MS RIVER SCIENCE FORUM

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Presented for your consideration
February 16, 2023

The American Waterways Operators

The Tugboat, Towboat & Barge Industry Association

The American Waterways Operators

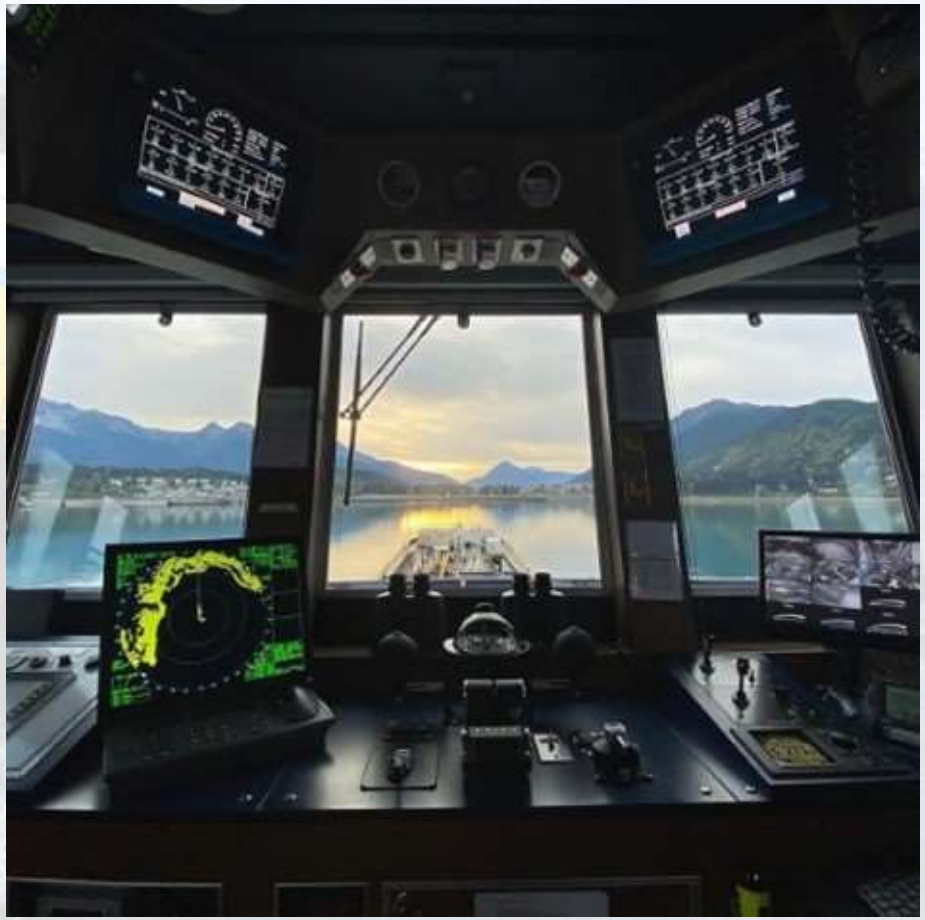
AWO members are The towboat, tugboat, and barge industry that is a vital link for the supply chain.

- American-built, American-owned, American crewed
  - **The eyes-and-ears for national security**
- 5,000 tugs and towboats; 28,000 barges
  - **Move over 665 million tons of goods every year (read: 25,200,000 trucks)**
- Sustainability Task Force work
  - **Committed to continuous improvement**
- **Contribute $30 billion to the U.S. GDP**; 75% on the inland waterways
- 60% of grain exports to feed the world
  - **Critical to support U.S. allies confronting major food/fuel security issues due to the war in Ukraine**

AWO is proud to serve as the tugboat, towboat and barge industry's advocate, resource, and united voice for safe, sustainable and efficient transportation on America's waterways, oceans and coasts. Since our founding, we have worked with members and government partners to leverage our industry's unique position as the safest and most environmentally friendly and fuel-efficient mode of freight transportation toward the goal of reducing safety risks while continuously improving the sustainability of the U.S. marine transportation system.

