

MONONGAHELA RIVER L/D 2,3,&4

IWUB #102 – Springfield, VA

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11 April 2024



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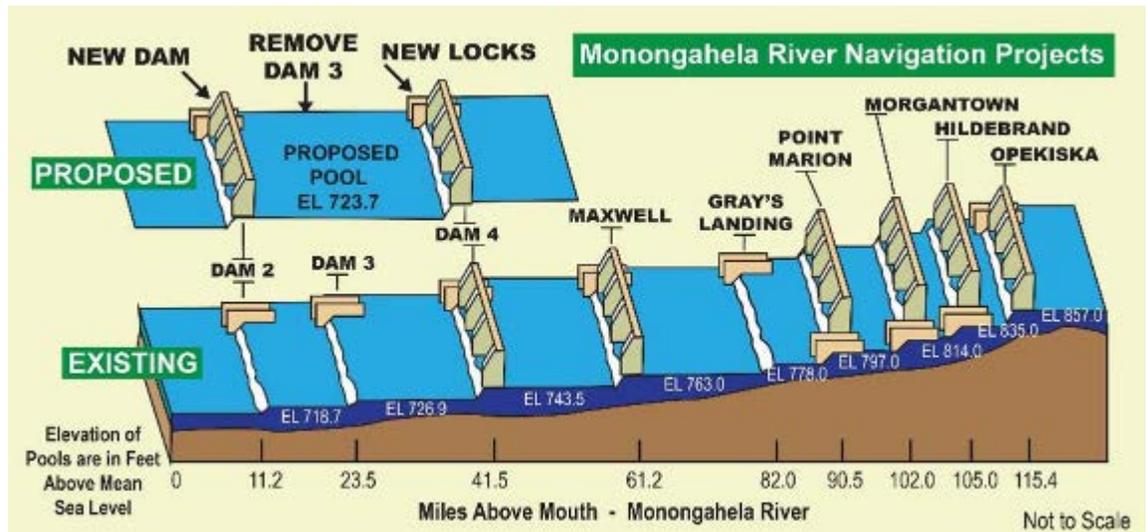


US Army Corps
of Engineers

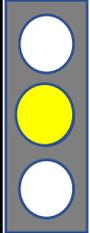
MON RIVER LOCKS & DAMS 2, 3, & 4 SCOPE

Major Project Features

- Braddock locks and dam (L/D 2): New gated dam Completed 2004
- Charleroi locks and dam (L/D 4):
 - Two new larger lock chambers (84' wide x 720' long)
 - River chamber (now operational from middle wall control shelters)
 - Land chamber deferred
 - Dam stilling basin extension
- Locks and Dam 3 removal
- Pool 3 dredging
- Relocations
- Environmental mitigation



MON RIVER LOCKS AND DAMS 2, 3, AND 4 BLUF STATUS -SUMMARY DASHBOARD

PROJECT SAFETY	PROJECT STATUS SUMMARY	FINANCIAL STATUS SUMMARY												
 <p>River chamber contract - 4 incidents in FY22 - 4 incidents in FY23 - 0 incidents in FY24</p> <p>Stilling basin contract - No safety incidents Dredging contract - No safety incidents Fish Reef contract - No safety incidents</p>	<p>Schedule:</p> <table border="1"> <thead> <tr> <th></th> <th>Orig.</th> <th>Last</th> <th>Current</th> </tr> </thead> <tbody> <tr> <td>Operational (90% benefits)</td> <td>Jul 2027</td> <td>Dec 2024</td> <td>Dec 2024</td> </tr> <tr> <td>Completion (Physically complete)</td> <td>Jan 2029</td> <td>April 2027</td> <td>Apr 2027</td> </tr> </tbody> </table> <p>Next Contract Award(s): Charleroi Land Chamber and Misc. contract (2025)</p>		Orig.	Last	Current	Operational (90% benefits)	Jul 2027	Dec 2024	Dec 2024	Completion (Physically complete)	Jan 2029	April 2027	Apr 2027	 <p>Planned (BCWS_{nc}): \$1,066 M Earned (BCWP_{nc}): \$1,011 M Actual (ACWP): \$1,053 M CPI : 0.96 CV%: -4.1% Target: Green: CV>0, Yellow -5%<CV%<0, Red CV%<-5 Benefits/Costs FY21 BCR @ 2.5% - 2.8 to 1 BCR @ 7% - 1.4 to 1 RBRCR to follow after cost cert</p>
	Orig.	Last	Current											
Operational (90% benefits)	Jul 2027	Dec 2024	Dec 2024											
Completion (Physically complete)	Jan 2029	April 2027	Apr 2027											

