Outline

- Reconnaissance Study
- Workshop Summary
- Action Plan
U.S. Inland Waterway Modernization:
A Reconnaissance Study
Study Purpose

Evaluate options to sustainably fund maintenance and improvements to Iowa’s Lock and Dam system
Current State

- U.S. inland waterway infrastructure received a D-grade from the American Society of Civil Engineers (ASCE)
- Chronically underfunded
- Crumbling infrastructure
- Seriously affects U.S. competition for global trade
  - our economy relies on low transportation costs to offset higher wages and cost of production
Future Trends for Inland Waterways

• Overall freight transport will have high growth; proportion of transport by water to stay steady

• Tonnage on U.S. inland waterways will increase 23% by 2025, and 40% by 2040

• 83% trade growth increase on Mississippi River System from 2010 to 2040

• Iowa’s share of total tonnage along Mississippi will more than double from 6% to 13% by 2040
## Benefits of Improved System

### Economic Benefits of Barge Freight Passing Through Iowa Lock and Dam 19, 2011

<table>
<thead>
<tr>
<th>Annual Economic Benefits ($M)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced shipping/transportation costs</td>
<td>$384.0</td>
</tr>
<tr>
<td>Reduced emissions</td>
<td>$29.3</td>
</tr>
<tr>
<td>Reduced maintenance</td>
<td>$34.3</td>
</tr>
<tr>
<td>Reduced roadway congestion</td>
<td>$0.0</td>
</tr>
<tr>
<td>Reduced accidents</td>
<td>$78.4</td>
</tr>
<tr>
<td><strong>Total Economic Benefits</strong></td>
<td>$525.9</td>
</tr>
</tbody>
</table>

Source: HDR Commercial Analysis, Appendix C
If No Action is Taken

- Cannot maintain infrastructure at current funding level
- Critical age and capacity thresholds reached by 2020
- Move to other transport modes increases deterioration and cost for those systems
- Loss of economic benefits
- Missed opportunity with Panamax
FUND or FAIL?

WHY INVEST IN OUR INLAND WATERWAYS?

Move MORE

$4.0B Annual economic benefits/year

With LESS

$10.67 LESS vs. truck & rail costs/ton

52 LESS GHG emission vs. truck tons/million ton-mile

8 LESS GHG emission vs. rail tons/million ton-mile

WHAT HAPPENS IF WE ALLOW OUR INLAND WATERWAYS TO FAIL?

-730,000 accumulated loss in jobs by 2020

-$1.3T accumulated loss in sales by 2020

-$700B accumulated loss to GDP by 2020

-$270B accumulated loss in value of exports by 2020

Iowa Department of Transportation MISSISSIPPI RIVER ACTION PLAN
## Funding Option Evaluation

<table>
<thead>
<tr>
<th>Option</th>
<th>Timeliness</th>
<th>Full System Solution</th>
<th>Stand Alone Solution</th>
<th>Administrative Ease</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Action</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Partial Divestiture</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Funding from traditional sources</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Partnerships</td>
<td>No</td>
<td>TBD</td>
<td>TBD</td>
<td>No</td>
</tr>
</tbody>
</table>
New Funding Approaches Needed

- Increased funding from traditional sources only a short term solution
- Long-term options
  - Partial divestiture of the system
    - need further study to understand long-term impacts of divestiture
  - Public Private Partnerships (P3s) are not an option until major system repairs and upgrades are completed
  - Increased funding from traditional sources can only be part of a more comprehensive funding system

What other funding options should be considered?
Fuel Tax Revenue

- Large changes in the fuel tax rate lead to relatively small changes in overall shipping rate
- Current rate is 20¢/gallon
- Rate of 33¢/gallon = $50 million/year increase in revenue
- Explore indexing fuel tax rates to inflation
Partnerships

• Public-Public
  • Between governments and/or non-profit

• Public-Private (P3)
  – Design-Build (DB) and variations
    • Single private entity contracted to design and build
  – Design-Build with Private Financial Participation (PFP)
    • Private sector financing used for project
  – Pre-Development Agreements
    • Private sector partner works on the feasibility phase then gets first negotiation rights to develop and implement
Key Findings

• No action will result in loss of economic benefits and a missed opportunity with Panamax
• Partial divestiture should be examined if there is no new funding, but will need more study
• Public Private Partnerships are not an option until major system repairs and upgrades are completed
• Increased funding from traditional sources can only be part of a more comprehensive funding system
Study Recommendations for Congress

Congress

- Pass the 2013 Water Resources Development Act (WRDA) Bill
- Allow pilot programs for non-federal sponsors to work on federal projects
- Allow alternative project delivery and funding
- Adequately fund USACE Civil Works and Navigation Programs
- Explore indexing fuel tax rates to inflation
- Authorize USACE to study additional funding options
Study Recommendations for Iowa

Iowa

- Create a coalition of Upper Mississippi River states and inland waterway interest groups to drive the legislative agenda
- Implement a pilot project in line with the 2013 WRDA Bill
A one-day workshop to engage a range of stakeholders in the planning process for the Mississippi River Action Plan:

