

UPPER OHIO NAVIGATION PROJECT

INLAND WATERWAYS USERS BOARD MEETING NO. 98

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1 December 2022

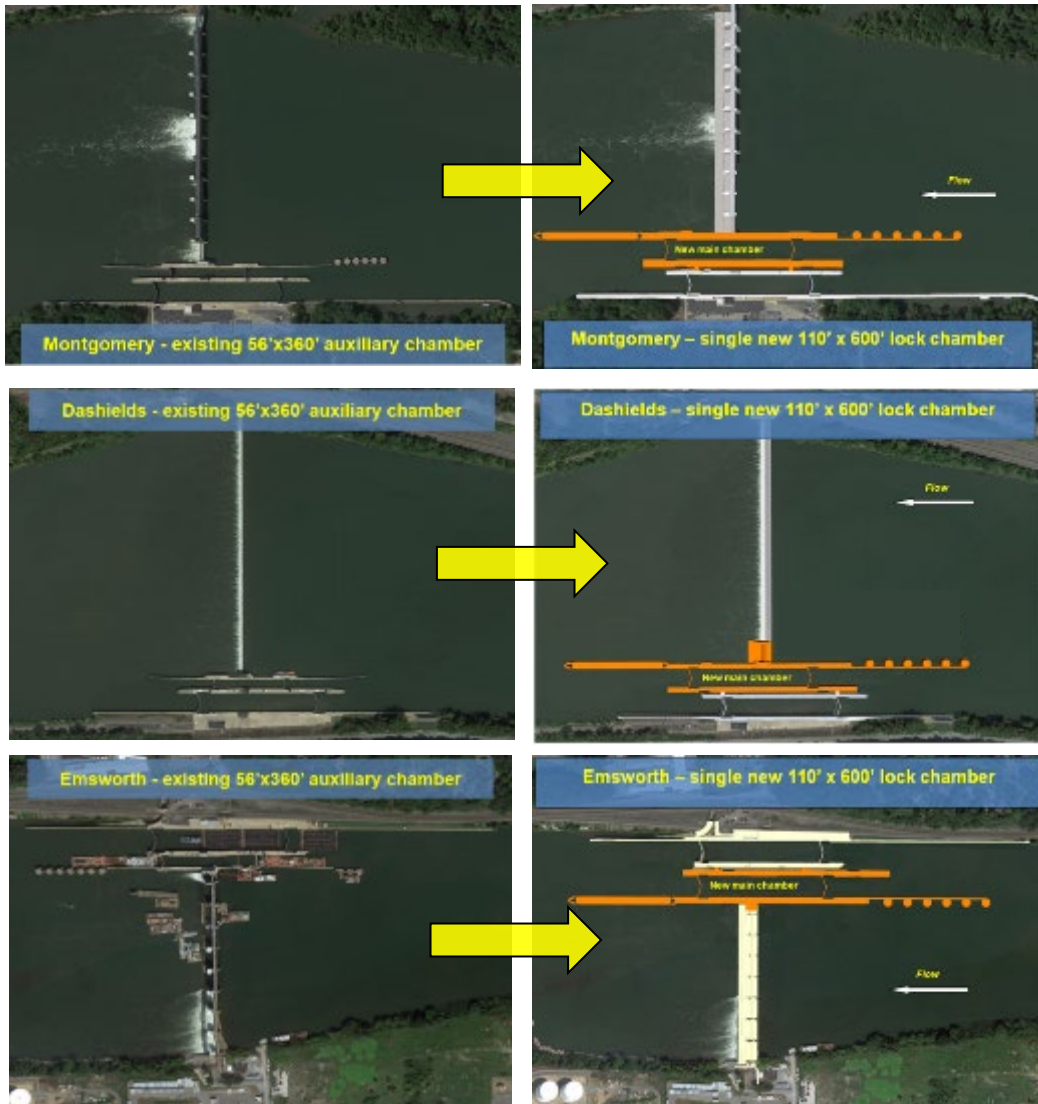
World-Class Delivery...
Real-World Impact!