The American Waterways Operators

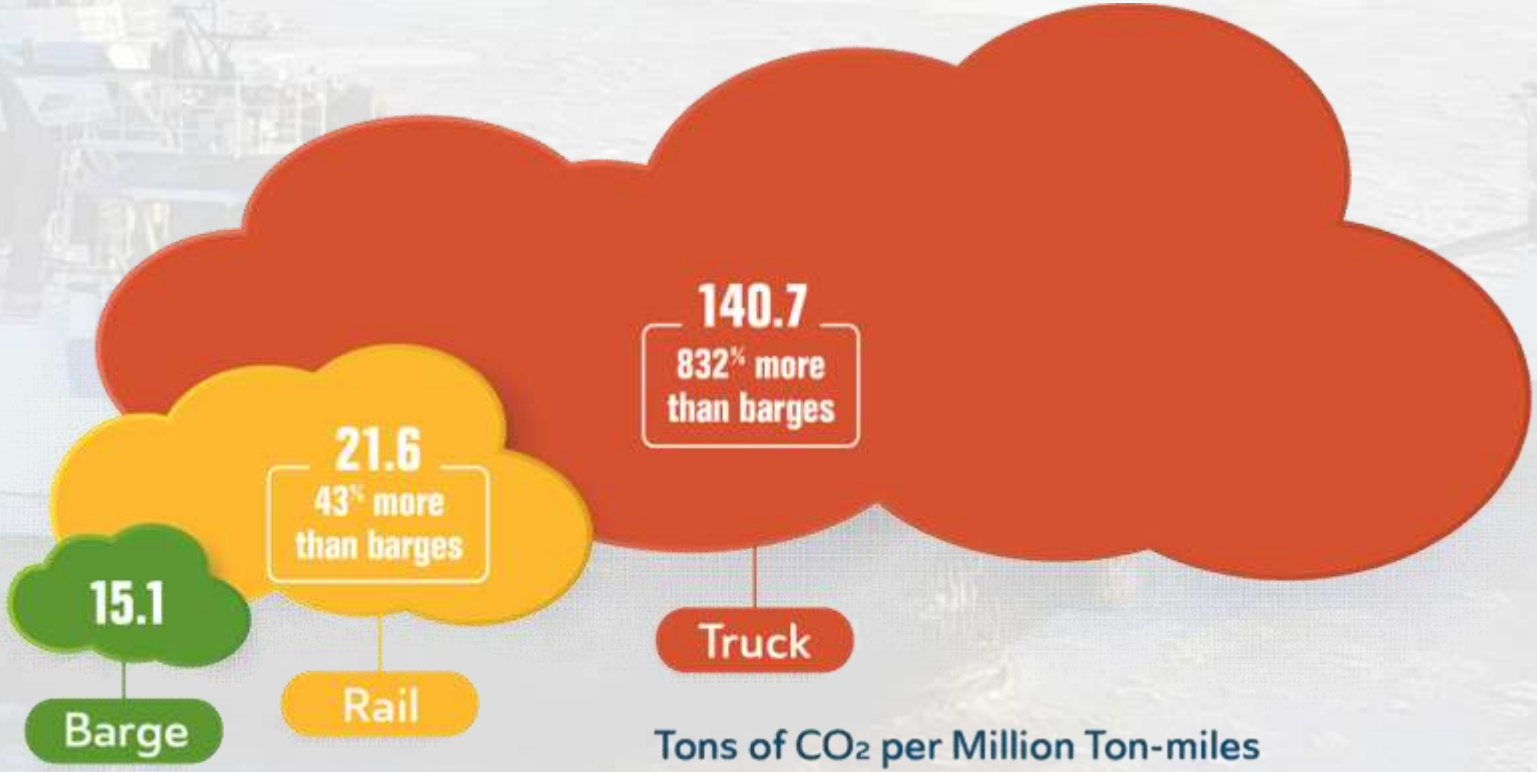
- The tugboat, towboat and barge industry's advocate, resource and united voice for…
- safe, sustainable and efficient transportation on America's waterways, oceans and coasts.
- **Advocacy**: Congress, Administration, Coast Guard, state agencies, media, general public & more
- **Safety**: Provide resources and collaborative opportunities to build safer industry



