Olmsted Locks & Dam
Inland Waterways Users Board

MR. DAVID DALE, PE, PMP, SES
DIRECTOR, Programs
Great Lakes & Ohio River Division
25 February 2015
Agenda

- Status
  - Financials
  - Project Overview
  - Dam Re-Baseline Plan
  - 2014 LWS Milestone Update
  - 2014 LWS Images
  - 2015 LWS Milestone Identification
  - Scorecard
  - Deferred Demolition L&D Nos. 52/53
  - Future Challenges

- Discussion
## Olmsted Locks and Dam, Ohio River, IL & KY

### Current Status of the Project

- **NP-2** set 29 Jan 2015
- Precast yard work on shells NP 3-6 and PB 5-8
- Pile driving activities as river conditions allow
- CG / IWTF (85/15) beginning FY15

### Total Project Cost: $3,098,573,000*

<table>
<thead>
<tr>
<th>FY13 Allocation:</th>
<th>CG</th>
<th>IWTF</th>
<th>Total</th>
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<tbody>
<tr>
<td>$71,856,000</td>
<td>$71,856,000</td>
<td>$143,712,000</td>
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<tr>
<td>FY14 Allocation:</td>
<td>$124,106,000</td>
<td>$41,606,000</td>
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<td>FY15 Allocation:</td>
<td>$174,250,000</td>
<td>$30,750,000</td>
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<td>FY16 Budget:</td>
<td>$153,000,000</td>
<td>$27,000,000</td>
<td>$180,000,000</td>
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</table>

### Remaining Balance: $900,048,000 $158,832,000 $1,058,880,000

### Remaining Balance Change From Last Meeting $45,000,000

### Changes
- Adjustment to FY15 allocation; reprogramming of discretionary funds.

### Funding Overview

- Original Authorized Cost: $775M
- 902 Limit: TBD **
- ARRA Funding (FY09-11): $29.5M
- Engineering & Design Cost: $157.4M
- Supervision & Admin Cost: $131.5M
- Mitigation: $16.0M

* 902 Limit will be based on latest Certified Cost Estimate

### Next Steps

- Set 7 shells in 2015 LWS – NP 3-5 and PB 5-8
- Complete master and sheet pile through NP-9
- Install Tainter Gate 2 in 2015 LWS

### Current Status of the Project

- NP-2 set 29 Jan 2015
- Precast yard work on shells NP 3-6 and PB 5-8
- Pile driving activities as river conditions allow
- CG / IWTF (85/15) beginning FY15

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**LWS** – Low Water Season (contractually 15 Jun – 30 Nov)

**NP** – Navigable Pass

**PB** – Paving Block

**RBA** – Right Boat Abutment

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**Note**: Cost and Schedule data reflective of the latest Certified Cost Estimate (01 OCT 2013 price levels) completed in JUL 2014.
<table>
<thead>
<tr>
<th>Schedule of Remaining Work</th>
<th>Design Initiated</th>
<th>Contract Award</th>
<th>Construction Complete</th>
<th>Project Benefits</th>
<th>Capitalized Cost Closeout</th>
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<tbody>
<tr>
<td>Dam</td>
<td>26-Aug-96</td>
<td>28-Jan-04</td>
<td>30-Jun-21</td>
<td>1-Jul-21</td>
<td>30-Dec-21</td>
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<td>Wicket Lifter</td>
<td>1-Jan-15</td>
<td>9-Feb-16</td>
<td>13-Feb-18</td>
<td>14-Feb-18</td>
<td>30-Jun-18</td>
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<tr>
<td>Building &amp; Grounds</td>
<td>1-Oct-18</td>
<td>18-Jun-19</td>
<td>30-Apr-21</td>
<td>1-May-21</td>
<td>30-Sep-21</td>
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<tr>
<td>Demolition L&amp;D 53</td>
<td>1-Apr-19</td>
<td>1-Dec-21</td>
<td>1-Oct-23</td>
<td>N.A.</td>
<td>1-Jan-24</td>
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NOTE: Green highlighted dates are actual dates.
Olmsted Project Overview

- **Navigable Pass**
  - Foundation prep through NP9 complete
  - All 2014 LWS Milestones (PB Nos. 1-4, RBA and NP1) and Stretch Goal (NP2) complete
  - All 2015 LWS Paving Blocks (PB Nos. 5-8) precast in-progress
  - All 2015 LWS Shells (NP Nos. 3-5) and Stretch Goal (NP6) precast in-progress

- **Tainter Gates**
  - All (18 of 18) TG Shells set
  - TG-1 erected
  - TG-2 in fabrication (6 July delivery)
  - TG-3,4,5 released for fabrication/expedited delivery

- **Locks & Approach Walls**

- **Operations Facilities**

- **Resident Engineers Office**

- **Completed**

- **Under Contract**

- **Future**

- **Fixed Weir**

- **Dam Access Road**

- *** Left Boat Abutment**

- **Under Contract**

- **Completed**

- **Future**
2014
Plan to Complete
Final two Shells
scheduled set in
LWS 2018

2015
Plan to Complete
Final three Shells
scheduled set in
LWS 2017

* Nine shells set in LWS 2014 including two shells set outside historical LWS limits (15 Jun – 30 Nov)
2014 LWS Milestones

