

ST. PAUL DISTRICT OPERATIONS PERSPECTIVE

MISSISSIPPI RIVER MANAGERS MEETING

8 Feb 2022

Tamara Cameron

Chief, Operations Division



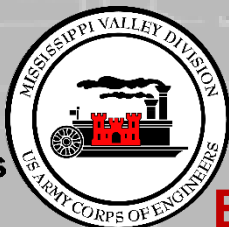
INLAND NAVIGATION

WHERE WE'VE BEEN AND WHERE WE'RE GOING

- CURRENT STATE
- FUTURE STATE
- STRATEGIC INITIATIVES
- USACE NAVIGATION PRIORITIES



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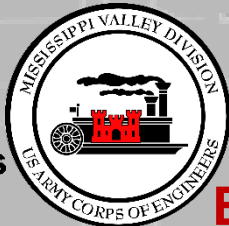
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CURRENT STATE OF INLAND NAVIGATION

- 514.9 M tons (2019) of goods valued at \$134 billion, vs. 766.3M tons (2018) of goods valued at \$507.3 billion, moved on the U.S. inland waterways system
- World-wide demand for waterborne commerce expected to more than double by 2025
- (estimated 47% of US inland waterborne commerce is on Miss River)
- Historic moment: Infrastructure and Investment Jobs Act - \$2.2 B



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STRATEGIC INITIATIVES UPDATE

CURRENT STATE

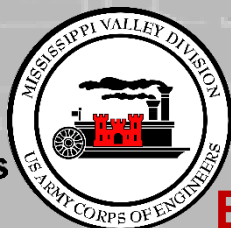
- Strategic Engagements

FUTURE STATE

- Resilient Navigation:
 - Open Pass
 - River to Reuse



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STRATEGIC ENGAGEMENT INITIATIVE – YEAR 2

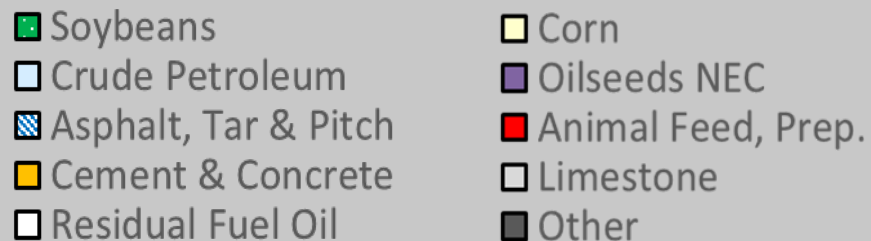
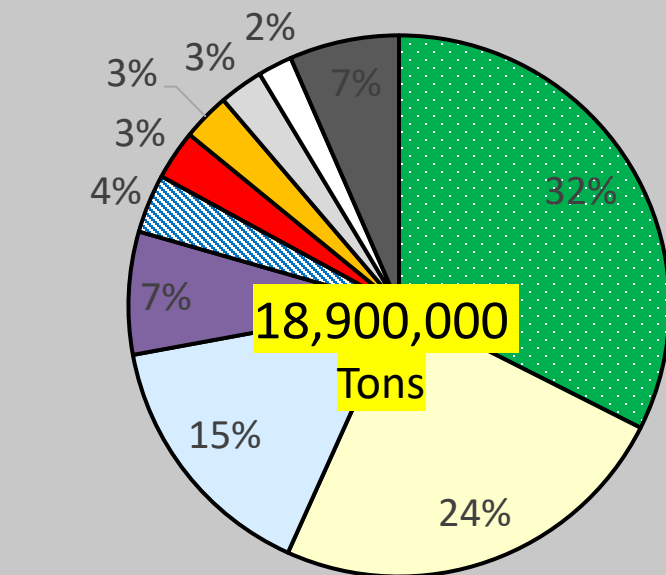
- ERDC supported effort
- Define current and future state of inland navigation
- Multi-modal and Inter-modal context
- Future focus
- Information gathering includes Industry input
- Establish a strategic outreach framework around the commercial, hydrologic, political, financial, and regional landscape



OUTCOME:

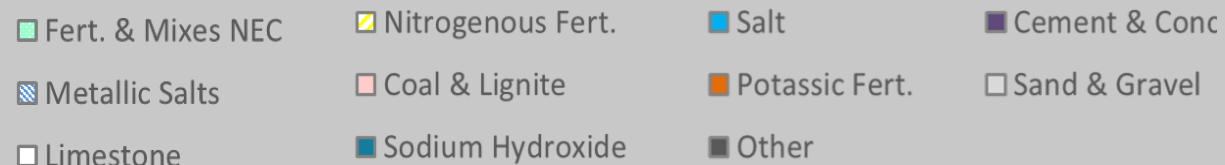
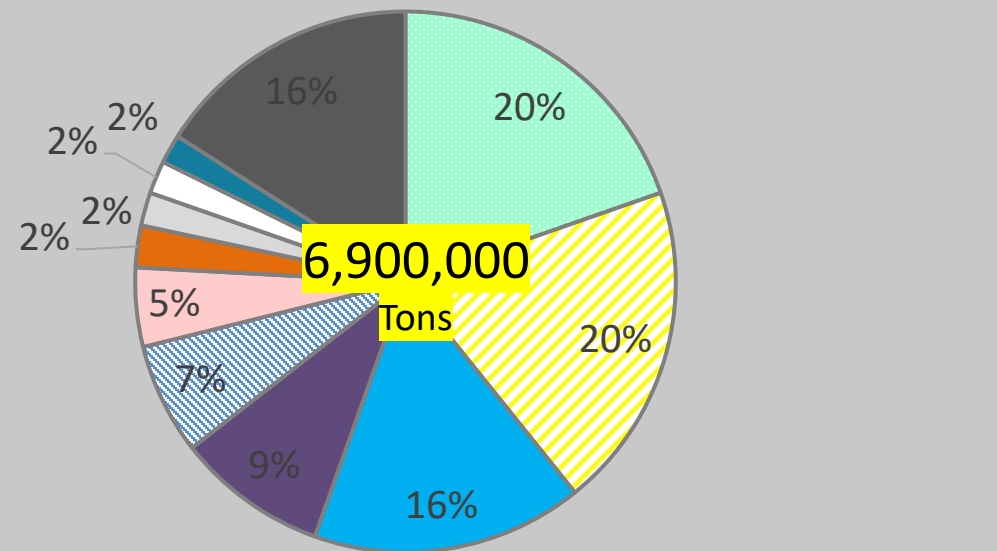
- We understand the big picture and how we fit into it
- We know what we need to do now to be ready for the future