AWO Policy Priorities

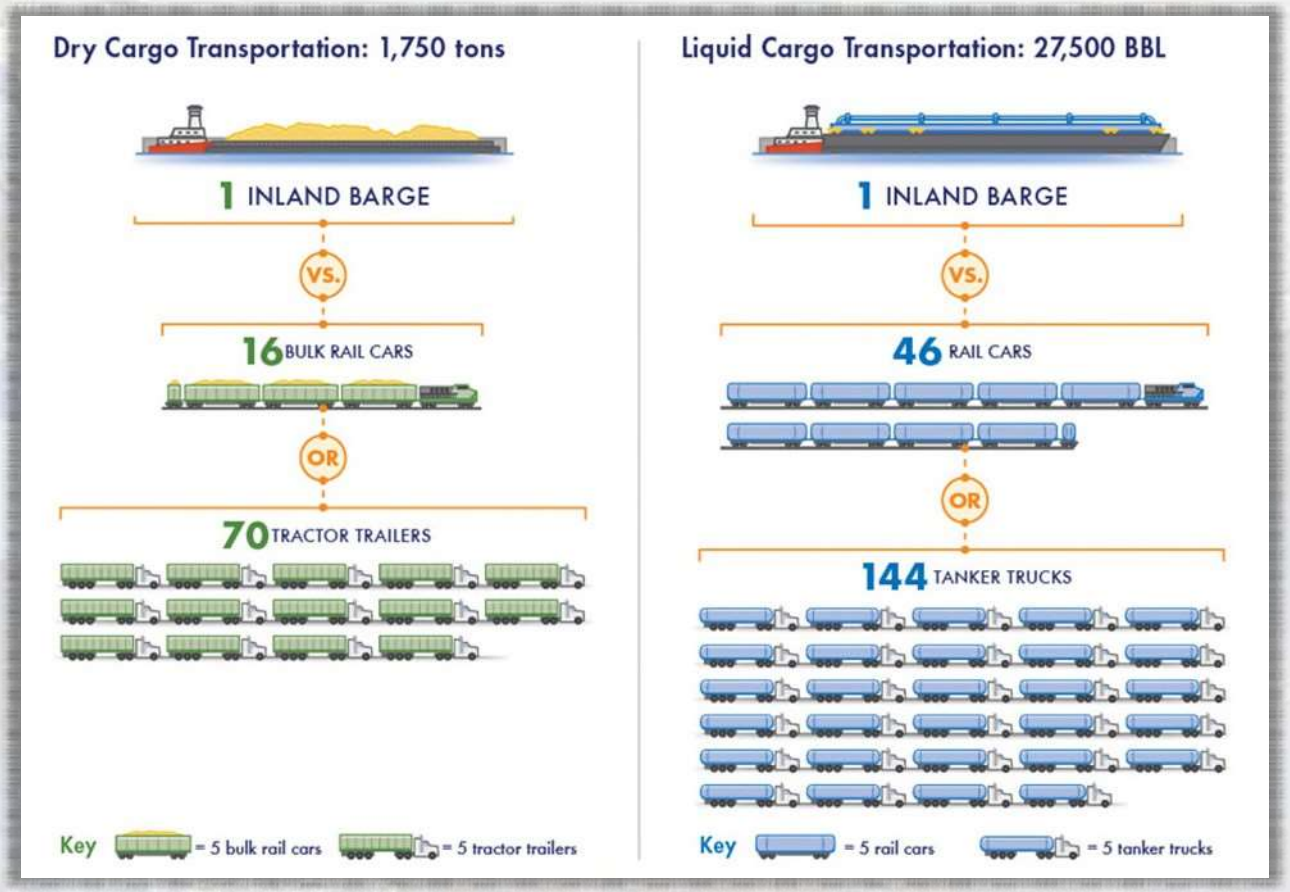
- Jones Act: vessels moving cargo between two U.S. ports must be American-built, -owned & crewed
- Modern, well-maintained ports and waterways infrastructure
- Federal laws and regulations that…
  - Facilitate safe, efficient, sustainable maritime commerce
  - Keep pace with emerging tech
  - Promote, don't discourage, innovation and investment

