

KENTUCKY LOCK ADDITION

INLAND WATERWAYS USERS BOARD MEETING NO. 99

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Nashville District
13 April 2023

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KENTUCKY LOCK - OVERVIEW



Authorization:

- Water Resources Development Act (WRDA) of 1996
- Reauthorized in WRDA 2020

Purpose/Description:

Construction of a new 110' x 1200' lock addition at Kentucky Lock. The existing navigation lock is too small to meet current and future traffic demands without significant delays. The new Lock will accommodate 15 barges (Max amount allowed on TN river) per lockage as opposed to the existing 110 ft x 600 ft lock's 9 barge per lockage Kentucky Lock's delays are among the highest in the country.

Schedule:

| DESCRIPTION | ORIGINAL | CURRENT |
|--|----------|-----------|
| Lock Operational (Online) | 2025 | 2029-2030 |
| Project Completion Date (Base Schedule) | 2028 | 2030-2031 |

Cost:

- Total Project Cost Estimate: \$1,561,073,000(FY22 Price Level). Certified 21 Apr 22
- Section 902 Limit = \$1,630,303,000



KENTUCKY LOCK ADDITION - SCOPE



Total Project Cost Estimate – \$1,561M (2022 TPCS)
\$652,811,211M Expended thru 28 Feb 2022



Completed

Current

Future

Remaining Project Scope:

Approach Walls (AWC)
 E/M, Buildings, Bridges, Utilities (EMBC)
 East Bank Development (EBSD)

Current Contracts:

DS Monoliths (\$380M) – CCD MAY 2027

DS Excavation (\$54.8M) – Complete OCT 2022

DS Cofferdam (\$67.1M) – Complete MAR 2021

Closed Contracts:

Bridge Substructures (\$44M) – Complete MAR 2006

US Cofferdam (\$17M) – Complete NOV 2006

Bridge Superstructures (\$104M) – Complete JUL 2014

US MG Fab (\$5.6M) – Complete DEC 2016

US Lock (\$110M) – Complete FEB 2017

Site Demo Utilities (\$4.6M) – MAR 2019



KENTUCKY LOCK - BLUF STATUS / DASHBOARD



PROJECT SAFETY



Hours/Rate DS Monoliths
Exp Hours 209,843.50
PDART 0.95

PROJECT STATUS SUMMARY



Schedule:

| | Orig. | Last | Current |
|-------------|--------|--------|---------|
| Operational | Sep-25 | Jul-29 | Jul-29 |
| Completion | May-28 | Sep-30 | Sep-30 |

Next major Contract Award:

Lock Operational construction contract

FINANCIAL STATUS SUMMARY



| | | |
|---------|--------|----------|
| Planned | (BCWS) | \$828.3M |
| Earned | (BCWP) | \$612.8M |
| Actual | (ACWP) | \$598.2M |

BCWP: Reports the value (based on % Complete) of work performed to date

Target: Actual as compared to Planned:
(<1% = green) (>1% and <3% = Yellow and (>3% = Red)

Data as of 01 July 2022

EXECUTIVE SUMMARY:

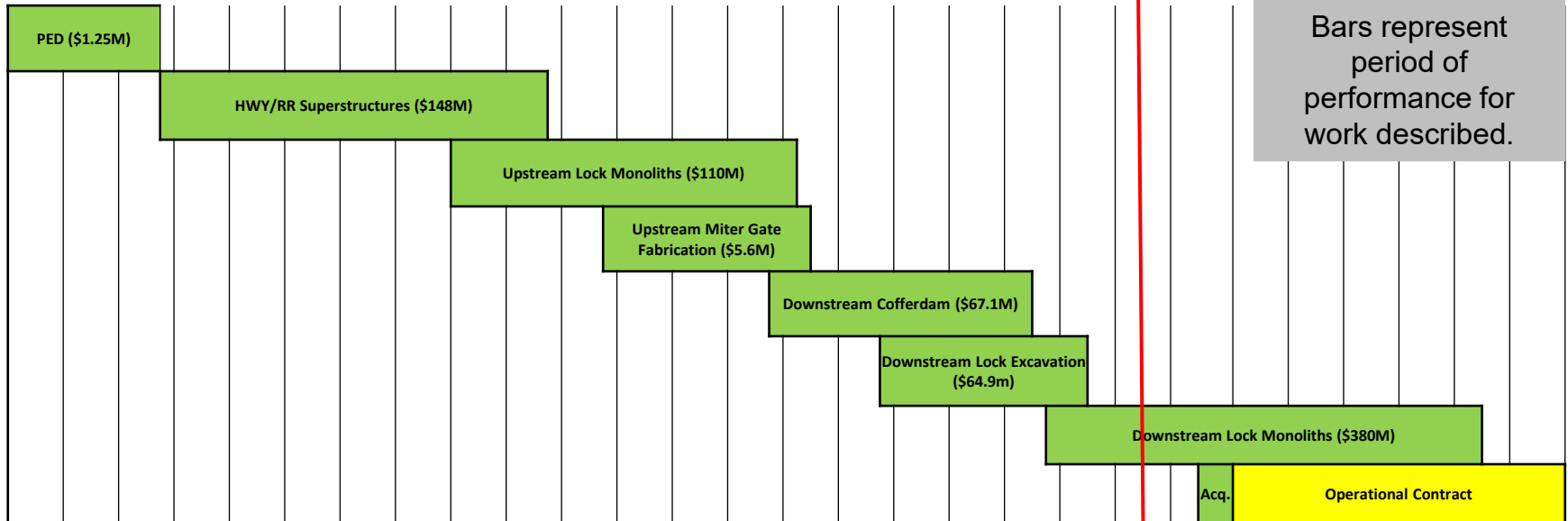
- **Downstream Lock Excavation Contract:**
 - **Schedule:** Contract completion was 21 October 2022.
 - .
- **Downstream Lock Monolith Contract:**
 - **Schedule:** Contract Required Completion Date is scheduled for May 2027.
 - **Construction Status:** Contract is 14 percent complete. Batch plant and conveyor distribution system is operational.
 - **Concrete Placements:** Several mud mats placed, first mass placement on track for early April 23.
- **Operational Contract:**
 - **Schedule:** Design and contract solicitation are being developed with plan to be in a position to make an award in 2025.



KENTUCKY LOCK – SCHEDULE & FUNDING



FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27 FY28 FY29 FY30



Funded Work

Unfunded Work, includes contract, contingency, and labor

We Are Here

Schedule comments:

- Schedule dates have not changed since last meeting



KENTUCKY LOCK – FUNDING SUMMARY



| | ARRA | CG | IWTF | BIL | Total |
|-----------------------------------|--------------|---------------|---------------|---------------|-----------------|
| Allocations through FY 2016: | \$88,833,626 | \$211,381,288 | \$171,660,987 | NA | \$471,875,901 |
| FY17 Allocation: | NA | \$18,000,000 | \$18,000,000 | NA | \$36,000,000 |
| FY18 Allocation: | NA | \$20,600,000 | \$20,600,000 | NA | \$41,200,000 |
| FY19 Allocation: | NA | \$21,800,000 | \$21,800,000 | NA | \$43,600,000 |
| FY20 Allocation: | NA | \$30,530,000 | \$30,530,000 | NA | \$61,060,000 |
| FY21 Allocation: | NA | \$71,565,000 | \$38,535,000 | NA | \$110,100,000 |
| v(IJA): | NA | \$0 | \$0 | \$465,492,000 | \$465,492,000 |
| Total Allocations to Date: | \$88,833,626 | \$373,876,288 | \$301,125,987 | \$465,492,000 | \$1,229,327,901 |
| Remaining TPC Balance: | | | | | \$332,000,000 |

| | | |
|--------------------------|-----------|-------------|
| Total Project Cost (TPC) | \$1,561 M | FY22 Price |
| Authorized Cost: | \$1,229 M | WRDA 2020 |
| Escalated Cost: | \$1,397 M | FY22 Price |
| 902 Limit: | \$1,630 M | May 2022 |
| PED Cost: | \$9.2 M | FY97 |
| EDC Cost: | \$124.6 M | 01 Mar 2023 |
| S&A Cost: | \$31.7 M | 01 Mar 2023 |

Fiscal Year Funding Capabilities: add additional years if required

| FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 | FY 2031 | FY 2032 | FY 2033 | TOTAL |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| \$0 | \$75M | \$168M | \$62M | \$27M | \$0 | \$0 | \$0 | \$0 | \$0 | \$332M |

Commentary:

- The current Total Project Cost Estimate indicates an additional \$332 million is required to finish the project.
- BCR is 2.5 and RBRCR is 4.8 based 2020 TPCE (2020 Price Level).



KENTUCKY LOCK – ISSUES/CHALLENGES



- Lock Operational Contract - Team is working to develop the contract. The scope includes Approach Walls, Electrical/Mechanical, Buildings, Bridges, and Utilities. Contract award is planned for FY25.
- Increased costs and availability issues associated with Construction Labor and Supply Markets required to complete remaining scope could impact estimated total project cost estimate and completion schedule.
- Very competitive labor market with limited labor resources available.



THANK YOU

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