UPPER MISS SHIPMENTS (EXPORTS) by COMMODITY TYPE, 2019



2020 numbers
expected by
Mar 2022

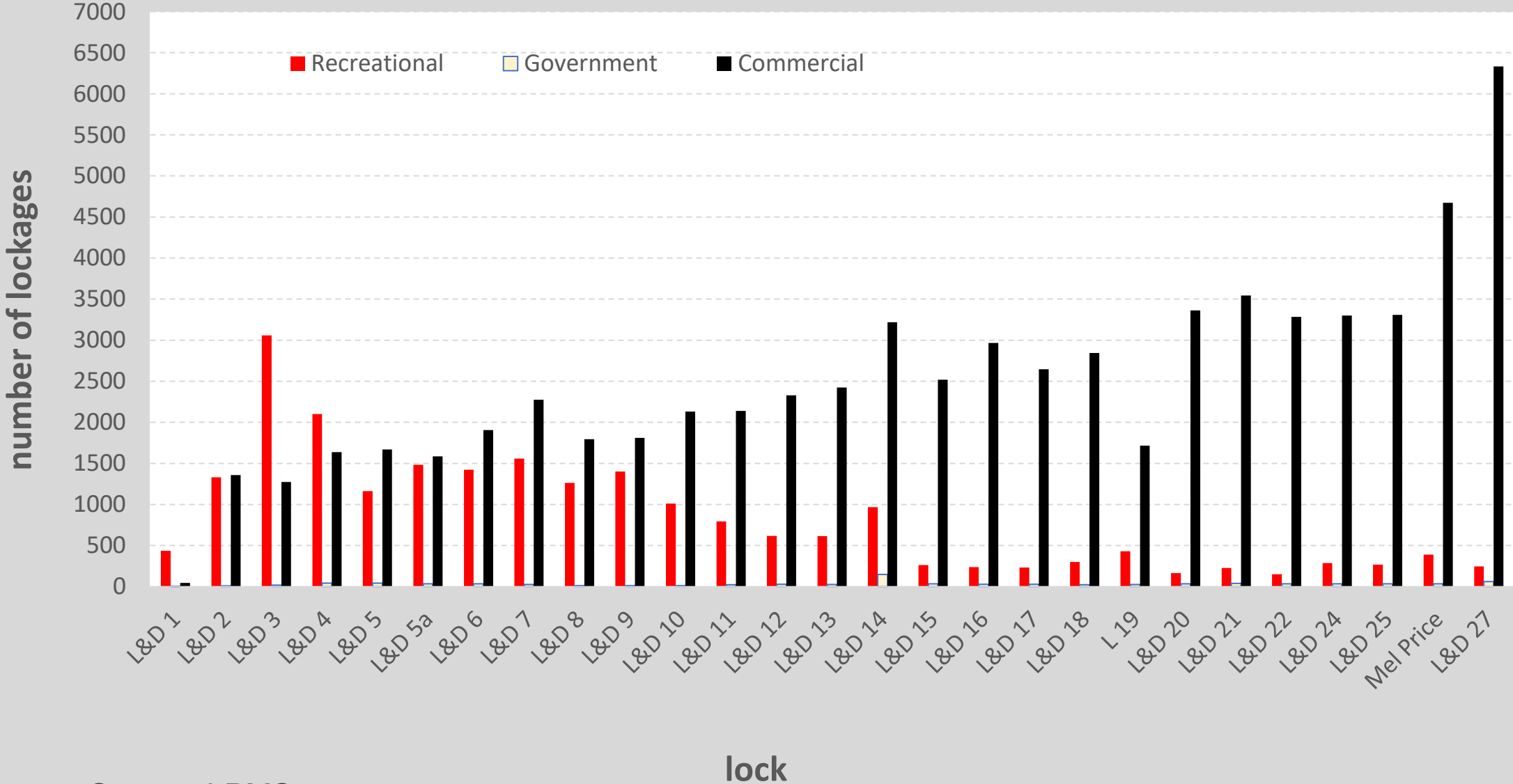
UPPER MISS RECEIPTS BY COMMODITY TYPE, 2019



*Section Included: Minneapolis, MN to Mouth of Missouri River; Upper Mississippi River from mile 857.6 to mile 195. Maintained Depth: 9 feet. Navigation Seasons: 23 March to 5 December upper portion; annual closure in upper portion due to winter freeze-up; open all year in lower portion except during brief periods when the channel may be blocked by ice.