- EXECUTIVE SUMMARY:**
- Continued focus on safety
 - FY 2024 appropriations included \$41M for the project
 - Cost Update
 - Most recent certification: 2017
 - Evaluating remaining costs and risks
 - Expect new cost estimate this spring

MON RIVER LOCKS & DAMS 2,3, & 4 KEY ACTIVITIES



Locks and Dam 3 at Elizabeth

Commentary:

- Charleroi River Chamber
 - New River Chamber is scheduled to open traffic this month
 - Substantial construction completion – **June 2024**
- Charleroi land chamber
 - Land Chamber will be closed to traffic in May
 - Long term closure plans and specifications being developed
- Locks & Dam 3 Removal Contract
 - Begin dam removal to in July 2024.
 - Complete dam removal in December 2024 (**Project Operational**)
 - Navigation restrictions during demolition
- Fish Reef Contract – All reefs have been installed – US Coast Guard is requiring marking
- Charleroi Elevator – Installation underway, contract completion June 2024
- Braddock gallery pumps – Installation underway, contract completion July 2024
- Relocations – Actively engaging owners



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MON RIVER LOCKS & DAMS 2,3, & 4 - FUNDING SUMMARY

Funding Overview		
Authorized Cost:	556,400,000	(Oct 1991)
902 Limit:	1,764,443,000	(Mar 2019)
ARRA (FY09-13):	68,261,203	
PED & EDC Cost:	204,370,000	
S&A Cost:	53,257,000	

	ARRA	CG	IWTF	Total
Total Project Cost (May 2018) *1				\$ 1,233,835,000
Allocations through FY17	\$ 68,261,203	\$ 379,645,646	\$ 379,645,652	\$ 827,552,501
FY18 Allocation		\$ 48,150,000	\$ 48,150,000	\$ 96,300,000
FY19 Allocation		\$ 44,606,606	\$ 44,606,606	\$ 89,213,212
FY20 Allocation		\$ 55,648,770	\$ 55,648,770	\$ 111,297,540
FY21 Allocation				\$ -
FY22 Allocation				\$ -
FY23 Allocation				\$ -
FY24 Allocation *2				\$ -
Total Allocations to Date:	\$ 68,261,203	\$ 528,051,022	\$ 528,051,028	\$ 1,124,363,253
			Remaining/Unallocated Balance *2	\$ 109,471,747
			Remaining Balance Change From Last Meeting:	\$ -

*1. A total project cost update is expect to be completed this Spring.

*2. The project was appropriated \$41 Million, however, those funds have not yet been allocated. Once allocated, the remaining unallocated balance will drop from \$109 Million to \$68 million. It is anticipated that additional funds will be needed to achieve the 90% benefits project and this need will be informed by the cost update.

Commentary:

- Project cost update – 2024

Fiscal Year Funding Capabilities:

FY 2024	FY 2025	FY 2026	Total
\$41,000,000	\$0	TBD*3	TBD

*3. FY26 capability will be determined following the 2024 cost update and the analysis of residual risks



MON RIVER LOCKS AND DAMS 2, 3, AND 4, PROGRESS AND/OR ISSUES/CHALLENGES



ISSUES/CHALLENGES

- Funding to achieve 90% benefits project
- Timing of 90% benefits is driven by river conditions
- Coordination of project funded relocations
- Residual Risks
 - Pool 3 navigation channel siltation
 - Braddock Dam scour