**US Army Corps
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PROJECT OVERVIEW OF SCOPE



Montgomery - existing 56'x360' auxiliary chamber

Montgomery - single new 110' x 600' lock chamber

Dashiels - existing 56'x360' auxiliary chamber

Dashiels - single new 110' x 600' lock chamber

Emsworth - existing 56'x360' auxiliary chamber

Emsworth - single new 110' x 600' lock chamber

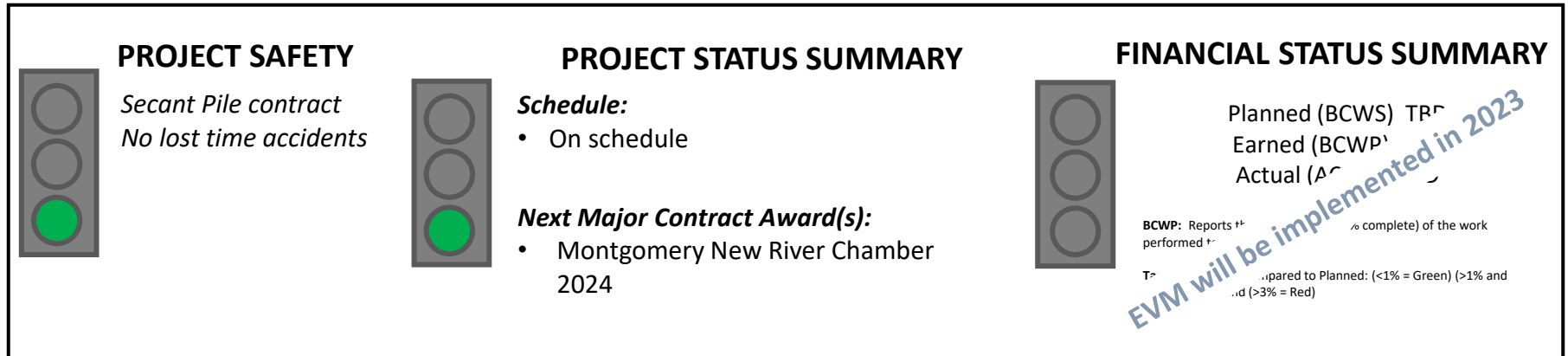
Pre-Project

Post-Project

Major Project Features

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

UPPER OHIO PROJECT - BLUF STATUS – SUMMARY DASHBOARD



EXECUTIVE SUMMARY:

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

UPPER OHIO – OVERALL PROJECT FUNDING SUMMARY

	GI-PED	BIL	CG	IWTF	Total
Upper Ohio Total Project Cost (BIL 2022 Index)					\$ 3,249,218,000
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	\$ 6,282,650	\$ 6,517,350	\$ 947,508,000
Total Appropriation to Date:	\$ 18,078,000	\$ 934,708,000	\$ 20,582,650	\$ 14,217,350	\$ 987,586,000
<i>Remaining Balance:</i>					\$ 2,261,632,000
Remaining Balance Change From Last Meeting:					\$ -
Total Allocations to Date:	\$ 18,078,000	\$ 22,333,500	\$ 20,582,650	\$ 14,217,350	\$75,211,500

Commentary:

- Montgomery Design: present - 2023
- Montgomery Construction 2024 - 2033
- Emsworth Design: 2023 - 2025
- Emsworth Construction: 2032 – 2042 (CIS dependent)
- Dashields Design: 2025 – 2027 (CIS dependent)
- Dashields Construction: 2043-2051 (CIS dependent)

UPPER OHIO – MONTGOMERY LOCK FUNDING AND KEY ACTIVITIES

	GI-PED	BIL	CG	IWTF	Total
Montgomery Lock Total Cost (BIL 2022 Index)					\$ 1,185,686,000
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
Total Appropriation to Date:	\$ 18,078,000	\$ 857,708,000	\$ 14,300,000	\$ 7,700,000	\$ 897,786,000
<i>Remaining Balance:</i>					\$ 287,900,000
Remaining Balance Change From Last Meeting:					\$ -
Total Allocations to Date:	\$ 18,078,000	\$ 20,100,000	\$ 14,300,000	\$ 7,700,000	\$60,178,000

Commentary:

- Real estate acquisition for the Montgomery concrete batch plant site - ongoing
- Montgomery New River Chamber 95% design - ongoing
- Montgomery Secant Wall contract – nearing completion
- Montgomery Esplanade Site Development contract – Scheduled award in 2023
- Montgomery New River Chamber contract – Scheduled award in 2024
- Inflation / escalation

MONTGOMERY LOCK DETAILS – ISSUES/CHALLENGES

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
- Real estate acquisition
- Resource competition
 - ✓ Contractors
 - ✓ Trades
 - ✓ Supplies and materials



PROJECT: UPPER OHIO – EMSWORTH LOCK FUNDING AND KEY ACTIVITIES

	GI-PED	BIL	CG	IWTF	Total
Emsworth Lock Total Cost (BIL 2022 Index)					\$ 1,008,224,000
FY17 Appropriation					\$ -
FY18 Appropriation					\$ -
FY19 Appropriation					\$ -
FY20 Appropriation					\$ -
FY21 Appropriation					\$ -
FY22 Appropriation		\$ 77,000,000	\$ 3,141,325	\$ 3,258,675	\$ 83,400,000
Total Appropriation to Date:	\$ -	\$ 77,000,000	\$ 3,141,325	\$ 3,258,675	\$ 83,400,000
<i>Remaining Balance:</i>					\$ 924,824,000
Remaining Balance Change From Last Meeting:					\$ -
Total Allocations to Date:	\$ -	\$ 2,233,500	\$ 3,141,325	\$ 3,258,675	\$8,633,500

