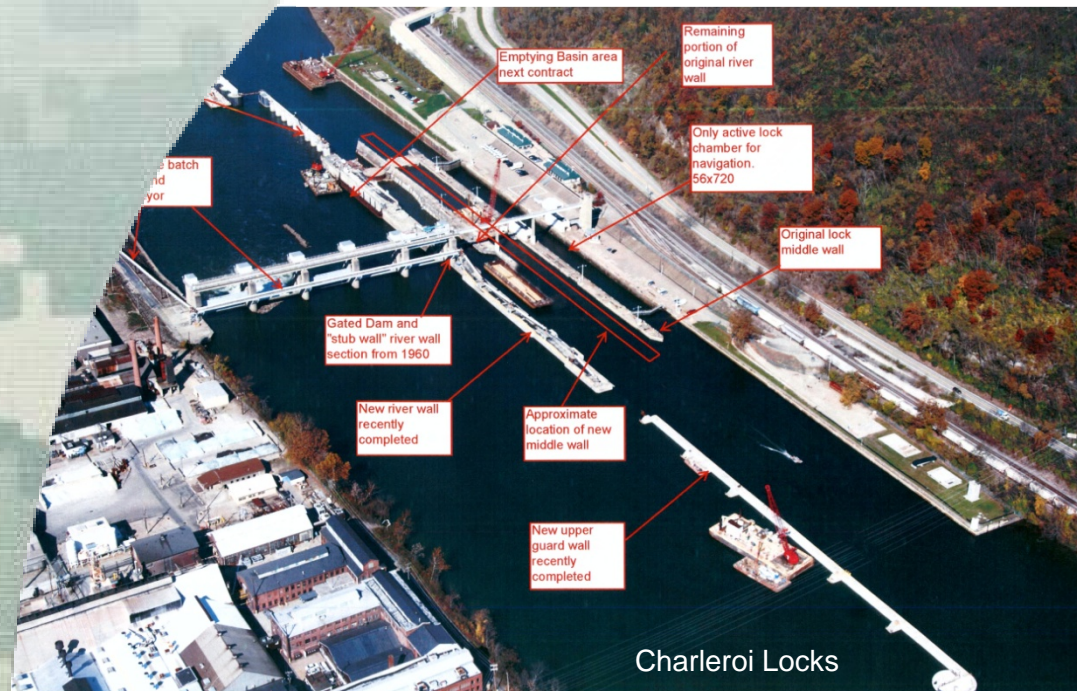
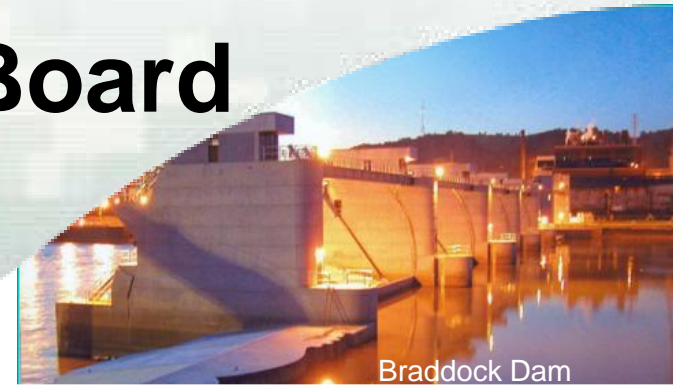


# Locks and Dams 2, 3, and 4 Monongahela River, PA (Lower Mon Project) Inland Waterways Users Board

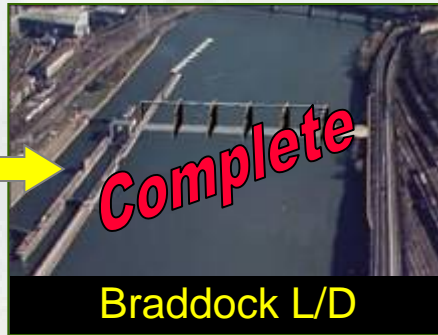
Lakes and Rivers Division, David Dale

August 2014



US Army Corps of Engineers  
**BUILDING STRONG**

## Lower Mon - Project Description



- Major Project Features
  - New Dam at Braddock
  - New Locks at Charleroi
  - Dredging
  - Removal of Locks and Dam 3
  - Relocations