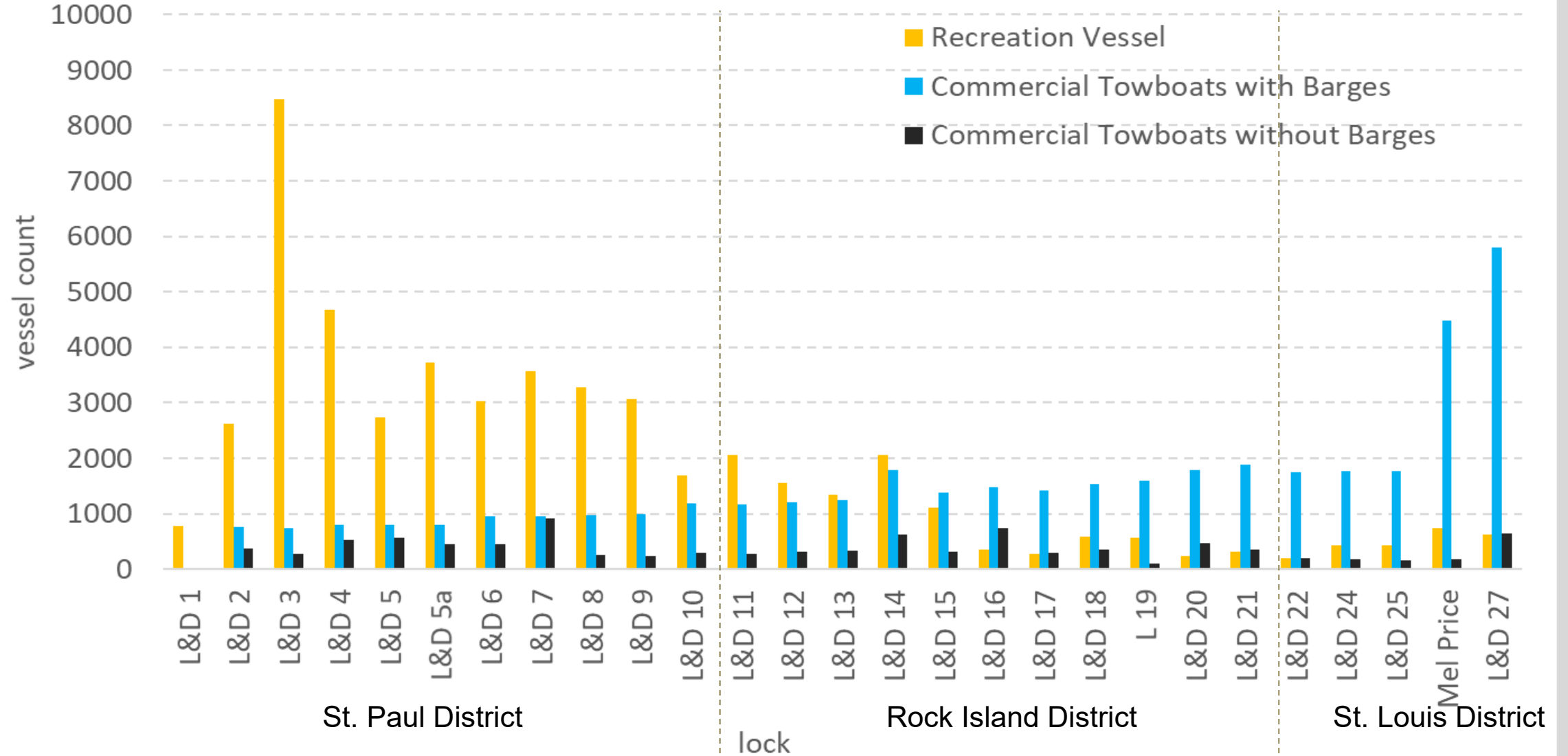
Data source:
WCSC

Number of Lockages by Vessel Type and Lock Location on the Upper MS, 2021



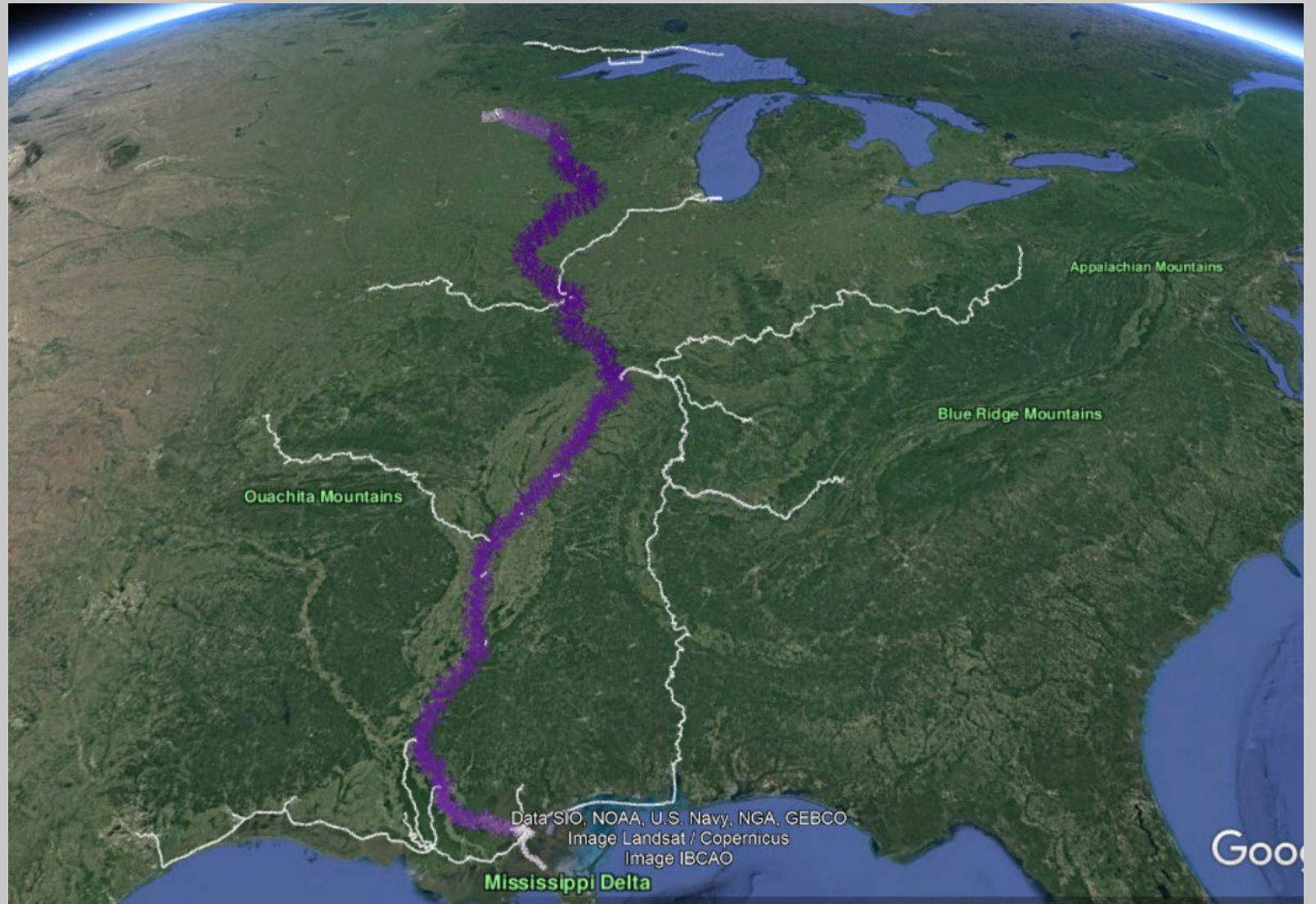
Source: LPMS

Waterway Usage by Vessel Type and Lock Location on the Upper MS, 2021



MVP RESILIENT NAVIGATION STRATEGIC VISION

- Quantify the current state of MVP inland navigation, the benefit to the region, and the potential impacts of changes to the waterway.
