others.



Improve opportunities for recreation in the Upper Mississippi River basin



A coordinated effort to support organizations that provide recreation, outdoor education, and outdoor opportunities would create new opportunities for recreation in the basin.

Where this raises the grade

Recreation (C), Economy (C).

Actions

This objective includes one activity for immediate action:

- Build an online inventory of recreation organizations, opportunities, and educational events through a permanent web portal. This can enhance public information available for outdoor recreation opportunities, increase public waterway use, and connect a network of education and event opportunities for residents and visitors in the Upper Mississippi River Basin.

Partners

Implementer of recreation inventory: River Action.

Key partners and those providing input to the inventory: State environmental and natural resource agencies, National Park Service, USFWS, USACE, National Geographic, tourism and visitors bureaus, municipal parks and recreation departments, conservation and environmental NGOs (TNC, Audubon, Mississippi River Network, Mississippi River Collaborative), AWI, UMRBA, MRCTI, citizens and river users, elected officials, and others.



Improve awareness of hydropower opportunities in the Upper Mississippi River basin



Engaging the public in a discussion about options for hydropower in the Upper Mississippi River Basin would identify opportunities for responsible hydropower opportunities.

Where this raises the grade

Energy (N/A), Economy (C).

Actions

This objective includes one activity for immediate action:

- Hold a workshop to bring together developers, dam owners, energy utilities, clean energy and environmental groups, NGOs and resource agencies, the Department of Energy, and the Federal Energy Regulatory Commission that work on energy issues to promote clean energy use and public education. This action will support evaluation of new hydropower energy production sites and explore the incorporation of hydropower energy into existing sites.

Partners

Workshop host: River Action.

Key partners and those providing input to the inventory: Energy utilities, clean energy and environmental groups, NGOs and resource agencies, USACE, the Department of Energy, and the Federal Energy Regulatory Commission, state environmental and natural resource agencies, USFWS, USEPA, AWI, MRCTI, citizens and river users, elected officials, colleges, universities, and others.

2016 conference sponsors