The Greenest Mode of Freight Transportation

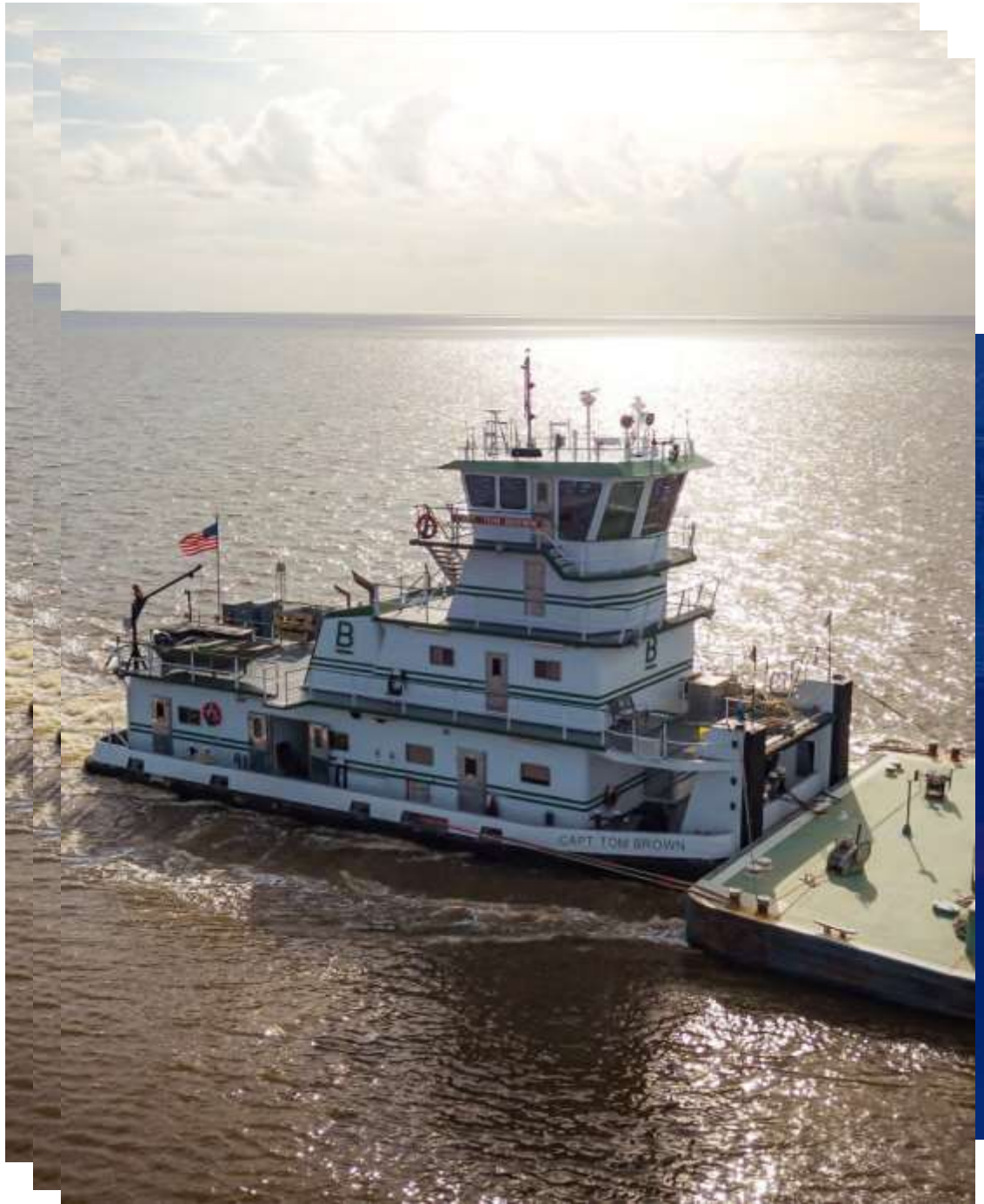


Source: National Waterways Foundation

The Greenest Mode of Freight Transportation



AWO is committed to providing members with the tools and resources to ensure our industry is prepared for the safety and sustainability challenges of tomorrow. We will continue to set high expectations for ourselves by measuring our safety progress, including through our Safety Statistics Reporting Program, and prepare for the future through forward-facing initiatives, like our Environmental Stewardship Best Practices.



