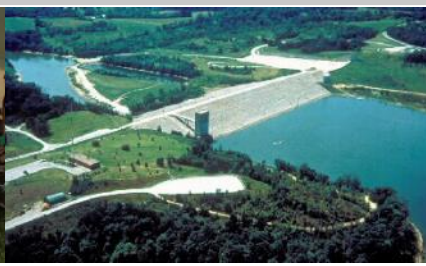


ILLINOIS WATERWAY CONSOLIDATED CLOSURES

Tom Heinold
Chief, Operations Division
Rock Island District
09 JAN 2019



US Army Corps
of Engineers®



ROCK ISLAND DISTRICT'S MAIN MISSIONS

Navigation (Main emphasis of today's briefing)

Environmental Protection/Ecosystem Restoration

Flood Risk Reduction

Regulatory (Permits)

Emergency Management (including National Flood Fight Center at Arsenal)

Recreation

Hydropower

Military support

Support for others



AREA OF RESPONSIBILITY

Parts of five states

- Three state capitols
- Lead Corps district for regulatory issues in Iowa

Five river basins

- Upper Mississippi, Illinois, Des Moines, Iowa/Cedar and Rock

Twelve locks and dams on the Mississippi River

- Dubuque, IA to Hannibal, MO

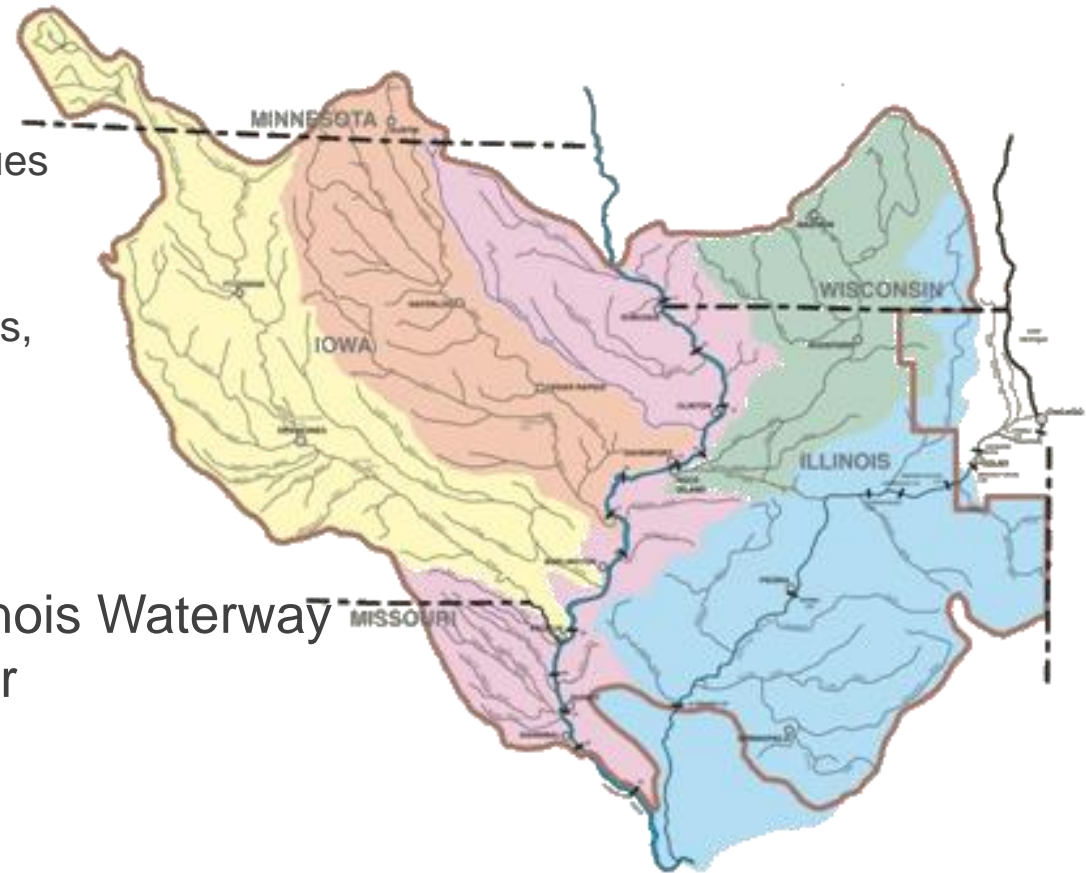
Eight locks and dams on the Illinois Waterway

Inland Navigation Design Center

- Nationwide support

National Flood Fight Center

- Nationwide support





WHY DO WE CARE ABOUT INLAND WATERWAYS?