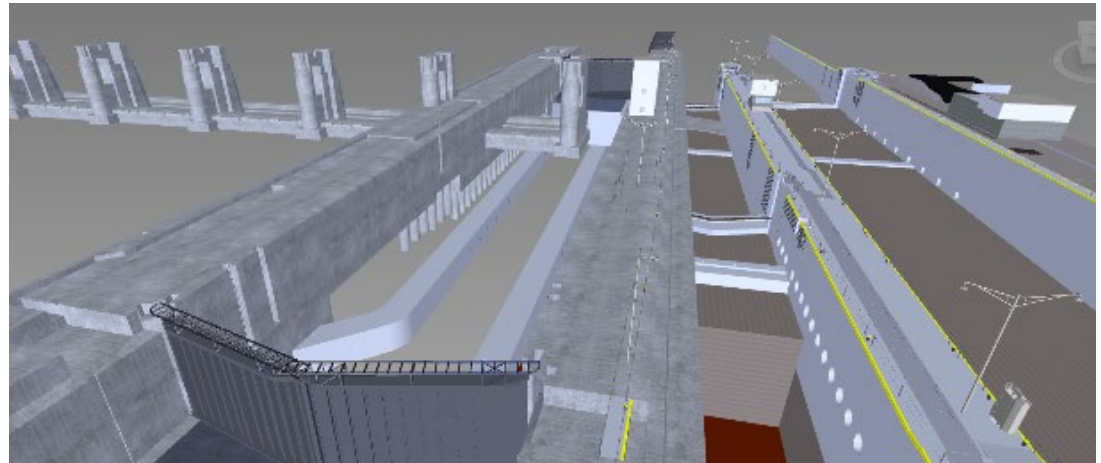
Commentary:

- Preliminary investigations to include geotechnical borings, bathometric surveys, and current/velocity data collection
- ERDC starting material purchases and initial development for filling and emptying system and navigation models
- 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
- Failure of Lock Chamber before or during construction
 - ✓ Advanced maintenance being implemented
 - ✓ Tow Haulage Unit, Hydraulic pump units, Cylinder anchorage system; Monolith surface rehab, Miscellaneous parts purchase
- 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 (BIL 2022 Index)					\$ 1,055,308,000
FY17 Appropriation					\$ -
FY18 Appropriation					\$ -
FY19 Appropriation					\$ -
FY20 Appropriation					\$ -
FY21 Appropriation					\$ -
FY22 Appropriation			\$ 3,141,325	\$ 3,258,675	\$ 6,400,000
Total Appropriation to Date:	\$ -	\$ -	\$ 3,141,325	\$ 3,258,675	\$ 6,400,000
<i>Remaining Balance:</i>					\$ 1,048,908,000
Remaining Balance Change From Last Meeting:					\$ -
Total Allocations to Date:	\$ -	\$ -	\$ 3,141,325	\$ 3,258,675	\$6,400,000

Commentary:

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

DASHIELDS LOCK DETAILS – ISSUES/CHALLENGES

Issues and Challenges

- Funding for design and major contract – CIS dependent
- Failure of Lock Chamber before or during construction
 - ✓ Advanced maintenance being implemented
 - ✓ Tow Haulage Unit, Hydraulic pump units, Cylinder anchorage system; Monolith surface rehab, Miscellaneous parts purchase
- Real estate acquisition in an industrial corridor
 - ✓ Start acquisition activities early
 - ✓ Environmental challenges



THANK YOU



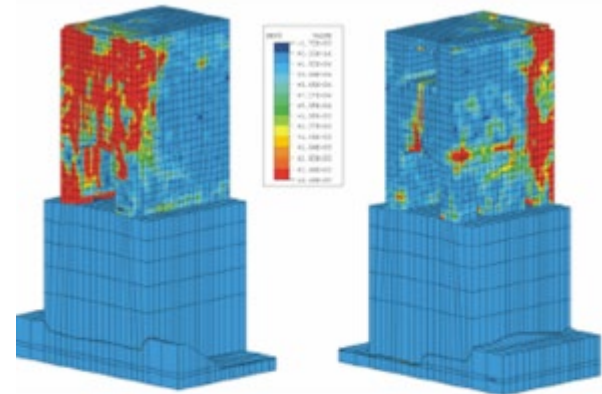
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Montgomery Lock



Monolith Joint Deterioration



**Middle Wall Cracking Pattern
Projected in Year 2060
Monolith Faces**