

UPPER OHIO NAVIGATION PROJECT

INLAND WATERWAYS USERS BOARD
MEETING No. 101

Steve Fritz, PE, PMP
U.S. Army Corps of Engineers
Pittsburgh District
October 19, 2023

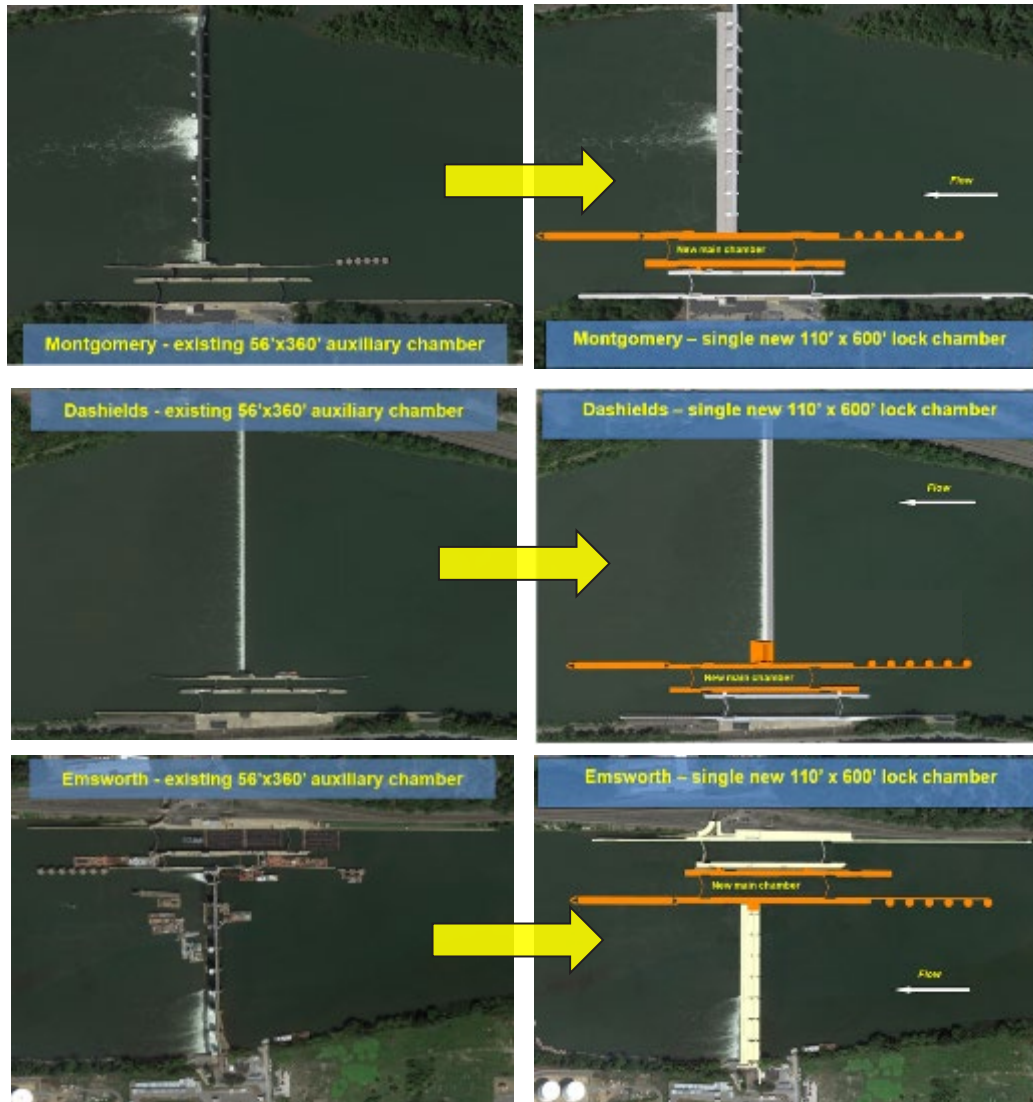


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of Engineers

PROJECT OVERVIEW OF SCOPE



Pre-Project

Post-Project

Major Project Features

- Similar work at Montgomery, Dashields, & Emsworth
 - Remove the existing 56' x 360' Auxiliary Chamber
 - Construct a new 110' x 600' Main Chamber
 - Modifications to dams



