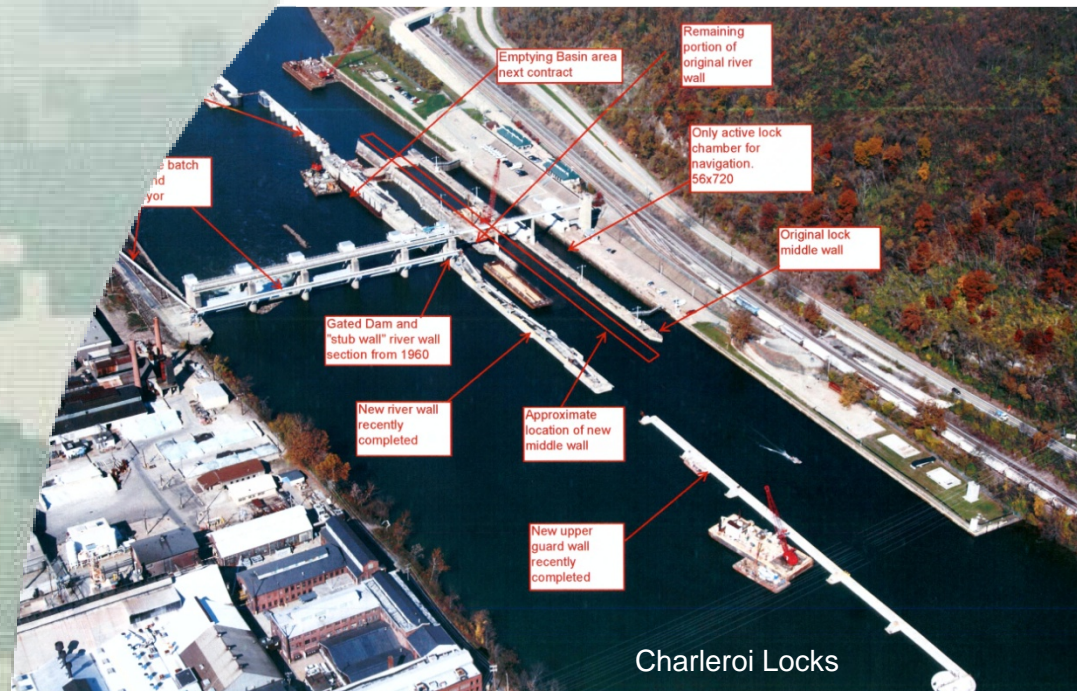
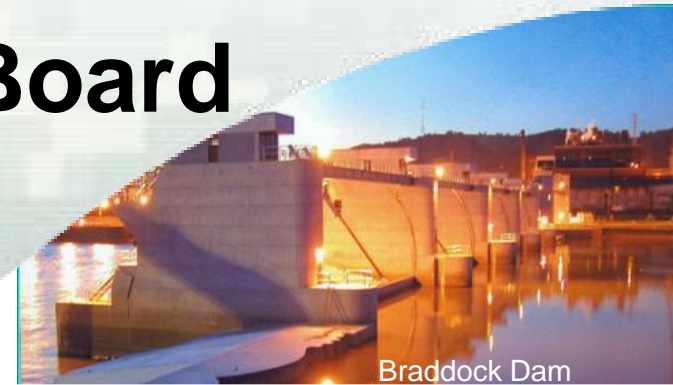


Locks and Dams 2, 3, and 4 Monongahela River, PA (Lower Mon Project) Inland Waterways Users Board

Lakes and Rivers Division, Mr. David Dale

25 February 2015



US Army Corps of Engineers
BUILDING STRONG

Lower Mon - Agenda

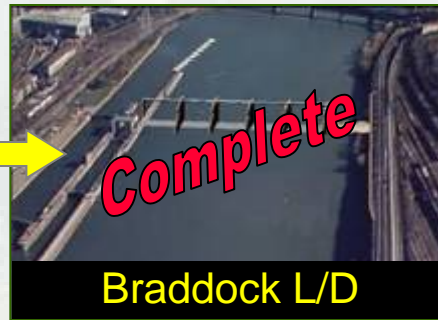
- **Agenda**
 - **Project Description**
 - **Cost Summary**
 - **Schedule**
 - **Moving Toward Benefits**
 - **Ongoing Construction**
 - **Deferment of Charleroi Land Chamber**
 - **Port Perry Rail Road Bridge**



