

# **“Keys to the River 2020” Report**

## **Draft Outline as of February 18, 2020**

[For discussion purposes at the February 25-26, 2020 workshop.]

### Executive Summary of Findings, Recommendations, and Planned Next Steps

Focus of effort: Enhance the resilience of the economies, communities, and ecologies within the river corridor of the Upper Mississippi System. (Resilience as defined by USACE.)

### Introduction – Background Context on the PAS Agreement and Parties Involved

#### Chapter 1 – Historical Reference

Overview of policy, plans, decisions, and events that led to existing approaches for managing floods and the 9-foot navigation channel.

#### Chapter 2 – Sediment and Channel Management

High leverage actions with regional consent that will help us improve resilience:

1. Develop opportunities to use dredged material as a resource material in beneficial ways
2. Evaluate existing markets for bulk material and identify potential new markets for sorted fractions (e.g., sorted by grain sizes and physical properties, such as Frac sands, etc.)
3. Update existing sediment management plans and agreements between the Corps and states and develop new plans where needed to enhance timeliness and effectiveness of actions
4. Advocate for efforts that would slow water and sediment movement through the watershed and into the Upper Mississippi River system

#### Chapter 3 – Flood Risk

High leverage actions with regional consent that will help us improve resilience:

1. Create a hydraulic model for the Upper Mississippi and Illinois Rivers to facilitate scientifically-based deliberations regarding floodplain management and flood response
2. Estimate the likelihood and magnitude of flood occurrences on the Upper Mississippi River floodplain – i.e., perform a flow frequency study for mapping, regulatory, and levee certification purposes
3. Assess the potential location and magnitude of damages resulting from various flood stages and communicate the results to floodplain communities and businesses
4. Convene information sharing sessions about changing weather patterns and define assumptions of predicted future conditions
5. Utilize The Nature Conservancy's floodplain prioritization tool to identify opportunities for floodplain restoration or protection

## Chapter 4 – Extended Drought

High leverage actions with regional consent that will help us improve resilience:

1. Develop a shared definition of drought conditions affecting the Upper Mississippi River-floodplain that integrates stakeholder perspectives
2. Identify critical infrastructure within the river-floodplain that is dependent on a specific quantity of water as well as any potential conflicts that may arise under a shortage
3. Create a database of existing tools and information to assist with drought planning
4. Identify the most important resource needs for drought planning (i.e., gap analysis)
5. Assess the economic vulnerabilities to prolonged hydrologic drought

## Chapter 5 – Recommendations for a UMRBA-Requested Section 729 Study

High leverage questions with regional consent that will help us improve resilience:

1. How much sediment do the different sub-watersheds of the UMRS deliver to the river corridor?
2. How is land and water use in the sub-watersheds of the UMRS contributing to these sediment loads?
3. How can these sediment loads be reduced?
4. How much water do the different sub-watersheds of the UMRS deliver to the river corridor?
5. How is land and water use in the sub-watersheds of the UMRS contributing to these water loads?
6. How can these water loads be reduced?
7. How is land and water use in the sub-watersheds of the UMRS contributing to drought vulnerability in the river corridor?
8. How can these vulnerabilities be reduced?
9. How does the multijurisdictional nature of governance in the UMRS contribute to the challenges of sediment/channel maintenance, flood management and risk reduction, and drought management and preparation?
10. How can these jurisdictional challenges be addressed, including the formation of a state Governors' compact on the UMRS?

## Chapter 6 – Integrated Action Strategy

Integrates the agreed-upon actions described in Chapters 2-4 in a clear, concise executive-summary type brochure or handout.

## Chapter 7 – Communications and Engagement Strategy

Provides a summary of the communications and engagement strategy implemented throughout the PAS (including insights gained) and a recommended strategy for communications and engagement in a Section 729 study and an ongoing forum – i.e., gaining informed consent.