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UPPER OHIO PROJECT - BLUF STATUS - SUMMARY DASHBOARD

PROJECT SAFETY	PROJECT STATUS SUMMARY	FINANCIAL STATUS SUMMARY
<i>No lost time accidents</i>	<p>Schedule:</p> <ul style="list-style-type: none"> On schedule <p>Next Major Contract Award(s):</p> <ul style="list-style-type: none"> Montgomery New River Chamber - Fall 2024 	<p><i>Montgomery only</i></p> <p>As of 1JUN2023 Planned (BCWS) \$53.4M Earned (BCWP) \$74.3M Actual (ACWP) \$58.6M</p> <p>BCWP: Reports the value (based on % complete) of the work performed to date Target: Actual as compared to Planned: (<1% = Green) (>1% and <3% = Yellow) and (>3% = Red)</p> <p>Benefits/Costs FY20 BCR @ 2.75% - 2.4 to 1 BCR @ 7% - 1.1 to 1 RBRCR pending 2023 cost cert</p>

EXECUTIVE SUMMARY:

- Total project cost update
- Montgomery lock design and a significant portion of the construction was funded by the Bipartisan Infrastructure Law (BIL)
- Emsworth lock design, real estate, and a small portion of construction was funded by the BIL
- Overall project schedule to be informed by the Capital Investment Strategy (CIS)



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UPPER OHIO – OVERALL PROJECT FUNDING SUMMARY



	GI-PED	BIL	CG	IWTF	Total
Upper Ohio Total Project Cost (Non-Certified, Fully Funded Current Working Estimate FY23)					\$ 6,092,061,000
FY17 Appropriation	\$ 5,525,000				\$ 5,525,000
FY18 Appropriation	\$ 2,353,000				\$ 2,353,000
FY19 Appropriation	\$ 2,500,000				\$ 2,500,000
FY20 Appropriation	\$ 7,700,000				\$ 7,700,000
FY21 Appropriation			\$ 14,300,000	\$ 7,700,000	\$ 22,000,000
FY22 Appropriation		\$ 934,708,000	\$ 1,992,700	\$ 10,807,300	\$ 947,508,000
FY23 Appropriation					
Total Appropriation to Date:	\$ 18,078,000	\$ 934,708,000	\$ 16,292,700	\$ 18,507,300	\$ 987,586,000
<i>Remaining Balance:</i>					\$ 5,104,475,000
Remaining Balance Change From Last Meeting:					\$ -
Total Allocations to Date:	\$ 18,078,000.00	\$ 68,484,250.00	\$ 16,292,700.00	\$ 18,507,300.00	\$ 121,362,250.00

Commentary:

- Working toward total project cost certification by the end of the calendar year
- Montgomery Design: present - 2023
- Montgomery Construction 2024 – 2033 (CIS dependent)
- Emsworth Design: 2023 - 2025
- Emsworth Construction: 2032 – 2042 (CIS dependent)
- Dashields Design: 2025 – 2027 (CIS dependent)
- Dashields Construction: 2043 - 2051 (CIS dependent)



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UPPER OHIO – MONTGOMERY LOCK FUNDING AND KEY ACTIVITIES



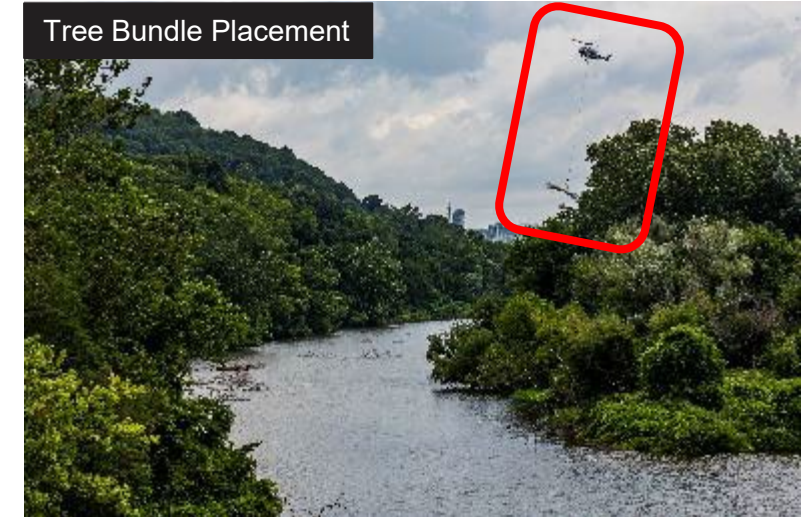
	GI-PED	BIL	CG	IWTF	Total
Montgomery Lock Total Cost (Certified 2023)					\$ 1,698,572,000
FY17 Appropriation	\$ 5,525,000				\$ 5,525,000
FY18 Appropriation	\$ 2,353,000				\$ 2,353,000
FY19 Appropriation	\$ 2,500,000				\$ 2,500,000
FY20 Appropriation	\$ 7,700,000				\$ 7,700,000
FY21 Appropriation			\$ 14,300,000	\$ 7,700,000	\$ 22,000,000
FY22 Appropriation		\$ 857,708,000			\$ 857,708,000
FY23 Appropriation					
Total Appropriation to Date:	\$ 18,078,000	\$ 857,708,000	\$ 14,300,000	\$ 7,700,000	\$ 897,786,000
<i>Remaining Balance:</i>					\$ 800,786,000
Remaining Balance Change From Last Meeting:					\$ (512,886,000.00)
Total Allocations to Date:	\$ 18,078,000	\$ 56,043,250	\$ 14,300,000	\$ 7,700,000	\$ 96,121,250.00