Lower Mon - Project Description & Agenda

Pre-Project Condition

Post-Project Condition



- 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)
- \$631 million allocated thru 2014
- \$ 58 million to be allocated thru FY2015 Work Plan
- \$557 million invested thru January 2015
- \$1.07 billion below 902 limit (including FY2015 Work Plan)
- Fully funded certified cost (March 2014 *) reflects
 - IWTF revenue & Olmsted schedule - **adds \$185 million**
 - Charleroi Land Chamber deferment into 2050s - **adds \$797 million**



* Certified cost reflects conditions prior to changes in Olmsted Cost share and IWTF tax structure



Lower Mon - Project Schedule

| Major Feature Construction | Last Reported Completion (Nov 2014) | Revised |
|------------------------------------|-------------------------------------|---|
| Charleroi Dam Stilling Basin | 2018 | Will not be pursued until 2017, Complete 2022 |
| Charleroi River Chamber Completion | 2022 | |
| Dredging Pool 3 | 2022 | |
| Relocations | TBD | |
| Lock and Dam 3 Removal | 2023 | |
| Charleroi Land Chamber | TBD | |

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



Lower Mon – Moving Toward Benefits

Late Funding Profile (October 2014 Price Level)

| Contract | Const Period | Cost (\$M) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | | | | |
|--|--------------|------------|------------------------------|------|--------|-------------------------|--------|---------|------------------------------|---------|--------|------------------------|--------|------|------|
| Ongoing EDC/SA FY14&Prior Contracts | | | | | | | | | | | | | | | |
| Base Contract M1-M7 | 2.5 Years | \$58.0 | 58.0 | | | | | | | | | | | | |
| Option 2 -M8-M10 | 1.5 Years | \$33.5 | | | | 33.5 | | | | | | | | | |
| Option 1 - M11-M16 | 2.2 Years | \$52.0 | | 52.0 | | | | | | | | | | | |
| Option 3 - M17-M21 | 1.3 Years | \$31.9 | | | | 31.9 | | | | | | | | | |
| Option 4 - Cofferdam, Chamber Work | 1.3 Years | \$68.3 | | | | | | 68.3 | | | | | | | |
| Option 5 - Make RC functional & Stabilize land wall | 1 Year | \$52.7 | | | | | | | 52.7 | | | | | | |
| Engineering During Construction & Supervision and Administration of Contracts | NA | \$72.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | 6.0 | 6.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Contracts to Achieve Lower Mon Benefits | | | | | | | | | | | | | | | |
| Stilling Basin | 4 years | \$36.2 | | | 36.2 | | | | | | | | | | |
| Pool 3 Dredging | 4 Years | \$109.0 | | | | 40.0 | 40.0 | 29.0 | | | | | | | |
| Lock 3 Demolition | 2 Years | \$12.8 | | | | | | | 12.8 | | | | | | |
| Pool Clearing | 2 Years | \$2.0 | | | | | | | 2.0 | | | | | | |
| Relocations (Distribution Includes Port Perry Bridge) | TBD | \$84.0 | | | 21.0 | 21.0 | 21.0 | 21.0 | | | | | | | |
| Numbers shown in this table are at the October 2014 price level and are not inflated thru construction. | | | FY Total | | \$58.0 | \$52.0 | \$67.2 | \$126.4 | \$71.0 | \$118.3 | \$79.5 | \$20.0 | \$20.0 | | |
| | | | Obligate River Chamber Funds | | | Obligate Dredging Funds | | | Obligate L/D 3 Removal Funds | | | Scheduling Flexibility | | | |

* River Chamber Options can be awarded sooner if funding is available

* Changes in table since last IWUB: Added relocations as a distributed cost, added pool clearing, and added EDC and SA