Save money (least expensive mode)

Make US commodities more competitive

- (62% of US grain exports are shipped down the Mississippi on barges)
- Panama Canal opened JUN 2016

Reduce road congestion (and wear)

Safest

Least polluting

Provide alternative to rail (no monopoly)

Provide ancillary benefits (water supply, cooling water, recreation, improved environmental habitats)



9-FOOT NAVIGATION CHANNEL (MISSISSIPPI AND ILLINOIS WATERWAY)



Most structures built in 1930s

Designed for 50-year life

Most gates (dam and lock) are still original

Most mechanical and electrical systems are original

Maintenance crews do an amazing job keeping systems operating, but can only do so much with current resources



CRUMBLING, DECADES OLD TECHNOLOGY





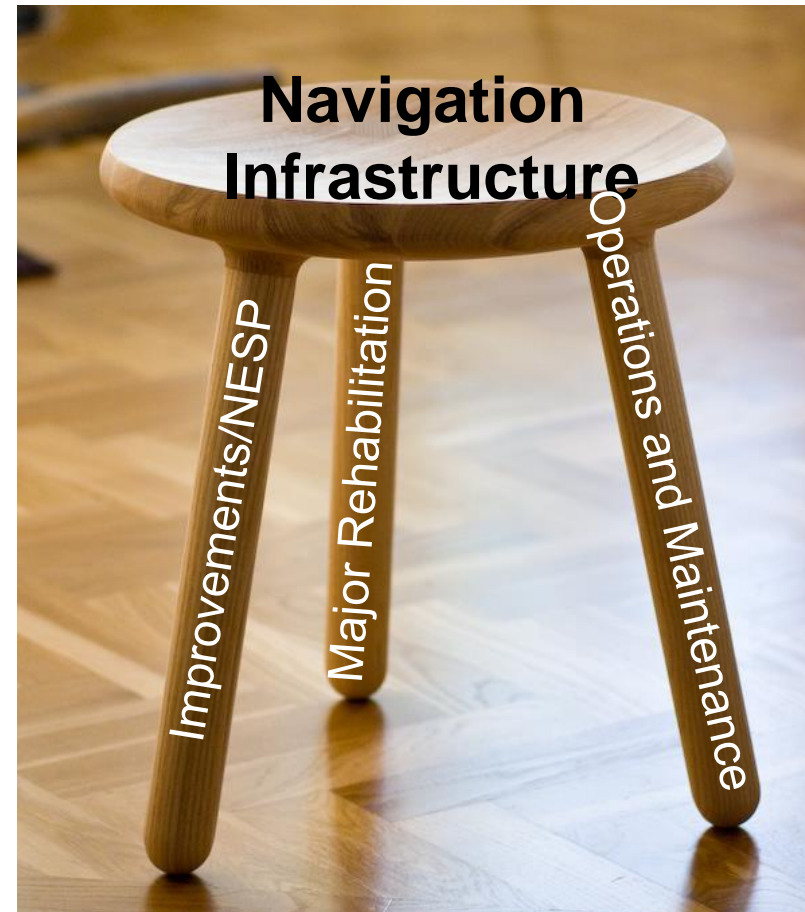
CRUMBLING, DECADES OLD TECHNOLOGY





RIVER NAVIGATION INFRASTRUCTURE “THREE-LEGGED STOOL”

- O&M
- Major Rehab
- Improvements
 - Small Scale
 - Large Scale





THE 2005-2017 NAVIGATION ONE-LEGGED STOOL





NESP (Navigation Improvements)

NESP Navigation Authorization = \$2.37 billion (FY07)
(50/50 Cost Share with the **Inland Waterway Trust Fund**)

- **Small scale structural and non-structural measures**
- **New 1200' locks at Locks 20 through 25, LaGrange, and Peoria**

NOTE:

- To date, no NESP construction funds have been appropriated
- Comparable progress required with ecosystem restoration



THE WAY AHEAD?

11



- Upper Mississippi States and other stakeholders work together for common goals
- Congress finds way to fund projects in a “no earmark” era
- Inland Waterway Trust Fund gets out of the red
- Nation sees value of inland water transportation
- Nation invests in our future
- Potential for Public-Private Partnership (P3)

Potential issues if nothing changes (or funding decreases)

- Higher transportation costs for grain
- Higher deficit (worsening balance of trade)
- Significantly higher traffic on roads (and delays and higher maintenance costs for highways)
- Less than 24-hour operations of locks?
- Shut down all recreation?
- A major system failure?



LAGRANGE MAJOR REHAB / MAJOR MAINTENANCE (MR/MM)



Major Scope Items:

- Horizontal and Vertical Concrete:
 - Precast concrete panels
 - Integrated wall armor
 - Utility trench replacement
 - Protective concrete piers

- Mechanical Systems:
 - Hydraulic power units
 - Miter gate rotary actuators
 - Tainter valve submersible cylinders
 - Bubbler system replacement

- Electrical Systems:
 - Programmable Logical Controllers (PLCs)
 - Fiber optic data system
 - New generators



*20' failed section of the lock chamber wall
(13 APR 2018)*



*Unsafe conditions for both lock workers
and the Navigation Industry*



LAGRANGE MR/MM

Timeline:

- FY 2014
 - Award of miter gate fabrication contract
- FY 2016:
 - Bulkhead recess design and award
 - Start of MR/MM Design
- FY 2017:
 - Delivery of miter gates to Illinois Waterway
 - Bulkhead recess construction
 - Continuation of design
- FY 2018:
 - Installation of miter gates APR 2018
 - Design complete APR 2018
 - Awarded NOV 2018
- FY 2019:
 - Start construction
 - Mobilization, fabrications & I-wall work
- FY 2020:
 - Lock closure and dewatering
 - Lock chamber work, landwall work
- FY 2021:
 - Project completion



LaGrange and the 2020 IWW Consolidated Closures:

- Single largest effort in terms of coordinating with industry as well as resource allocation
- Construction at LaGrange is the driving factor for closure dates



Questions?