Commentary:

- Montgomery cost certification – completed June 2023
- Montgomery Concrete Batch Plant Site Development contract – in construction – on schedule
- Montgomery Esplanade Site Development contract – in construction – slightly behind schedule
- Montgomery groundbreaking ceremony held on 11 August 2023
- Montgomery New River Chamber 100% design – handed off to contracting
- Montgomery New River Chamber contract – Solicitation late 2023; scheduled award in Fall 2024

Issues and Challenges

- Facility failure prior to completion
 - ✓ Completing maintenance repairs prior to construction
 - ✓ Conducting routine inspections during construction
 - ✓ Continue maintenance during construction as needed
- Construction cost/Inflation
 - ✓ Evaluate transfer of risk contractually
 - ✓ Utilize economic price adjustment
- Market condition
 - ✓ Engaged with industry partners





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PROJECT: UPPER OHIO – EMSWORTH LOCK FUNDING AND KEY ACTIVITIES



	GI-PED	BIL	CG	IWTF	Total
Emsworth Lock Total Cost (Non-Certified, Fully Funded Current Working Estimate FY23)					\$ 1,988,542,000
FY17 Appropriation					\$ -
FY18 Appropriation					\$ -
FY19 Appropriation					\$ -
FY20 Appropriation					\$ -
FY21 Appropriation					\$ -
FY22 Appropriation		\$ 77,000,000	\$ 996,350	\$ 5,403,650	\$ 83,400,000
FY23 Appropriation					
Total Appropriation to Date:	\$ -	\$ 77,000,000	\$ 996,350	\$ 5,403,650	\$ 83,400,000
<i>Remaining Balance:</i>					\$ 1,905,142,000
Remaining Balance Change From Last Meeting:					\$ -
Total Allocations to Date:	\$ -	\$ 12,441,000	\$ 996,350	\$ 5,403,650	\$ 18,841,000.00

Commentary:

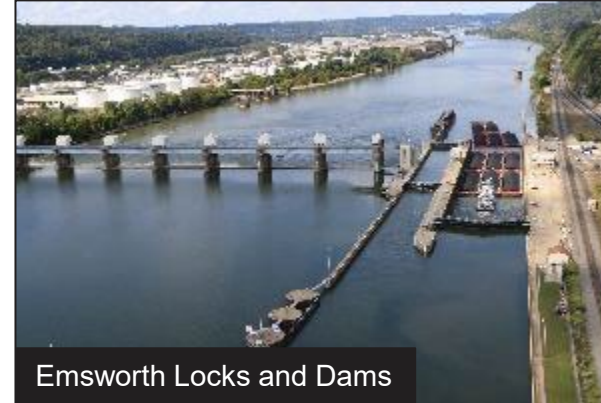
- Preliminary design efforts have started
- Physical modeling – under construction
- In river geotechnical and environmental investigations – completed
- Initiated real estate acquisition activities for future batch plant and potential laydown sites



EMSWORTH LOCK DETAILS – ISSUES/CHALLENGES

Issues and Challenges

- Funding for major contract
 - ✓ CIS dependent
 - ✓ Inflation/Escalation
- Failure of Lock Chamber before or during construction
 - ✓ Advanced maintenance being implemented
- Real Estate Acquisition in an Industrial Corridor
 - ✓ Starting acquisition activities early
 - ✓ Environmental challenges