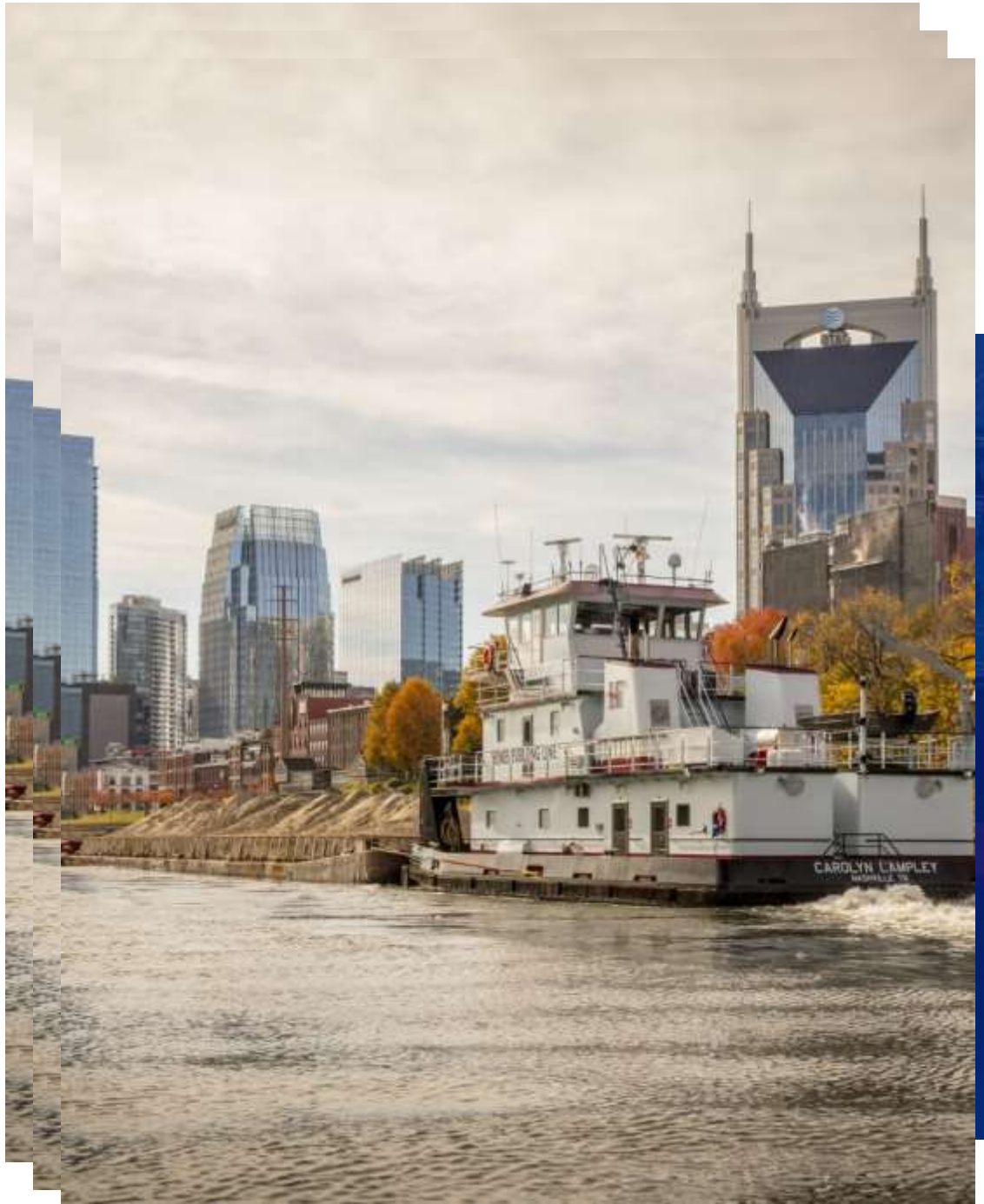
Knowledge Gaps

Economics

- Accurate and Complete Economic Models
  - Entire system (harbors, channel, deep-water)
  - Changes to decisions/behaviors caused by planned & unplanned closures
  - Impacts caused by lock closures w/no redundant lock
  - Impacts caused by lock closures that are concurrent w/no redundant lock
  - Impacts cause by low & high water, ice

Next Steps

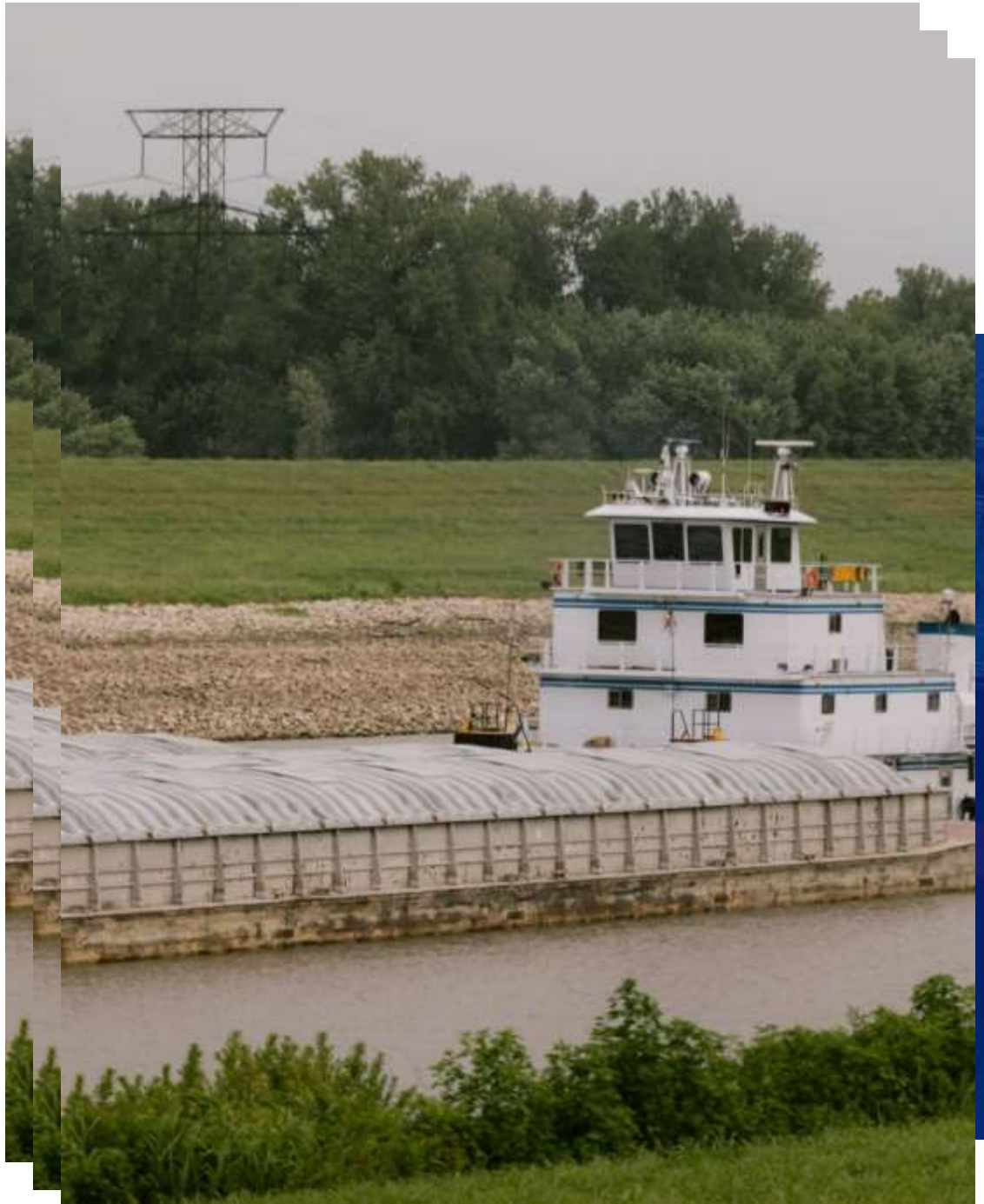
- Under the Committee of the Maritime Transportation System (CMTS) or the Maritime Administration (MarAd), studies should be conducted to understand the full economic impacts to the region and the nation. Other impacts such as safety, security and environmental impacts also need updating.