## Lower Mon - Project Costs

Authorized Cost (1992)	\$556 million
Authorized Cost Inflated (2015)	\$1,650 million
Current Cost Estimate (2015)	\$1,661 million
Fully Funded Cost Estimate	\$2,773 million
902(b) Project Cost Limit	\$1,761 million

- Certified cost estimate (80% confidence)
  - 19 March 2014
  - Includes risks
- \$633 million allocated to date
- \$1.1 billion below 902 limit
- Fully funded cost reflects
  - IWTF revenue / Olmsted schedule - **adds \$185 million**
  - Charleroi Land Chamber deferment into 2050s - **adds \$797 million**





## Lower Mon - Project Schedule (\*1)

Major Feature Construction	Start	Complete
Charleroi Dam Stilling Basin	2015	2018
Charleroi River Chamber Completion	2022	2027
Dredging Pool 3	2026	2028
Relocations	2026	2029
Lock and Dam 3 Removal	2027	2028
Charleroi Land Chamber	2054	2059

- Schedule based on best available information – July 2014
- **Over 90% of project benefits achievable**
  - **Inclusive of items in red**
  - Without exceeding 902(b) limit
- Deferment of Land Chamber
  - Allows other IWTF projects to be constructed sooner
  - Staggers major rehabilitation and/or recapitalization while maintaining reliable navigation on Monongahela River
  - Reported to Corps Cost Control Board

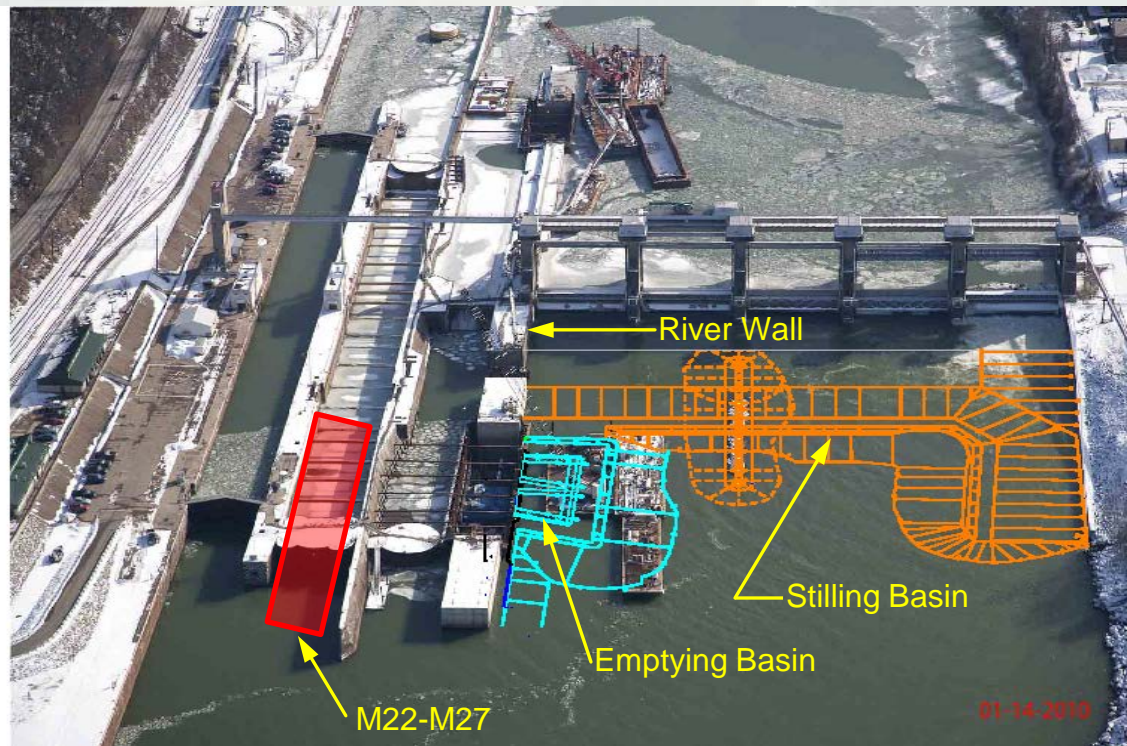


\*1 Application of WRRDA 2014 legislation in conjunction with current construction at Charleroi requires evaluation for next contract at Charleroi. There may be potential to accelerate schedule from what is show above.