Lower Mon – Moving Toward Benefits

Late Funding Profile (October 2014 Price Level)

| Contract | Const Period | Cost (\$M) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | | | | | |
|--|--------------|------------|------------------------------|--------|--------|-------------------------|--------|------------------------------|--------|--------|------------------------|-----|------|------|------|------|
| Ongoing EDC/SA FY14&Prior Contracts | | | | | | | | | | | | | | | | |
| Base Contract M1-M7 | 2.5 Years | \$58.0 | 58.0 | | | | | | | | | | | | | |
| Option 2 -M8-M10 | 1.5 Years | \$33.5 | | | | 33.5 | | | | | | | | | | |
| Option 1 - M11-M16 | 2.2 Years | \$52.0 | | 52.0 | | | | | | | | | | | | |
| Option 3 - M17-M21 | 1.3 Years | \$31.9 | | | | 31.9 | | | | | | | | | | |
| Option 4 - Cofferdam, Chamber Work | 1.3 Years | \$68.3 | | | | | | 68.3 | | | | | | | | |
| Option 5 - Make RC functional & Stabilize land wall | 1 Year | \$52.7 | | | | | | | 52.7 | | | | | | | |
| Engineering During Construction & Supervision and Administration of Contracts | NA | \$72.0 | | | 5.0 | 5.0 | | 5.0 | 5.0 | | 6.0 | 6.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Contracts to Achieve Lower Mon Benefits | | | | | | | | | | | | | | | | |
| Stilling Basin | 4 years | \$36.2 | | | 36.2 | | | | | | | | | | | |
| Pool 3 Dredging | 4 Years | \$109.0 | | | | 40.0 | | 40.0 | | 29.0 | | | | | | |
| Lock 3 Demolition | 2 Years | \$12.8 | | | | | | | | \$12.8 | | | | | | |
| Pool Clearing | 2 Years | \$2.0 | | | | | | | | \$2.0 | | | | | | |
| Relocations (Distribution does NOT Include Port Perry Bridge) | TBD | \$12.8 | | | | | 6.4 | | | 6.4 | | | | | | |
| Numbers shown in this table are at the October 2014 price level and are not inflated thru construction. | | | | | | | | | | | | | | | | |
| FY Total | | | \$58.0 | \$52.0 | \$46.2 | \$111.8 | \$50.0 | \$103.7 | \$79.5 | \$20.0 | \$20.0 | | | | | |
| | | | Obligate River Chamber Funds | | | Obligate Dredging Funds | | Obligate L/D 3 Removal Funds | | | Scheduling Flexibility | | | | | |

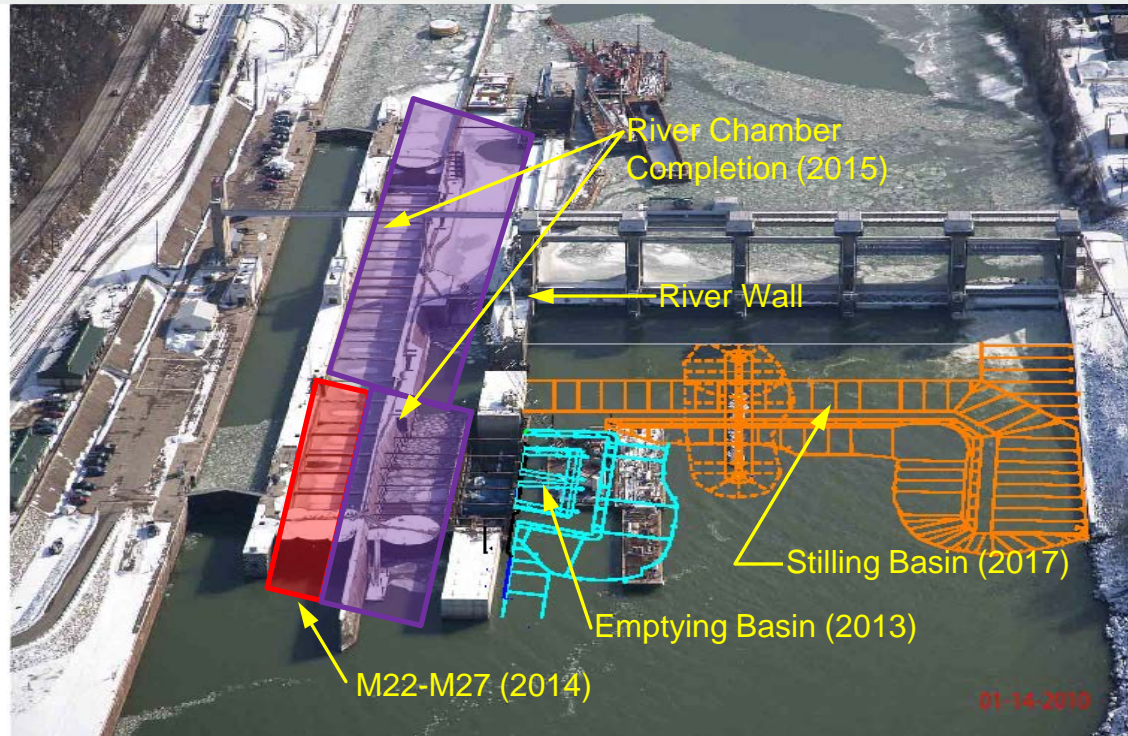
* River Chamber Options can be awarded sooner if funding is available

