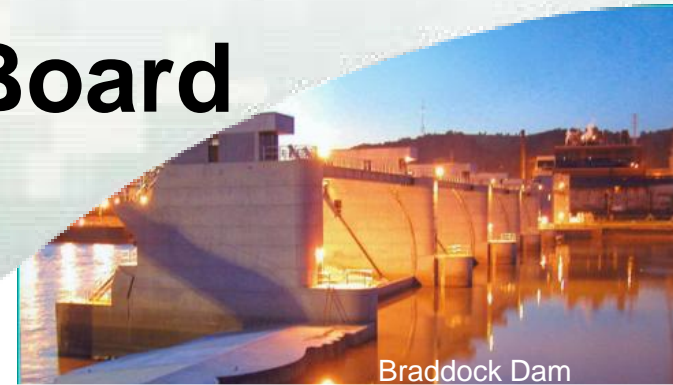


Locks and Dams 2, 3, and 4 Monongahela River, PA (Lower Mon Project) Inland Waterways Users Board

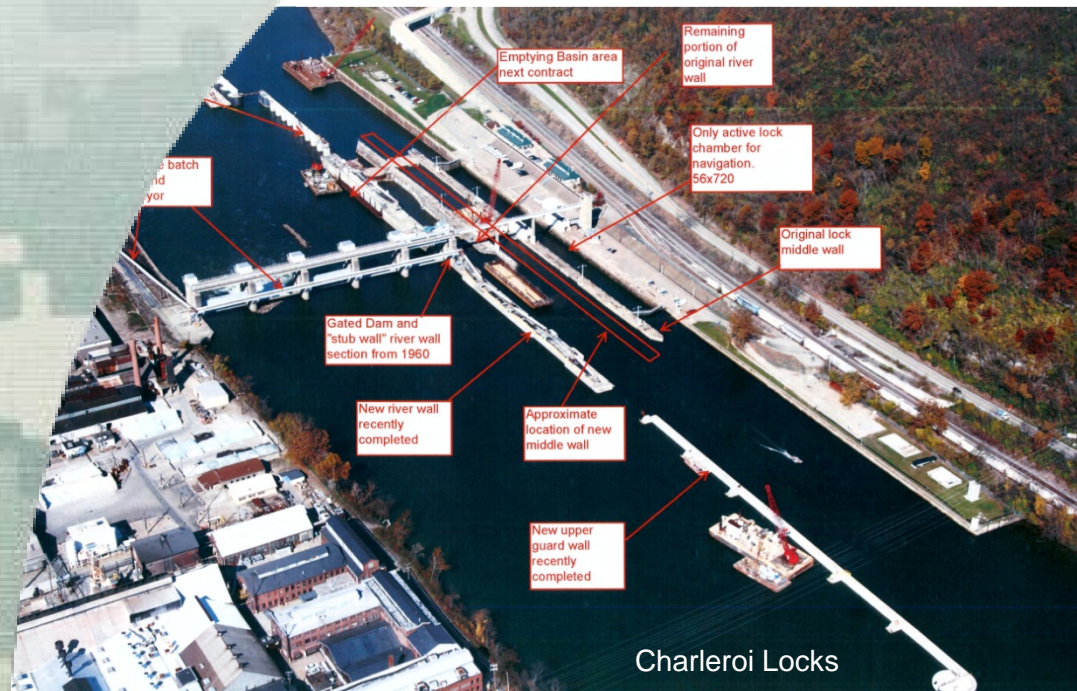
Lakes and Rivers Division, David Dale

November 2014

David Dale, PE, PMP



Braddock Dam



Charlevoix Locks



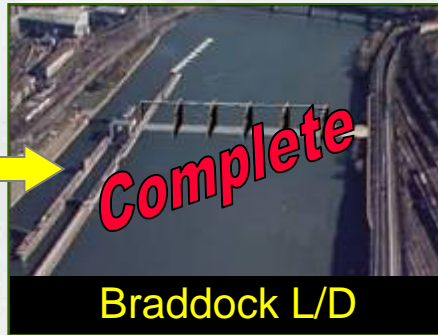
US Army Corps of Engineers
BUILDING STRONG

Lower Mon - Agenda

- **Agenda**
 - **Project Description**
 - **Cost Summary**
 - **Schedule**
 - **Moving Toward Benefits**
 - **Ongoing Construction**
 - **Deferment of Charleroi Land Chamber**
 - **Port Perry Rail Road Bridge**



Lower Mon - Project Description & Agenda



- 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	Bullet 1
Authorized Cost Inflated (2015)	\$1,650 million	Bullet 2
Current Cost Estimate (2015)	\$1,661 million	Bullet 3
Fully Funded Cost Estimate	\$2,773 million	Bullet 4
902(b) Project Cost Limit	\$1,761 million	