- Summarize the future of inland navigation within MVP/USACE, utilizing input from local ports and shipping industry.
- Identify potential future strategic/beneficial uses of district dredged material



Will use updated data in 2022

Source: CPT cargo shipment transit paths 2016

ERDC SUPPORT OF MVP STRATEGIC VISION

Data Collection/Analysis:

- Port Performance
- Waterway Transit Count by Direction
- Port Connectivity, Destination/Origin
- Impacts of Restrictions/Closures

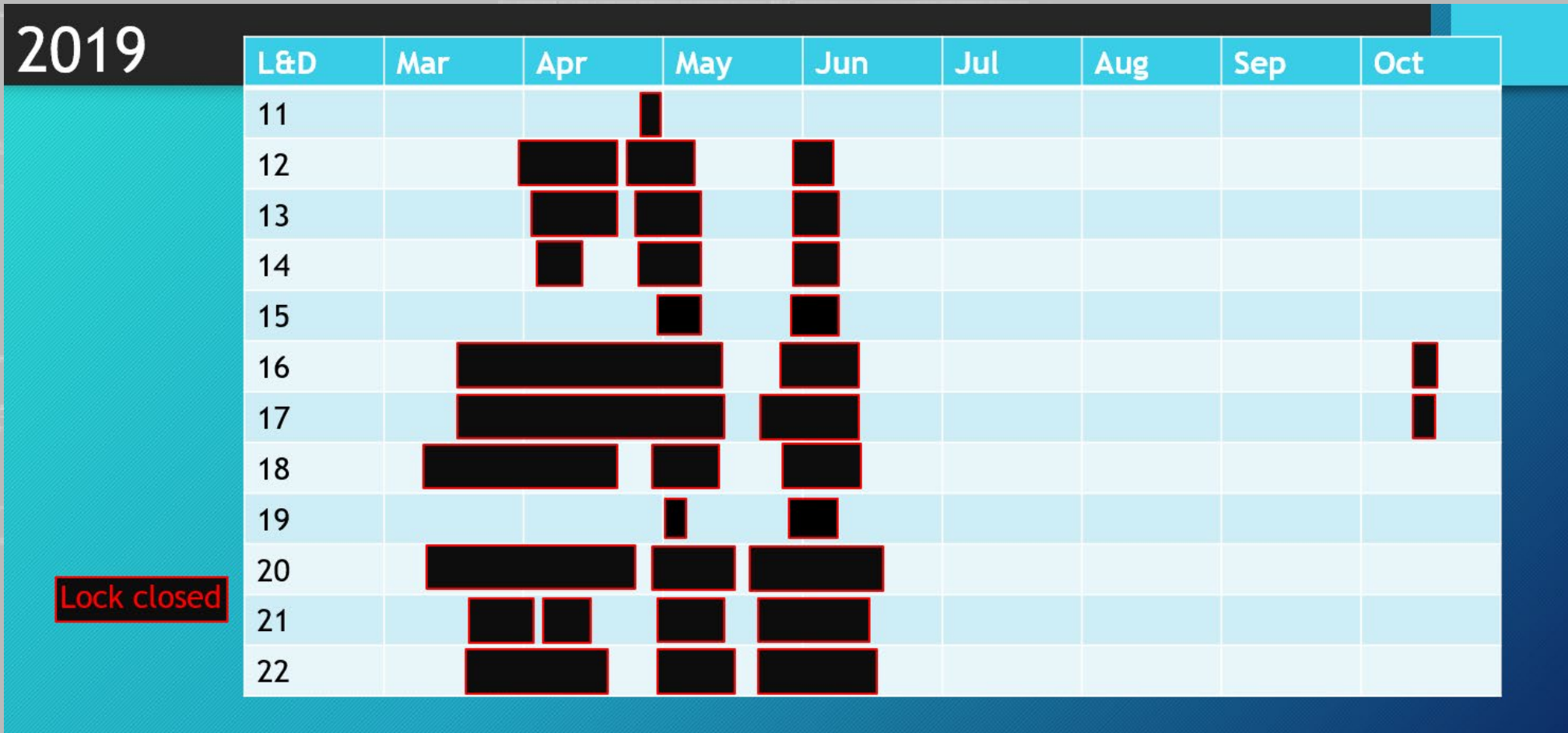
Outreach to Stakeholders:

- Commercial users
- ✓ Port Authorities (2021 and 2022)
- Industry advocates
- Regulatory authorities
- ✓ Multi-modal transportation authorities (2022)

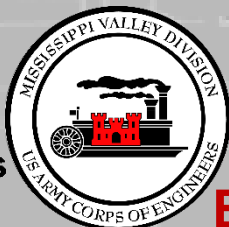


Relative Density Plot: 2019 Vessels traveling to/from MVP

OPEN PASS CONCEPT – INITIAL FINDING (2021)



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Source: USACE Rock Island District Engineering staff

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RIVER TO REUSE

PLACE MATERIAL WHERE IT CAN BE USED PRODUCTIVELY

- ✓ Agricultural Soil Amendments
- ✓ Residential Development
- ✓ Habitat Island Construction
- ✓ Stockpile for Removal
- ✓ General Construction



FUTURE STATE OF INLAND NAVIGATION

- ❑ Invest in infrastructure through enhanced maintenance and dredging, modernization and new construction
 - ✓ Invest through NESP
 - ✓ Reduce the O&M backlog
 - ✓ Rethink (Modernize) our approach to channel maintenance
 - ✓ Use our resources in the most efficient and effective ways possible



Lock and Dam 2, Hastings, MN

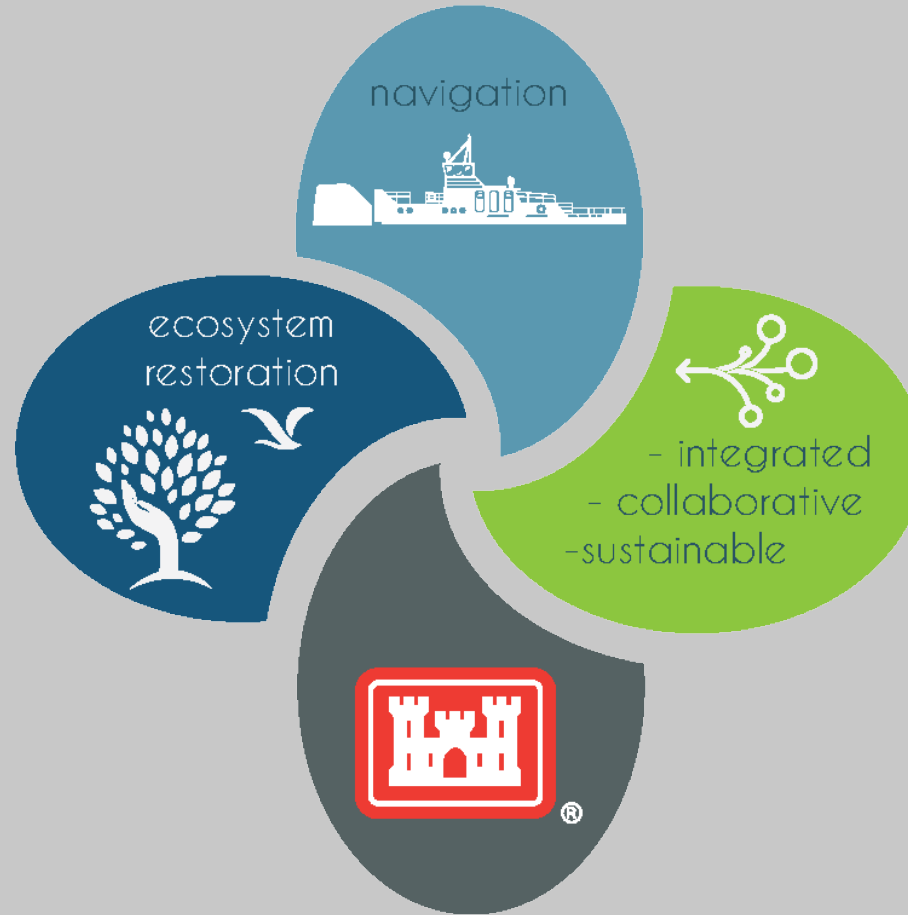
NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM (NESP)

GLOBAL MARKET COMPETITION

Helps the American farmer compete in global markets and decreases transportation costs.

SUPPORTING RURAL AMERICA

Integrated approach maximizes environmental benefits while preserving multiple uses for the waterways.



INFRASTRUCTURE INVESTMENT

Gives America the working modern infrastructure it deserves.

JOBS CREATION

High paying construction jobs and a permanent boost to the Midwest economy.