PROJECT: UPPER OHIO – DASHIELDS LOCK FUNDING AND KEY ACTIVITIES



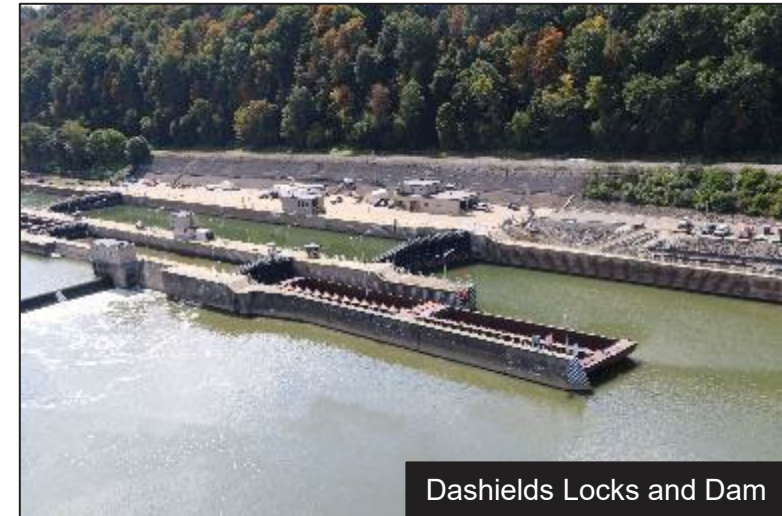
	GI-PED	BIL	CG	IWTF	Total
Dashields Lock Total Cost (Non-Certified, Fully Funded Current Working Estimate FY23)					\$ 2,404,947,000
FY17 Appropriation					\$ -
FY18 Appropriation					\$ -
FY19 Appropriation					\$ -
FY20 Appropriation					\$ -
FY21 Appropriation					\$ -
FY22 Appropriation			\$ 996,350	\$ 5,403,650	\$ 6,400,000
FY23 Appropriation					
Total Appropriation to Date:	\$ -	\$ -	\$ 996,350	\$ 5,403,650	\$ 6,400,000
<i>Remaining Balance:</i>					\$ 2,398,547,000
Remaining Balance Change From Last Meeting:					\$ -
Total Allocations to Date:	\$ -	\$ -	\$ 996,350	\$ 5,403,650	\$ 6,400,000.00

Commentary:

- Design – start in late 2025
- Preliminary efforts to include geotechnical, environmental, and real estate

Issues and Challenges

- Funding for design and major contract
 - ✓ CIS dependent
 - ✓ Inflation/escalation
- Failure of Lock Chamber before or during construction
 - ✓ Advanced maintenance being implemented
- Real estate acquisition in an industrial corridor
 - ✓ Start acquisition activities early
 - ✓ Environmental challenges



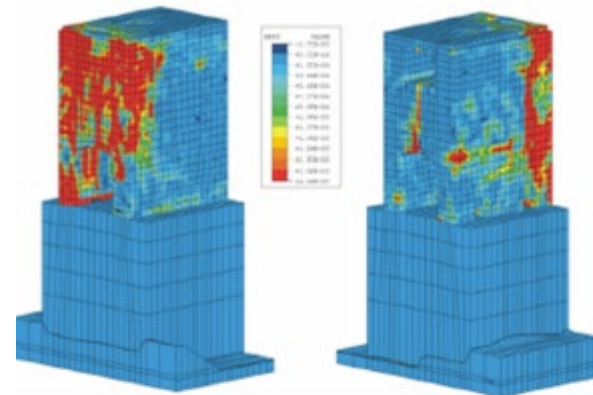
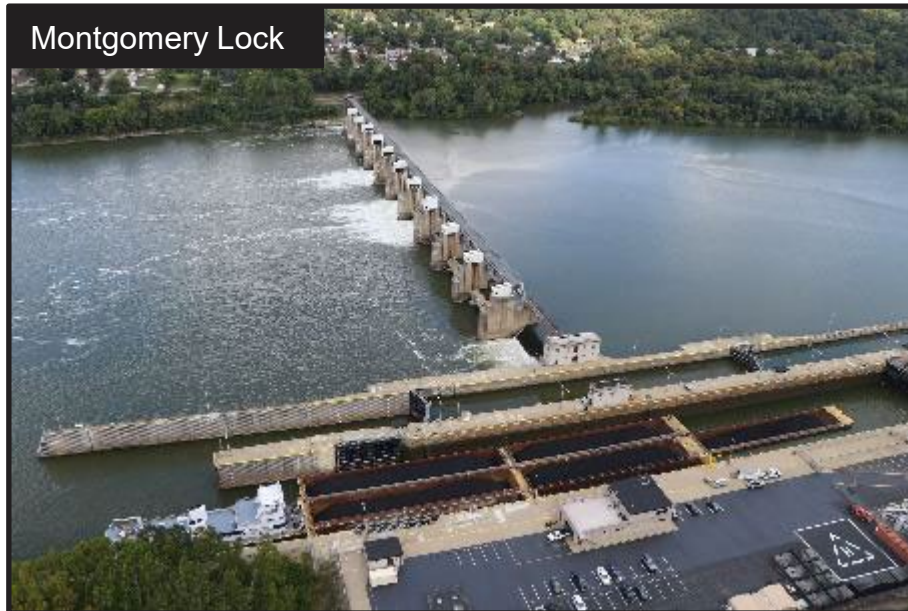


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THANK YOU



Middle Wall Cracking Pattern
Projected in Year 2060
Monolith Faces