# NESP LOCK 25 NEW 1200' LOCK AND LAGRANGE 1200' LOCK

# INLAND WATERWAYS USERS BOARD MTG NO. 97

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UNTERVICE BUILDING SUCT

1000 CONTRACTOR



## LOCK 25: PROJECT OVERVIEW OF SCOPE

### SITE PLAN



Lock and Dam 25 is located in Calhoun County, Illinois, and Lincoln County, Missouri, at approximately Mile 241.4 on the Upper Mississippi River above the mouth of the Ohio River near Winfield, Missouri.

### **PURPOSE**

• The primary purpose of the project is to improve efficiency, reliability, and safety for Navigation traffic transiting the facility along with additional operational redundancy at Lock 25.

### **KEY FEATURES**

- New 1200ft Navigation Lock adjacent to existing 600ft Lock
- New 1200ft Upstream Approach Wall
- New 600ft Downstream Approach Wall
- Existing 600ft Lock remains in operation

### **PROJECT BENEFITS**

- Reduction in per lockage times from two and a half hours or more to approximately 45 minutes.
- Accommodation of the largest tow configurations on the Upper Mississippi River.
- Added redundancy at the site, as the existing 600' chamber will remain in place and can be used as needed.
- Improved mariner safety, with professional mariners no longer having to "split" tows to transit the chamber

### **DESIGN AND CONSTRUCTION OVERVIEW**

### Design

- Perform remaining geotechnical investigations
- Complete hydraulic modelling
- Incorporate Scour Remediation design into foundation and structural plan
- Finalize ACQ Strategy/Plan
- Advance current designs from current ~0-15% completion state to final.
- Develop Solicitation Package
- EST. COST: \$ 60M











Fully Funded Project Costs	
nase 1 – Existing Lockwall odifications	\$10,000,000
nase 2 – Remainder of ock and Approach Walls	\$722,000,000
otal Project Cost (2021 \$s)	\$732,000,000

## LOCK 25 : SCHEDULE – WORK DONE IN FY22

- Phase 1 Construction contract award for lock wall modifications
- **Risk identification**
- Construction industry coordination
- Acquisition lessons learned discussions with Kansas City, Galveston, and Baltimore Districts
- Acquisition strategy determination utilizing enterprise-wide lessons learned on mega projects.
- Team development and design advancement.







# LOCK 25: SCHEDULE - ONGOING AND REMAINING WORK

- Current project schedule:
  - ~3-year design period (FY23-FY25)
  - $\circ$  ~1-year RE ACQ period concurrent with design starting at 65% submittal (FY24-FY25)
  - ~1.5 year acquisitions period starting at 100% P&S (FY25-mid FY27) Ο ~5 year period of performance on construction contract (FY27-FY32)
- Project anticipated to be constructed in two phases Phase 1 lockwall modifications and Phase 2 – 1200' lock construction
- Current completion schedule assumes a traditional design-bid-build contract.





## LOCK 25: PROJECT ISSUES AND CHALLENGES

> Issue: Remediation of existing riverbed scour in vicinity of new Lock. > Primary Mitigation Strategy: ACQ Strategy that allows for contractor input (ECI, IDaC). Focused early design effort with construction industry input to validate plan and minimize project cost and schedule impacts overall.

Current Condition w/ new river wall superimposed



Future Condition under Concept 1







As of August 4 2022

## LOCK 25: PROJECT ISSUES AND CHALLENGES

- > Issue: Need to minimize impacts to industry stakeholders and existing navigation during Lock Construction
- > Primary Mitigation Strategy: ACQ Strategy that allows for contractor input (ECI, IDaC). Continued Navigation and Construction industry collaboration to inform intermediate wall design and operational capabilities.
- > Issue: Construction Market Inflation and Labor/Material Availability > Primary Mitigation Strategy: ACQ Strategy that allows for contractor input (ECI, IDaC). Regular updates, Economic Price Adjustment Clauses, Construction Industry engagement to inform design, schedule, and overall plan.







- INDC technical lead on board, leading the design efforts.
- A/E design contract will be awarded in FY22 for site investigations and initial lock design to approximately 35%.
- ERDC has begun to update the physical model for project use. NAV industry coordination (pilot simulation) will be coordinated and occur at a later date.