## Lower Mon - Ongoing / Pending Construction

Major Feature Construction	Award	Complete
Charleroi River Wall	2004	2014
Charleroi Emptying Basin	2013	2015
Charleroi Middle Wall (M22-M27) (bids opened 23Jul)	2014	2018
Charleroi Dam Stilling Basin (next contract)	2015	2018



# Lower Mon – Port Perry Rail Road Bridge

- Current vertical guide clearance = 42.5 feet
- Post project clearance without adjustment = 40.6 feet
- Cost to raise bridge \$45M - \$83M (including risks)
- Vessel information (5 yr average, %'s rounded)

	# Trips	# Unique Vessels
H < 40.6 feet	2,503 (88%)	129 (81%)
40.6 < H < 42.5 feet	155 (5%)	10 (6%)
H > 42.5 feet	173 (6%)	21 (13%)

- Vessel height adjustment cost considerations
  - If over 42.5 feet now and passing bridge now – how?
  - What degree of adjustment is necessary?
    - Hard point (wheel house)
    - Soft point (antenna)
- Re-fleeting as opposed to adjusting vessel height



# Locks and Dams 2, 3, and 4, Monongahela River, PA

Total Project Cost: \$2,733M*	CG	IWTF	Total
FY13 Allocation:	\$12,604,000**	\$11,094,000	\$23,698,000
FY14 Allocation:	\$37,337,500	\$37,337,500	\$74,675,000
FY15 Budget:	\$4,516,000	\$4,516,000	\$9,032,000
Remaining Balance:	\$1,045,622,500	\$1,045,622,500	\$2,091,245,000
Remaining Balance Change From Last Meeting			\$888,633,000

Notes: \* Cost and Schedule data reflect the FY2015 cost Update & 902 Limit Calculations, Fully Funded

\*\* Includes ARRA FY13 Allocation: \$1,510,007

## Changes

- Remaining balance increased with FY2015 certified cost. Major increases due to delay of project features (\$185 million) associated with the IWTF and deferment of Charleroi Land Chamber construction (\$797 million) until late 2050's
- FY2014 allocation was \$72,715,000 higher than FY2014 budget amount.

## Funding Overview

- Original Authorized Cost: \$556M
- 902 Limit: \$1.76B
- EDC/SA: \$603M/\$207M \*
- Mitigation: \$12M

\* \$603M includes ALL Engineering and Engineering During Construction

## Current Status of the Project

- FY2014 Award of Charleroi M22-M2

## Next Steps

- Charleroi stilling basin extension contract
- Charleroi river chamber completion



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# Locks and Dams 2, 3, and 4, Monongahela River, PA

Schedule of Remaining Work	Design Initiated	Contract Award	Construction Complete	Project Benefits	Capitalized Cost Closeout
Charleroi River Wall	1-Oct-95	27-Sep-04	30-Sep-14 S		
Charleroi Emptying Basin	1-Oct-95	30-Sep-13	26-Dec-15 S		
Charleroi River Chamber (M22-M27)	1-Oct-95	19-Sep-14 S	2018		
Charleroi Dam Stilling Basin Extension	1-Oct-95		Funding + 3 years		
Charleroi River Chamber Completion	1-Oct-95		Funding + 5 years		
L/D 3 Removal	TBD		Funding + 1.5 years		
Dredging	1-Oct-95		Funding + 3 years		
Municipal Relocations	1-Oct-93		Funding + 5 years		
Port Perry Bridge Relocation	1-Oct-95		Funding +5 years		
Charleroi Land Chamber *1	TBD		Funding + 6 years		

**\*1: Over 90 % of project benefits can be achieved without constructing the Charleroi Land Chamber**