1. As authorized WRDA 1992 Sec 101(18)
2. Authorized cost inflated thru construction
3. Certified Cost Estimate = Sunk Cost + Uncompleted work escalated to Oct 14 price level
4. Fully funded estimate considers deferment of the Land Chamber and Delays to other project features due to Olmsted
 1. Delays due to deferring Land chamber adds \$797M
 2. Funding delays associated with several other major features adds \$185M



Lower Mon - Project Schedule

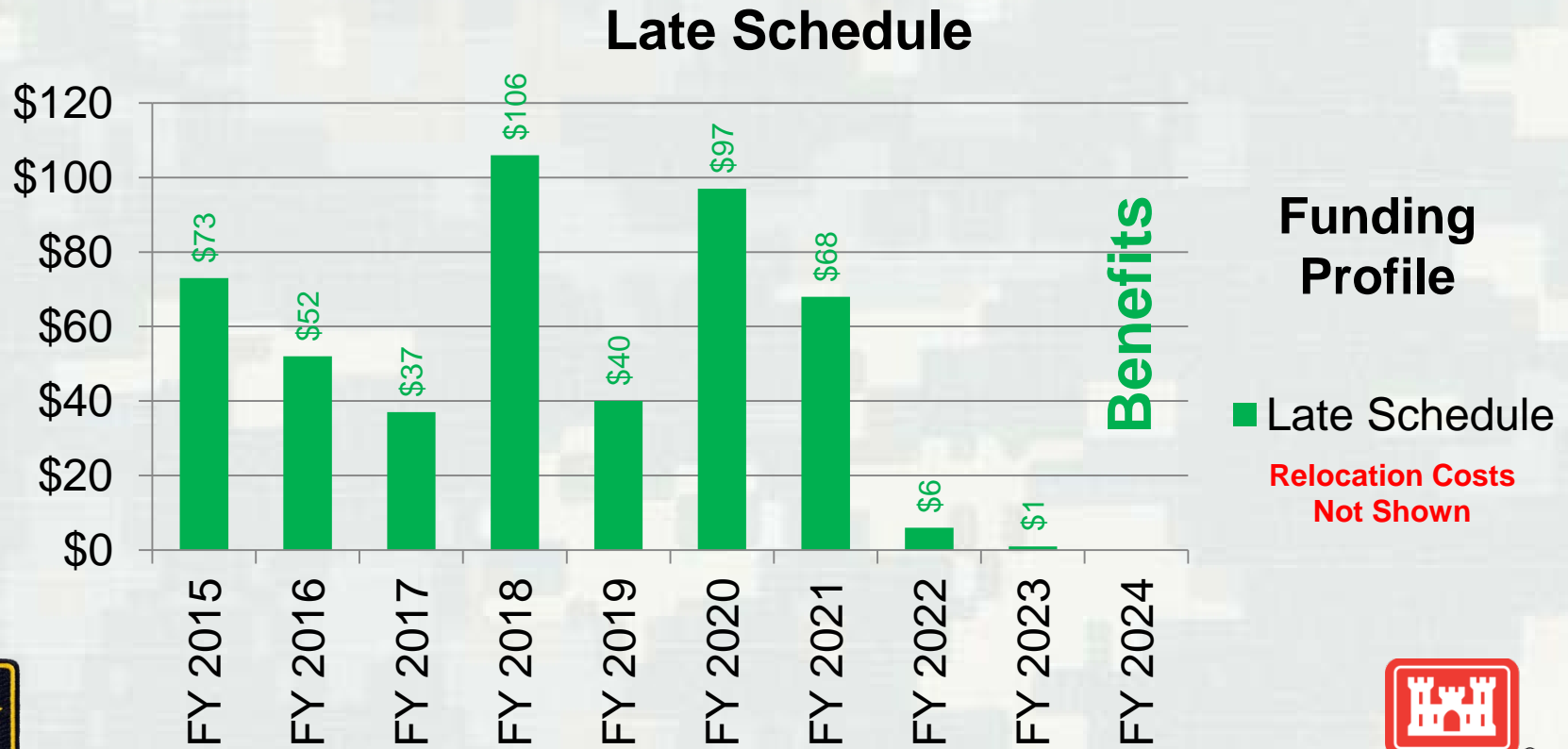
Major Feature Construction	Last Reported Completion	Revised
Charleroi Dam Stilling Basin	2018	Potentially part of River Chamber Contract
Charleroi River Chamber Completion	2027	2022
Dredging Pool 3	2028	2022
Relocations	2029	TBD
Lock and Dam 3 Removal	2028	2023
Charleroi Land Chamber	2059	TBD

Note: Revised schedule based on WRRDA 2014 implementation of Olmsted cost share and Lowermon Project as next priority.