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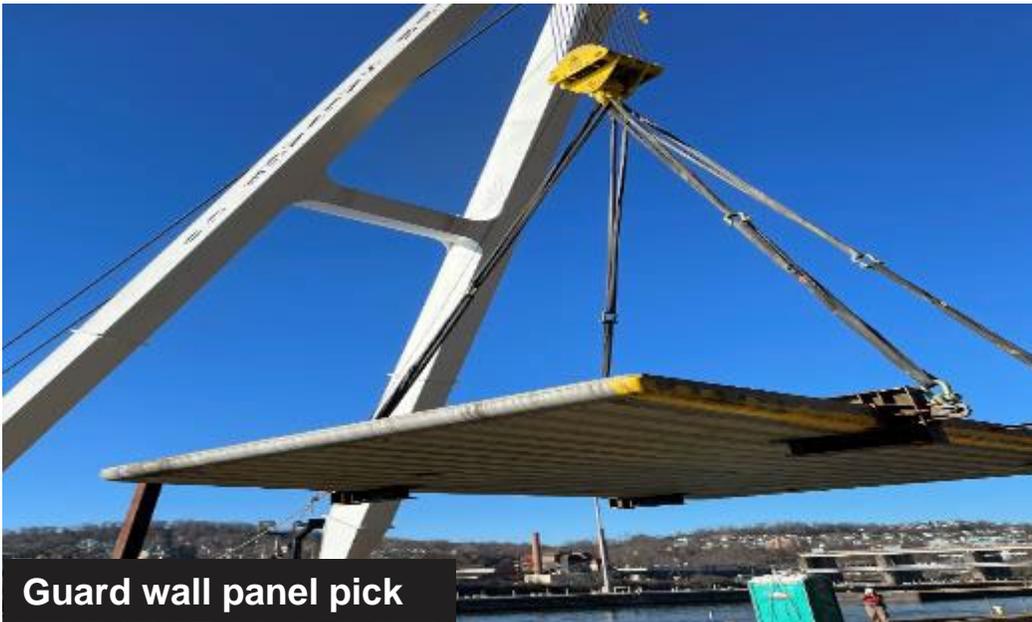
PROGRESS PHOTOS—CHARLEROI RIVER CHAMBER



Lower approach into new lock



D/S coffer cell demolition



Guard wall panel pick

LOCK CHAMBER STATUS AND SEMI-AUTO CONTROL

VALVES - SERVICE 0% 1 OPENED 0% 1 CLOSED 0% 2 OPENED 0% 2 CLOSED 0% 3 OPENED 0% 3 CLOSED 0% 4 OPENED 0% 4 CLOSED	U/S RW GATE 100.0 % CLOSED GATE RECESSED UPPER LATCHED UPPER UNLATCHED LOWER LATCHED LOWER UNLATCHED	EMPTY VALVES 100.0 % 1 OPEN 100.0 % 1 CLOSED 100.0 % 2 OPEN 100.0 % 2 CLOSED	D/S RW GATE 81.5 % CLOSE GATE RECESSED UPPER LATCHED UPPER UNLATCHED LOWER LATCHED LOWER UNLATCHED
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ARICE MODE OFF

UPPER POOL 744.9 FT | **CHAMBER 729.8 FT** | **LOWER POOL 729.8 FT**
 DISINING OF DOWNSTREAM GATES
 U/S GATES MITERED | CHAMBER MITERED | D/S GATES MITERED
 NORMAL MODE