Knowledge Gaps

Predictive Safety and Security Models

- We need better models to recover the Marine Transportation System (MTS) effectively & efficiently – avoiding impact to the national economy
  - What happens during an earthquake?
  - How to react to infrastructure that fails above/below/on the river?
  - What are the cyber concerns of highest risk?
  - Are regulations in sync with current threats?



Next Steps

- Coordination by the CMTS of federal agencies – including but not limited to – the Cybersecurity & Infrastructure Security Agency (CISA), the Corps, the Coast Guard, the National Economic Council, the Council for Environmental Quality (CEQ), and MarAd – to increase transparency, provide timelines for completion of work, and form partnerships with the industry

Knowledge Gaps

Predictions

- Accurate and timely water levels are needed to ensure safety, security, and economic viability – needs improvement based on 2022
- To ensure the above, weather modeling needs improvement
- Air gap sensors need to be installed in all bridges to ensure safe passage of vessels during high water
- Increased surveys as river levels fall

Next Steps

- Improved predictions from the National Weather Service (NWS), especially when there are extreme rises or falls in river levels
- Install air gap sensors on bridges that pose safety risks during high water
- The Corps should position survey equipment at locations that are “usual suspects” for safety and environmental risks as the water levels fall

Infrastructure Gaps

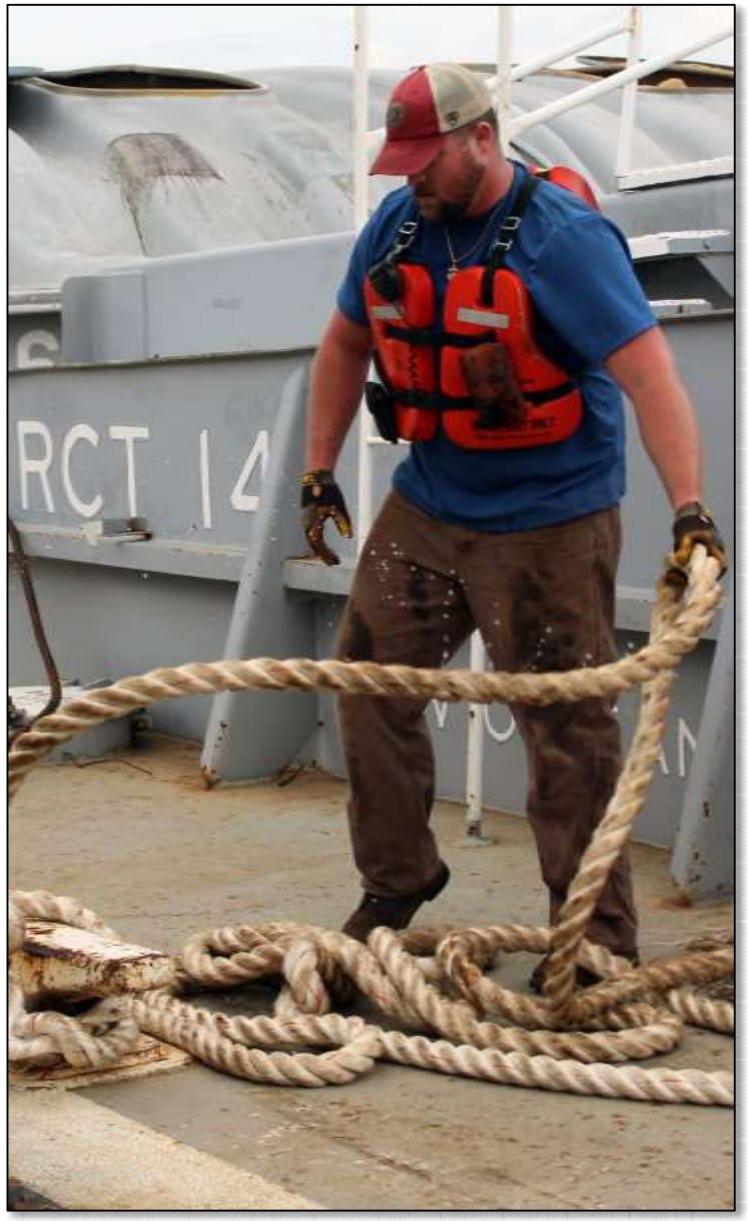
Locks/Structures

- New 1,200-foot locks throughout the system
- Redundant 1,200-foot locks are needed to ensure safety and transit during maintenance, especially unplanned closures
- More anchorages or structures for vessels to stage and hold
- Increased automation at locks to decrease transit time and increase safety