NESP IS VITAL TO THE NATION

NESP

FY 22: Received construction new start

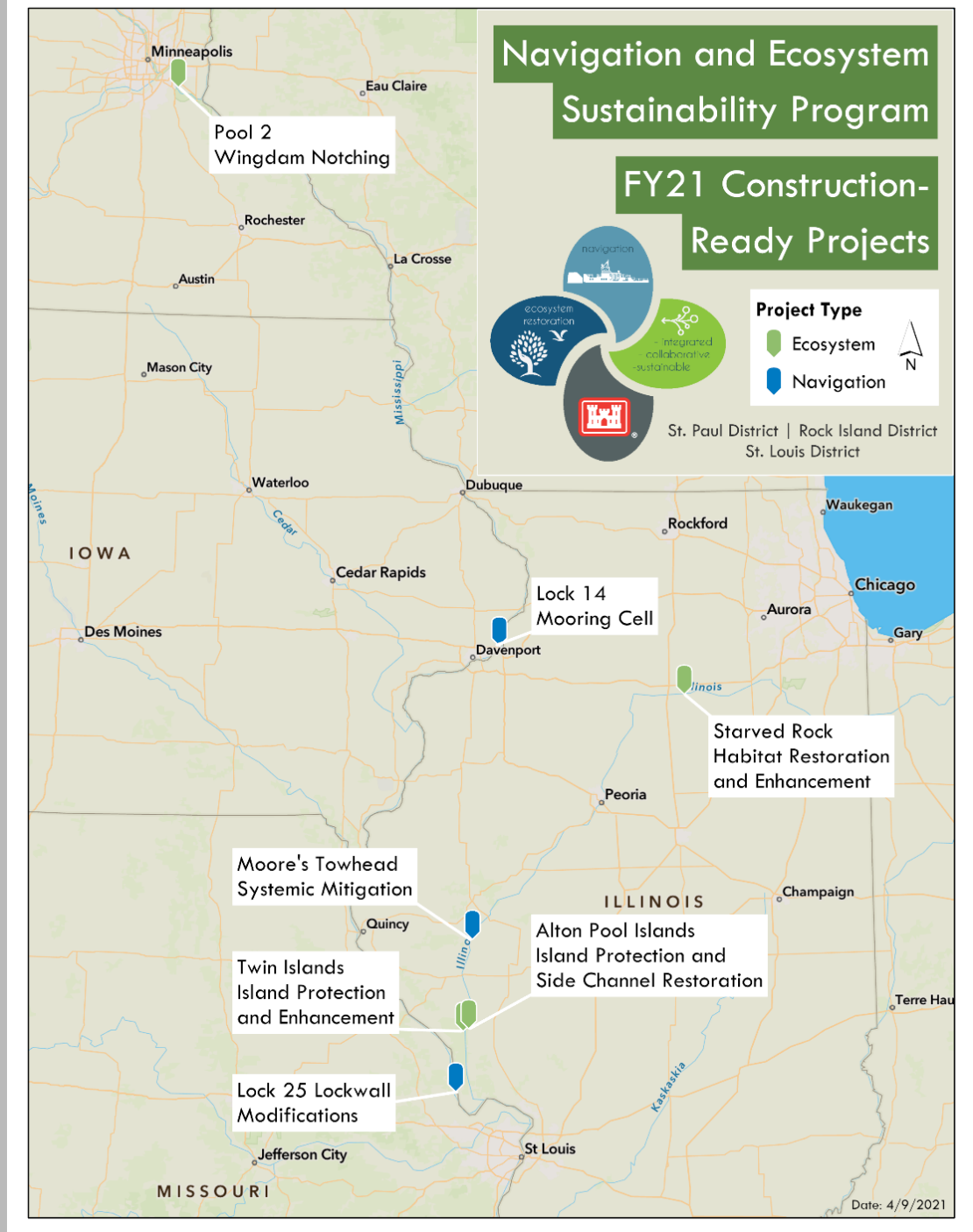
\$732.1M for 1200' lock at LD 25

\$97M for Lock 22 Fish Passage

NESP – Mooring Facilities Project
Project Site Priority List as of 1 FEB 2022

NOT YET FUNDED

Priority	Location
1	Lock 14 Lower
2	Lock 15 Lower
3	Lock 20 Lower
4	Lock 11 Upper
5	Lock 10 Upper
6	Lock 25 Lower
7	Lock 14 Upper
8	Lock 22 Upper (repair/replace)
9	Lock 18 Lower
10	Lock 24 Upper





O&M BACKLOG/DEFERRED MAINTENANCE - ST. PAUL DISTRICT

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In fiscal year 2015,
USACE maintenance
funding = 0.23% of Plant
Replacement Value

NRC recommends an annual
maintenance investment of
2 - 4% of PRV

Select Backlog/Deferred Item	FY 19 Estimate
Dam Gate and Bridge Painting	123,800,000
Bulkhead Repair	3,135,000
Dam Gate Repair	2,725,000
Guidewall Repair	13,600,000
Lock Repair (dewatering)	1,175,500
Spillway Rehab/Repair	4,250,000
Machinery/Equip Repair	488,000
Building/Grounds Repair	1,701,500
Auxiliary Lock Closure	30,000,000
Miter Gate Anchorage replacement	55,000,000
Miter Gate replacement	52,100,000
Other repairs	8,687,500
Tainter valve replacement	4,000,000
Total	\$300,662,500



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MODERNIZING OUR REAL ESTATE PRACTICES

- Update to Policy Needed – HQ request in progress
 - Fee Title Land Acquisition
 - Non-Standard Estate