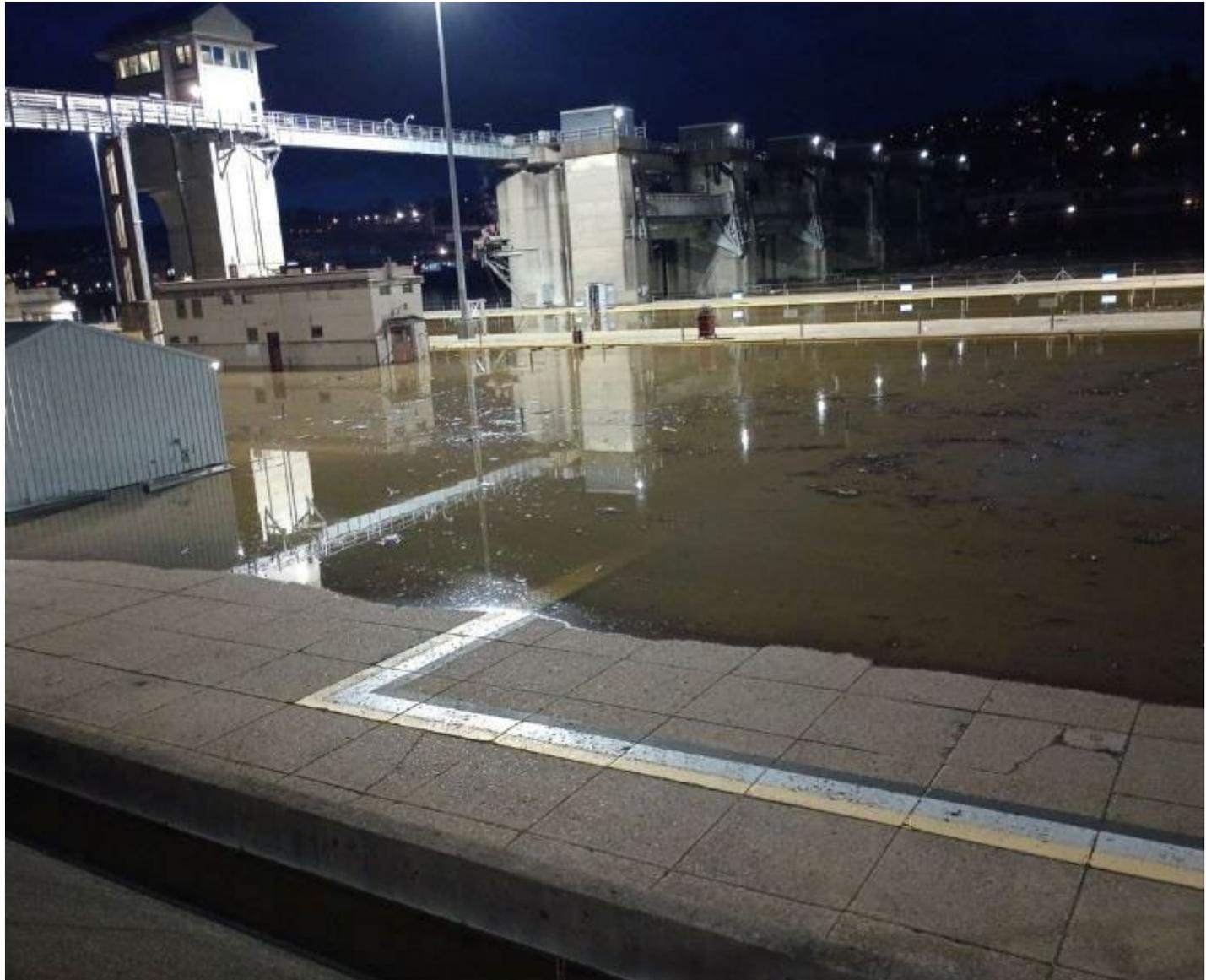
ALL VALVES - EMERGENCY 100.0 % 1 OPENED 100.0 % 1 CLOSED 100.0 % 2 OPENED 100.0 % 2 CLOSED 100.0 % 3 OPENED	U/S MW GATE 100.0 % CLOSED GATE RECESSED UPPER LATCHED UPPER UNLATCHED	D/S LOCKAGE LOCKAGE ENABLE (PRT) STOP LOCKAGE CONFIRM CLEAR TO ENTER CHAMBER CONFIRM CLEAR LOWER CHAMBER START	U/S LOCKAGE LOCKAGE ENABLE (PRT) STOP LOCKAGE CONFIRM CLEAR TO ENTER CHAMBER CONFIRM CLEAR CHAMBER START	D/S MW GATE 81.6 % CLOSED GATE RECESSED UPPER LATCHED UPPER UNLATCHED LOWER LATCHED LOWER UNLATCHED
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Control tower - Human Machine Interface (HMI)



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FLOODING – CHARLEROI - OVERTOPPING WALLS





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FLOODING - CHARLEROI D/S APPROACH