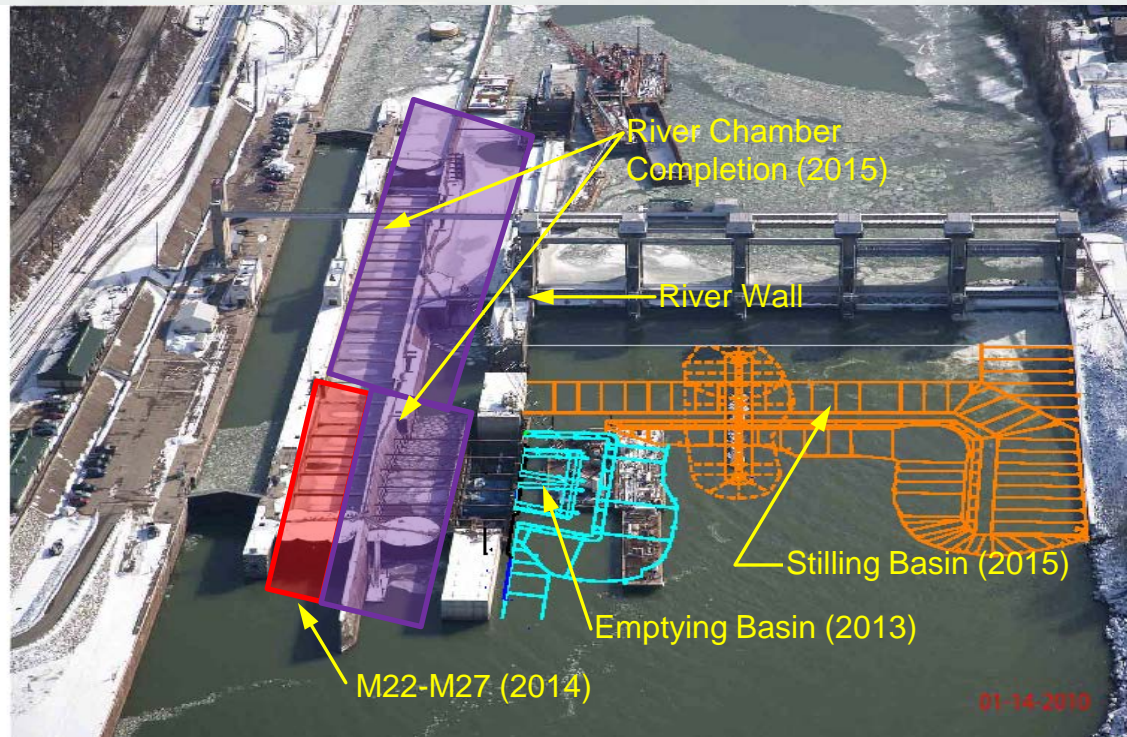
Lower Mon – Moving Toward Benefits

- Complete Charleroi River Chamber & Stilling Basin (\$341 Million)
- Pool 3 Dredging (\$113 Million)
- Removal of Locks and Dam 3 (\$16 Million)
- Funding Profiles To Achieve Benefits



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) (Awarded Aug2014)	2014	2018
River Chamber Contract (potential to include Stilling Basin)	Potential for 2015	2022



Lower Mon – Charleroi Land Chamber Deferment

- Land Chamber can be deferred and still achieve over 90% of the project benefits as early as 2023
- Land Chamber cost (\$432M Oct2014, \$1,229M Fully funded 2050s)
- Benefits begin to accrue with removal of L/D #3 without jeopardy of 902 impacts, including costs associated with:
 - Charleroi River Chamber
 - Dredging
 - Removal of L/D 3
 - Relocations, including Port Perry Bridge
- Existing Land Chamber will be closed as part of River Chamber construction
- Budget Decision of USACE
- Recommendation
 - Do not budget for Land Chamber (conscience decision)
 - Reconsider deferment decision following River Chamber Completion
- Other Inland Navigation projects can work towards benefits sooner
- Staggers maintenance at Charleroi



Lower Mon – Port Perry Rail Road Bridge

- Part of Authorized project
- Current vertical guide clearance = 42.5 feet
- Post project clearance without adjustment = 40.6 feet
- Cost to raise bridge \$83M - \$112 M (1st cost to fully funded, including risks)*Note
- 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%)

- Alternatives to raising the bridge
- US Coast Guard Position- Will object to any plan that does not raise the bridge
- Additional Authorities are we committed to?
- Agreement to adjust bridge
- Near Term – Do not budget for relocation
- Long Term – Engage USCG



Note: Reported \$45m-\$83m in Aug14. \$45M did not include risk. \$83M includes risk. \$112M is estimated as the fully funded cost.



Lower Mon - Questions