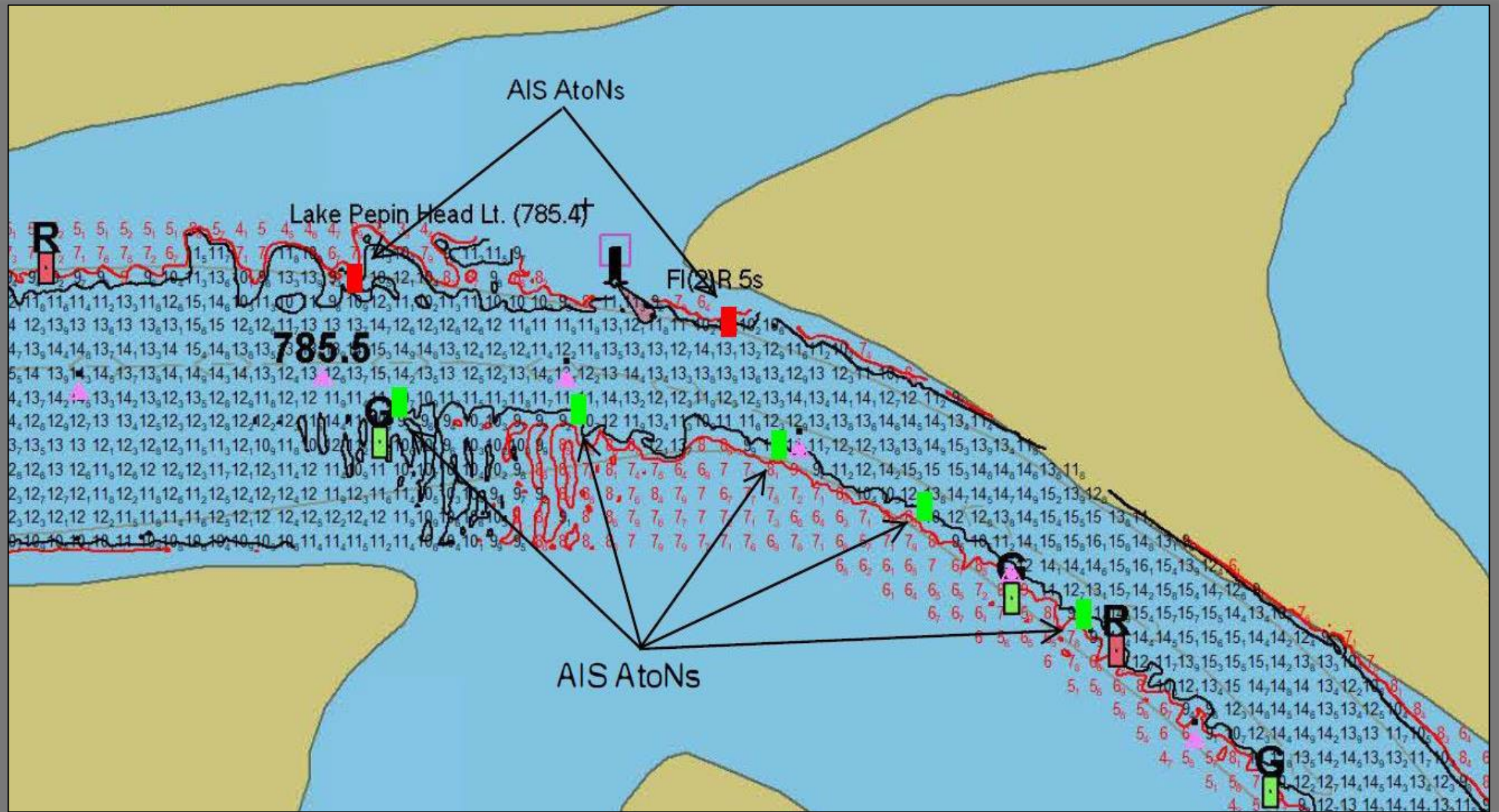


Dredge Material as a Resource



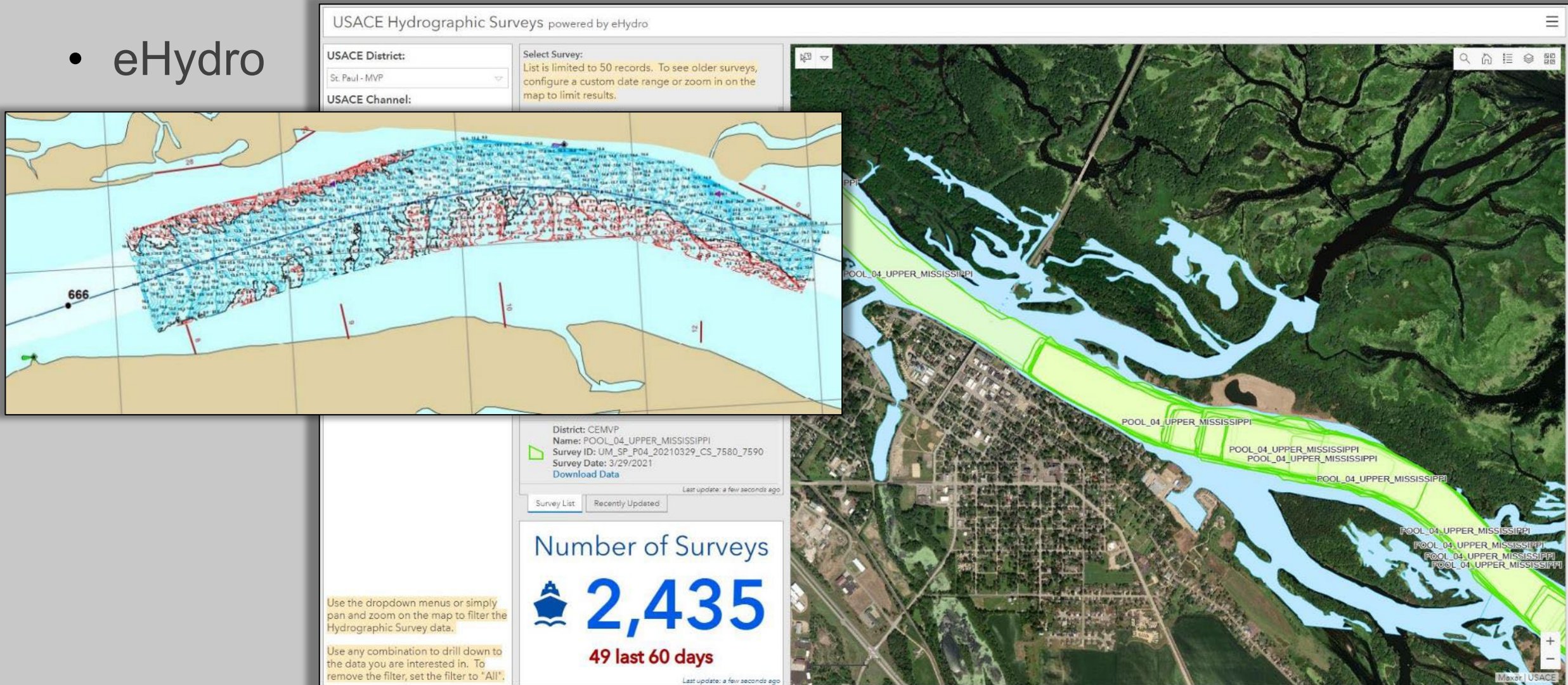
Dredge Material “Disposal”