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FLOODING - CHARLEROI U/S APPROACH



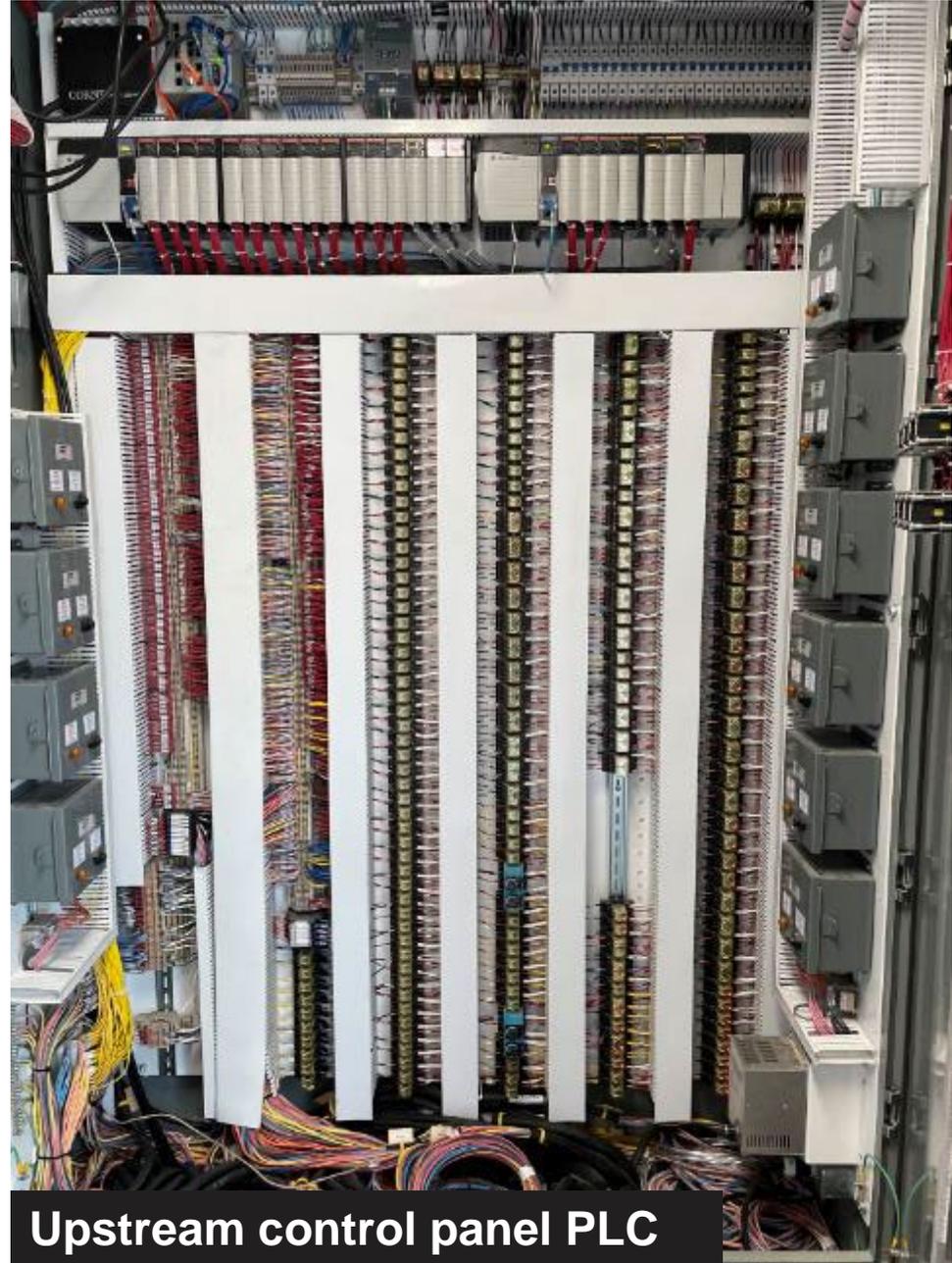
FLOODING - CHARLEROI FLOODED GALLERY





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THANK YOU AND QUESTIONS



Upstream control panel PLC