Next Steps

Locks/Structures

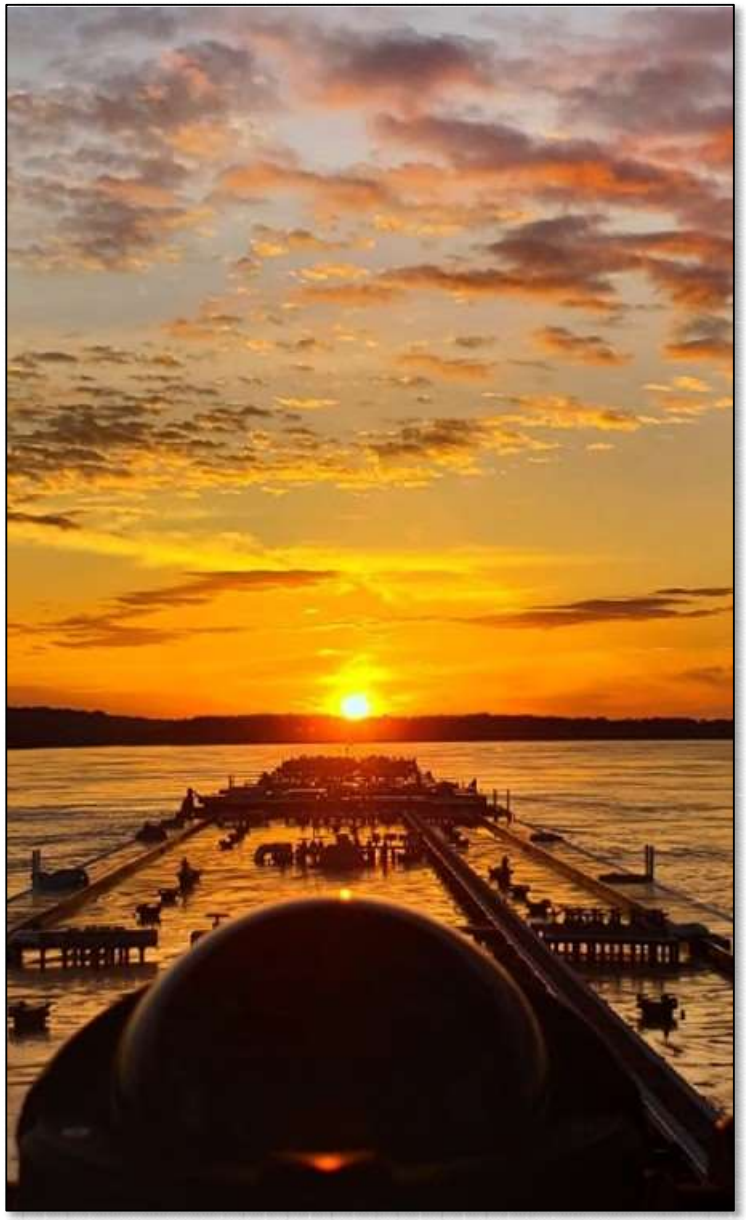
- Congress needs to appropriate monies to complete the locks authorized on the Upper Mississippi and Illinois rivers in the Water Resources Development Act (WRDA) 2007
- Fully utilize funds in the Inland Waterway Trust Fund to modernize the system
- Authorize redundant locks that would benefit the regional and national security
- The Corps and Coast Guard should collaborate with industry to identify where anchorages, mooring cells, or other structures would improve the safe flow of traffic on the river and recommend to Congress authorization of such structures
- Congress should authorize and appropriate funds to conduct testing of current technology at locks that would improve safety and efficiency



Infrastructure Gaps

Equipment

- There has been a serious lack of national investment to support navigation
  - The country owns aged dredges - average age 70 years
  - The country owns aged Waterways Commerce Cutters (vessels that set Aids-to-Navigation – AtoNs) – average age 56 years
  - Landside AtoNs need to be routinely maintained