MODERNIZING NAVIGATION CHARTS



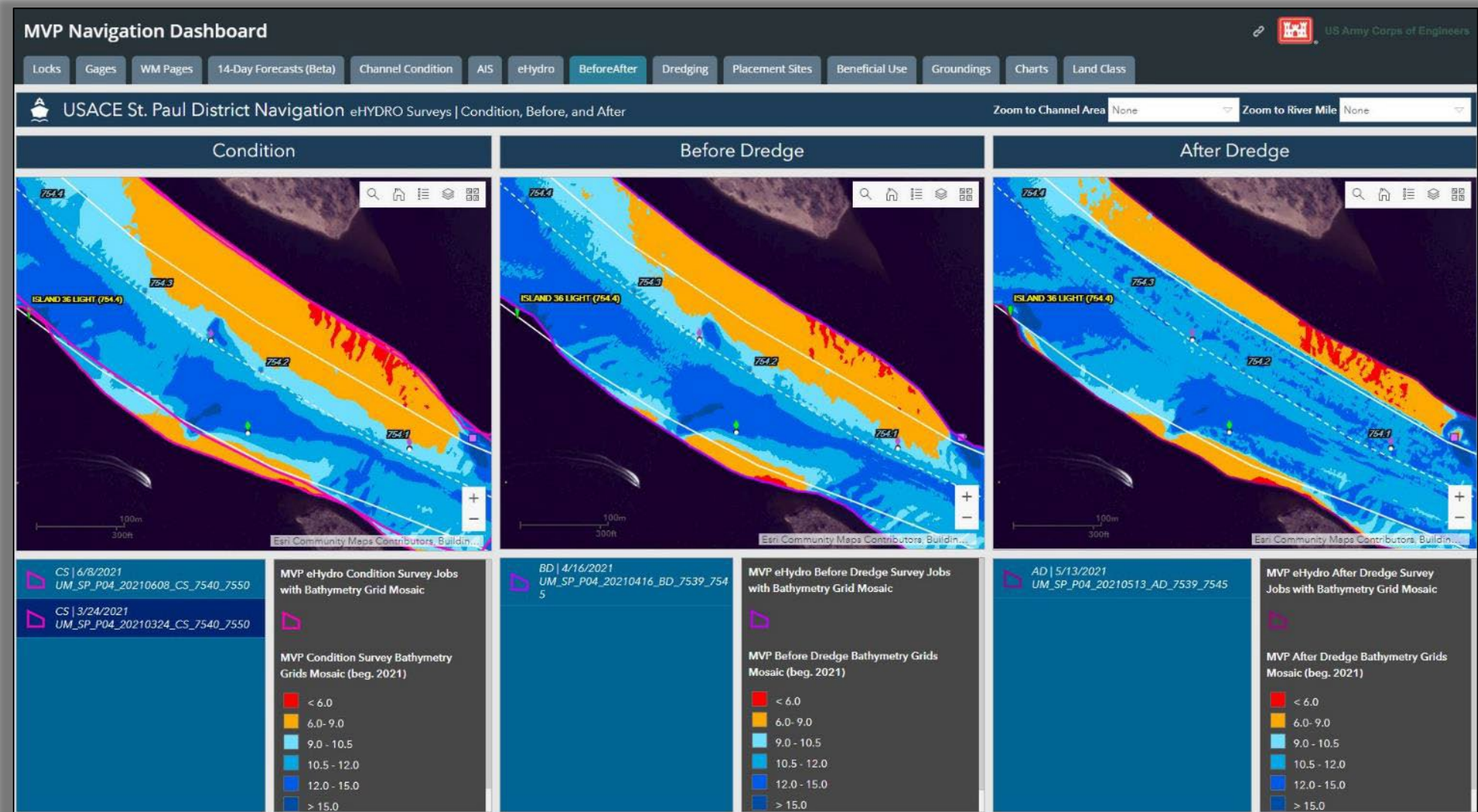
MODERNIZING SURVEY AVAILABILITY

- eHydro



MODERNIZING DECISION MAKING TOOLS

- Navigation Dashboard – Increasing Internal Efficiency



USACE FISCAL YEAR 2023 NAVIGATION BUSINESS LINE PRIORITIES

1. Expanding opportunities for beneficial use of dredged material and quantifying benefits
2. Science-based mitigation for environmental aspects of dredging and dredged material
3. Remote lock operations
4. Enhance resiliency of navigation structures and minimize maintenance costs
5. Coastal resiliency by making navigation channels more resilient by employing engineering with nature concepts
6. Engaging multidisciplinary engineering and environmental disciplines at our deepening/widening projects in support of resilient marine transportation systems



FUTURE STATE OF NAVIGATION

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* Maintain resilient navigation utilizing risk management processes.



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