- **Scheduled Milestones**
  - Set LP-5 (complete)
  - Set LP-6 (complete)
  - Set PB # 1-4 (of 12) (complete)
  - Erect TG #1 (complete)
  - Set RBA (complete)
  - Set NP #1 (of 12) (complete)

- **Preparatory Milestones**
  - Install Grout Mat (complete thru NP #9)
  - Drive Foundation Pile (complete thru NP #2)
  - Drive M/S Pile (complete thru NP #2 U/S, NP #6 D/S)

- **Stretch Goal Milestone**
  - Set NP #2 (of 12) (complete)

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**Legend**

- LP – Lower Pier
- TG – Tainter Gate
- SB – Service Bridge
- GM – Grout Mat
- FP – Foundation Pile
- M/S – Master/Sheet
- RBA – Right Boat Abutment
- LBA – Left Boat Abutment
- PB – Paving Block
- NP – Nav Pass Shell (Monolith)
1. Upper Pier Build-out (Nos. 1-6)
2. Dredging Boat Harbor
3. Deploying Diver
4. TG-1 resting on dogging beams
5. NP-2 moving down skidway
6. NP-2 Tremie Placement
2015 LWS Milestones

- **Scheduled Milestones**
  - Set NP #3-5 (of 12)
  - Set PB # 5-8 (of 12)
  - Erect TG #2 (of 5)

- **Preparatory Milestones**
  - Install Grout Mat (thru NP #12/LBA)
  - Drive Foundation Pile (thru NP #6)
  - Drive M/S Pile (thru NP #6 U/S, NP #8 D/S)

- **Stretch Goal Milestone**
  - Set NP #6 (of 12)
  - **Drive Left Boat Abutment (LBA) Foundation Piling**

**Legend**

- LP – Lower Pier
- TG – Tainter Gate
- SB – Service Bridge
- GM – Grout Mat
- FP – Foundation Pile
- M/S – Master/Sheet
- RBA – Right Boat Abutment
- LBA – Left Boat Abutment
- PB – Paving Block
- NP – Nav Pass Shell (Monolith)
### Expenditures

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Planned (BCWS)</th>
<th>Earned (BCWP)</th>
<th>Actual (ACWP)</th>
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<tr>
<td></td>
<td>$1.877B</td>
<td>$1.876B</td>
<td>$1.863B</td>
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</table>

**BCWP:** Reports the value (based on % complete) of the work performed to date.

**Target:** Actuals as compared to Planned: (<1% = Green) (>1% and <3% = Yellow) and (>3% = Red)

### Schedule

**Project Complete**
- PACR: Oct 2024/Mar 2022
- Dam Operational: Oct 2020/Oct 2018

**Measures:** Planned project completion and Dam contract operational dates

**Target:**
- Green: Current = PACR-12 months
- Yellow: Current = PACR-11 months to PACR-7 months
- Red: Current = PACR-6 months to after PACR date

### Olmsted Major Activity Schedule

**Olmsted Project TEP Trend**
- Actuals vs. Planned: (<1% = Green) (>1% <3% = Yellow) and (>3% = Red)

<table>
<thead>
<tr>
<th>TEP in Billions</th>
<th>Oct-14</th>
<th>Nov-14</th>
<th>Dec-14</th>
<th>Jan-15</th>
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<tbody>
<tr>
<td>PACR w/risk</td>
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<td>3.099</td>
<td>3.099</td>
<td>3.099</td>
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<td>Est. w/risk</td>
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<td>3.047</td>
<td>3.064</td>
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Olmsted L&D Project Earned Value Analysis
(Based on DOD Gold Card)
Dec 2014

PACR (Fully Funded) = $3.1B

Contingency (Out Year) = $44M

Contingency (Dam) = $200M

Current Field Office estimated TEP $2.819 Billion in Mar 2022

Dam Operational Oct 2018
(Current working schedule)

Olmsted Project Complete Mar 2022
(Current working schedule)

Olmsted Project Complete Sept 2024
(PACR)

ACWP
BCWP
BCWS

BUILDING STRONG®
L&Ds 52/53 Demolition Assessment

- Marine Demolition majority of demolition costs.
  - L&D 52 - $67.5M; L&D 53 - $47.7M
- US Coast Guard and Navigation Industry input – Jan 2015
  - Prefer majority of dam removed at each site
  - Remove Lock 53 in Olmsted approach
  - Lock 52 removal to be determined
- Maintains Safety of industry and recreational traffic
- Environmental impacts documented in original NEPA
Future Challenges

- Efficient Funding Stream
  - Minimum of $150M/year through 2020
  - Less than $150M would have direct impact on the schedule
  - Capability Funding Level of $205M (FY15)
- Passing Traffic as Work continues into the Navigable Pass Footprint

Default plan will be to continue providing a navigable channel past the project’s construction footprint in 2015. Commercial traffic will be routed through locks by exception to address extreme low water elevation and short duration critical shell set down activities.
Discussion

Olmsted Locks and Dam
Wicket Lifter Barge