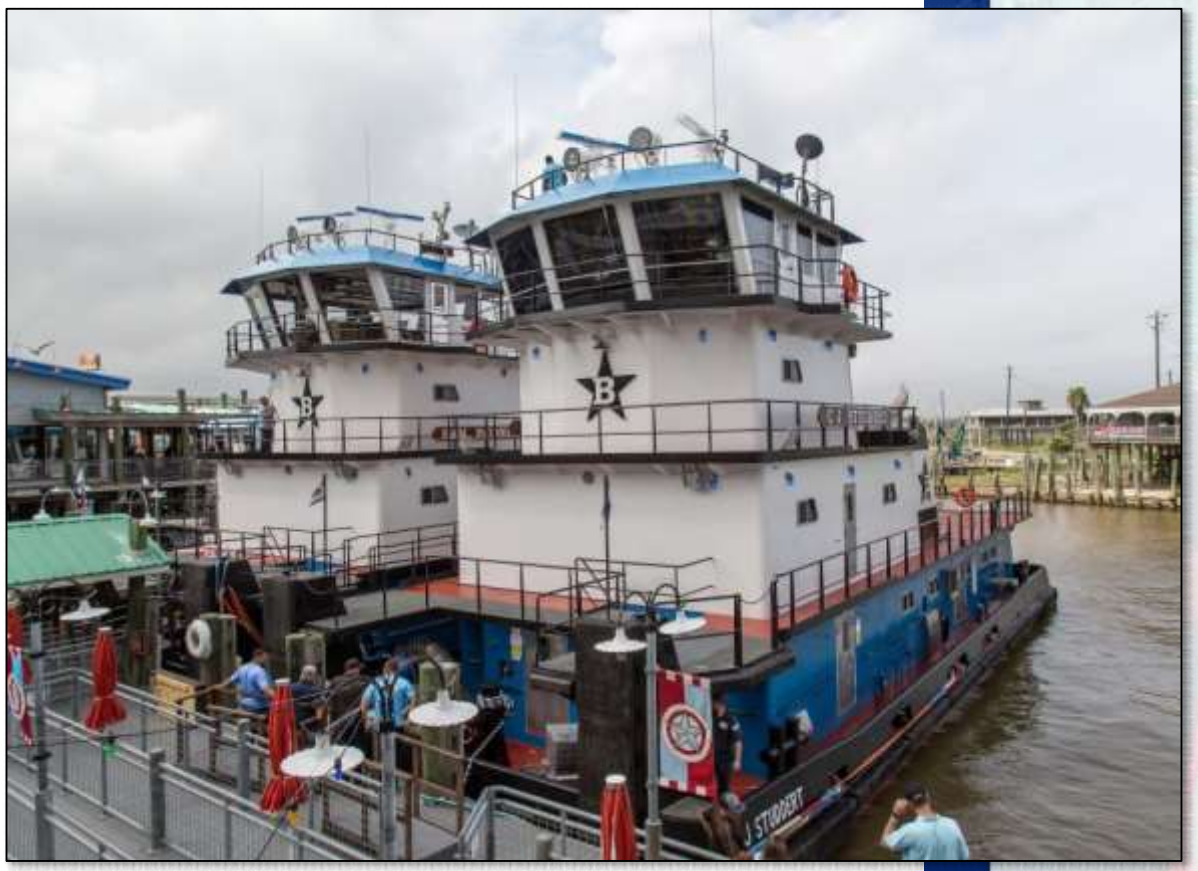


Next Steps

Equipment

- Recapitalize
  - Congress should ensure that the Waterways Commerce Cutters are delivered on time
  - Congress should authorize and appropriate funds to construct new dredges
- The Mississippi Valley Division (MVD) should embrace the utilization of contract dredges as authorized in WRDA 2022, Sec. 8133
- The Coast Guard should properly maintain all landside AtoNs
- The Coast Guard should continue testing to find AtoNs that are more durable in the river system

Science Gaps



- The number of electronic buoys needs to be expanded
- The location of both electronic and physical buoys needs to be added to electronic charts in a timely (within 24 hours) manner

Next Steps

- The Corps and the Coast Guard need to increase the number of electronic buoys – collaborating with industry on where buoys are needed
- The Coast Guard needs to utilize an improved technology to upload electronic buoys immediately – increased urgency is needed, especially as the river level falls

Policy Gaps

- The Corps should maintain authorized depths (or more) during all water levels
- The Corps needs to utilize contract dredges to ensure the main channel, ports, terminals, and the route between the channel and ports/terminals are all maintained at Congressionally authorized depths
- The Corps needs to develop a transparent and consistent permitting system to ensure that there is a safe, free flow of traffic and a transparent and reasonable process to remove permits if they are a hazard to navigation

Next Steps

- Congress should direct the Corps, and provide appropriate funding, to maintain all navigable channels at authorized depths, at a minimum
- The MVD must embrace the use of contract dredges (WRDA 2022, Sec. 8133) to ensure the authorized depth for ports, harbors, terminals, and the routes between them and the channel
- The Corps - MVD and the Great Lakes and Ohio River Division (LRD) should work with industry through the Mid-America Regional Quality Steering Committee (RQSC), the Corps-Coast Guard-industry safety partnership, to develop a consistent and transparent permitting process for structures built over and near the rivers

Policy Gaps

- The Coast Guard should improve crewing processes on cutters to ensure full utilization of assets – crews and vessels
- The automated Identification System (AIS) encoding guide should provide better guidance to fleeting areas on tow sizes

Next Steps

- The Coast Guard should evaluate how to ensure full crewing of vessels at all times, especially during critical water levels
- (AIS) encoding guide needs upgrading to ensure safe navigation throughout the system