* Changes in table since last IWUB: Added relocations as a distributed cost, added pool clearing, and added EDC and SA



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 (does not include stilling basin) | 2015 | 2022 |



Lower Mon – Charleroi Land Chamber Deferment

- Land Chamber can be deferred and still achieve over 90% of the project benefits (>90% of \$220M per year)
 - Land Chamber cost (\$432M Oct2014, \$1,229M Fully funded 2050s)
 - Benefits begin to accrue with removal of L/D #3
 - Charleroi River Chamber
 - Dredging & Relocations
 - Removal of L/D 3
 - Benefits
- } Within Section 902 Limit
(\$640M below limit)
Including Port Perry
- Other Inland Navigation projects can work towards benefits sooner
 - Staggers maintenance at Charleroi
 - 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



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)
- 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%) |

- IWUB #73
 - Board agreed to defer raising this Bridge until “sometime in the future”
 - Board agreed to assist in identifying options available to vessels in lieu of raising the bridge
- Corps Actions
 - Re-engage USCG at the local level
 - Do not budget for this relocation



Lower Mon - Questions



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

| Total Project Cost: \$2,733M* | ARRA | CG | IWTF | Total |
|-------------------------------|-------------|--------------|--------------|--------------|
| FY13 Allocation: | \$1,510,007 | \$11,093,652 | \$11,093,652 | \$23,697,311 |
| FY14 Allocation: | \$0 | \$36,336,500 | \$36,336,500 | \$72,673,000 |
| FY15 Allocation: | \$(50,711) | \$28,016,000 | \$28,016,000 | \$55,981,289 |
| FY16 Budget: | \$0 | \$26,000,000 | \$26,000,000 | \$52,000,000 |

| | | | |
|--|---------------|---------------|-----------------|
| Remaining Balance: | \$997,149,337 | \$997,149,337 | \$1,994,298,674 |
| Remaining Balance Change From Last Meeting | | | \$-98,948,326** |

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

** Change due to FY15 Work Plan, Reprogram of \$2M and increase in FY16 Pres Bud.

Changes

- Charleroi M-22 to M-27 Award to Joseph B. Fay Company ; Award: August 15, 2014; \$58,578,541.31
- FY2015 Work Plan Numbers Shown for CG & IWTF
- FY2016 President's Budget Request
- ARRA Funds Reduction

Funding Overview

- Original Authorized Cost: \$556M
- 902 Limit: \$1.76B
- ARRA Funding (FY09-FY14): \$68.4M
- Engineering & Design Cost: \$603M *
- Supervision & Admin Cost: \$207M
- Mitigation: \$12M

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

Current Status of the Project

- Charleroi Emptying Basin – On Schedule
- Charleroi M22-M27 – On Schedule

Next Steps

- Award Charleroi River Chamber Completion (Base plus Options) Contract in FY2015



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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 | 14-Dec-15 S | | |
| Charleroi Emptying Basin | 1-Oct-95 | 30-Sep-13 | 26-Dec-15 S | | |
| Charleroi River Chamber (M22-M27) | 1-Oct-95 | 15-Aug-14 | December 2018 | | |
| Charleroi Dam Stilling Basin Extension | 1-Oct-95 | | Funding + 4 years | | |
| Charleroi River Chamber Completion | 1-Oct-95 | FY2015 S | 2023 S | | |
| L/D 3 Removal | TBD | | Funding + 2 years | | |
| Dredging | 1-Oct-95 | | Funding + 4 years | | |
| Municipal Relocations | 1-Oct-93 | | Funding + 5 years | | |
| Port Perry Bridge Relocation | 1-Oct-95 | | Funding + 4 years | | |
| Charleroi Land Chamber *1 | TBD | | Funding + 6 years | | |

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