- Thursday, July 27th, 2013
- Consolidate stakeholder issues, concerns and priorities with the current lock and dam system along the Upper Mississippi River System.
- Recommend pilot projects for the Iowa DOT
- 60 attendees, including representatives from:
  - State Departments of Transportation
  - U.S. Army Corps of Engineers
  - Elected officials from states bordering the Mississippi River
  - Industries related to freight transportation
  - Special interest groups
Interactive Website: to engage stakeholders and generate conversations amongst stakeholders prior to the workshop.
Presentation by Gary Meden of the USACE Rock Island District:

- Mississippi River Navigation Infrastructure
  - Navigation authorization (9-foot channel)
  - State of the infrastructure
  - Types of funding to maintain/improve capabilities
  - Funding trends (O&M, Major Rehab, Construction)
  - Issues (Inland Waterway Trust Fund, No Earmarks)
  - Why does river navigation matter to the Upper Midwest and the Nation?
  - Lockage priorities
## Highest Priority Work in Rock Island District

- Based on U.S. Army Corps of Engineers prioritization.

<table>
<thead>
<tr>
<th>Work/Project</th>
<th>Cost Estimate ($M)</th>
<th>Funding Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lagrange Major Rehab</td>
<td>56.5</td>
<td>Construction</td>
</tr>
<tr>
<td>Lagrange Miter Gates</td>
<td>4.0</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>Peoria Miter Gates</td>
<td>4.0</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>Lagrange Lock Major Maint</td>
<td>14.3</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>Joliet Channel Wall Repair</td>
<td>5.1</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>Miss. Miter Gates 3 locations</td>
<td>23.1</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>Miss. Bulkhead Slots 7 locations</td>
<td>54.2</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>Dresden Replace Dam Gates</td>
<td>9.9</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>O'Brien Major Maintenance</td>
<td>13.0</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>Dam Gate Rehab (L/D 15, 21, 22)</td>
<td>13.0</td>
<td>O&amp;M</td>
</tr>
<tr>
<td>L/D 19 Concrete work</td>
<td>34.0</td>
<td>O&amp;M</td>
</tr>
<tr>
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<td>23.9</td>
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</tr>
<tr>
<td>L/D 15</td>
<td>TBD</td>
<td>TBD</td>
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<tr>
<td>L/D 18</td>
<td>TBD</td>
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<tr>
<td><strong>Total Shown on this page</strong></td>
<td><strong>255.0</strong></td>
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</tbody>
</table>
U.S. Inland Waterway Modernization Study

Presentation on key findings and study recommendations:

• Evaluates options to sustainably fund maintenance and improvements to Iowa’s Lock and Dam system

• Key findings
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# Visioning Process: SWOT Analysis

- Defined opportunities and constraints of the system and develop a unified vision for the action plan.

## Strengths

- The Mississippi River provides an efficient way to move goods environmentally and economically
- The Mississippi River is a significant economic asset
- The benefits of the river extend to all of society
- The river links the Upper Mississippi region to the world
- The Upper Mississippi provides for multiple uses

## Weaknesses

- The lack of consistently sufficient funding for river infrastructure and Operations & Maintenance
- The lack of awareness and understand among policymakers
- The risk of structural deficiencies due to age
- Inadequate dollars
- Fragmented decision making at federal, state, and local levels

## Opportunities

- To piggy-back on national infrastructure initiatives
- To spur local economic development
- To ease congestion on other modes
- To collaborate with other stakeholders
- To capture Post-Panamax opportunities

## Threats

- The lack of funding
- Major failure of a system component
- Losing global competitiveness
- Deferred maintenance
- Lack of predictable funding

(Top 5 Priorities of workshop participants)
The following perspectives were discussed to identify and understand the full breadth of issues faced by the Mississippi River System: Environmental, Regulatory, Economics, Navigation, and Recreation.

**Issue Themes**

- Alternative funding
- Bonding
- Economic benefit
- Environmental sustainability
- Demand
- Global competitor
- Jobs/workforce
- Industry
- Integrated water management

- Legislation
- Multi-modal system planning
- Predictability and certainty in funding and operations
- Public awareness
- Public benefits
- Regional planning
- Service Consolidations
- Whole system management
Pilot Projects

- To gather information to develop what a pilot program may look like.

### Brick and Mortar Projects

- Improve Lock 15 with a fixed guide wall
- Public, Private, Partnership with Soybean Council on maintenance and mechanical operations
- Standardize the entire lock and dam system
- Branding/public awareness campaign
- Select an implementation project based on USACE prioritization
- Improve Lock 18 as a multi-modal operation
Pilot Projects

Studies

• State investment/bonding
• Investigate current Harbor Maintenance Fund framework to identify elements applicable to Inland Waterways
• Alternative funding sources with and without the USACE
• Evaluate using dam pools for upstream and downstream benefits
• An Upper Mississippi River Business Plan
• Highlight value/efficiency of predictable funding
• Examine return of the state/ federal fuel user fees
• Investigate use of shorter life-span locks or smaller investments now
• Regional Freight Study
Action Plan Next Steps

- Engaging Stakeholders
- Developing Pilot Projects for Implementation