NEW LOCK AT THE SOO
QUARTERLY UPDATE

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AGENDA

1. Soo Locks Importance
2. Maintenance of Existing Facility
3. New Lock Schedule
4. New Lock Cost
5. Upstream Channel Deepening
6. Upstream Approach Walls
7. New Lock Chamber
8. Emerging Topics
9. Congressional Engagements
10. Upcoming Dates
The Soo Locks consist of two operating locks, the Poe Lock, built in 1968, and the MacArthur Lock, built in 1943.

“There is no contingency plan, stockpile or off shore sourcing action that could come close to mitigating the situation.”

- Industry Executive
THE SOO LOCKS IMPACTS OF OUTAGE & NEED FOR RESILIENCY

- Six month unscheduled outage of Poe Lock would result in 11 million jobs lost in U.S. with Michigan unemployment over 22%
- For comparison, Michigan’s unemployment was 15% in the 2009 Great Recession
- GDP loss across the entire Nation and reaching 10% - 22% loss in multiple states

Source: DHS, OCIA-The Perils of Efficiency Dynamic PDF, Oct 2015
MAINTAINING EXISTING SOO LOCKS FACILITY
(O&M FUNDED)

O&M – Routine & Asset Renewal
• Routine annual O&M has grown from $10.7M in FY08 to $15.2M in FY20
• Higher cost component repairs and replacements (Asset Renewal) - $117.5M thru FY20

FY20 Funding/Activities
• FY20 PBUD
  • $15.2M for Routine O&M
  • $2.5M in Asset Renewal for Poe Lock Gate 1 Repairs
• Soo Winter Maintenance (Jan-Mar 2020)
  • Poe Lock Gate 1 Repairs – crack/diagonal repairs
  • Poe Lock Gates 1&3 Sill Repairs
  • Poe Lock Gate 1 anchor bar replacement
  • Poe Lock Gate 4 Inspection if able to fully dewater

FY20 Work Plan Priorities
• Gate1/3 Sill Repairs ($500K)
• Acquisition of Aquadigger from Olmstead to replace Derrick Barge Nicolet ($8.0M)
• Roof replacement on Davis Bldg & Boathouse ($625K)
• Crawler Crane Replacement for C/B Harvey ($3.2M)
• Design of C/B Harvey - barge repairs & upgrades ($1.2M)
• Medium Voltage Breaker Replacement – lock power supply ($2.1M)

FY21 Priorities
• MacArthur Lock Ship Arrestor Repairs
• Routine O&M
• Asset Renewal Priorities:
  • Poe Lock Gate 1 – final phase (repairs & coating replacement)
  • Poe Gate 4 – initial phase (crack repairs)
  • Center Dike Rehab (initial phase)
MAINTAINING EXISTING SOO LOCKS FACILITY (CG FUNDED)

We are here

Workplan Capabilities FY20 ($11.5M)
- $8.0M – Poe Lock Ship Arrestors: Additional funding needed to complete project due to higher capacity needed for current vessels.
- $3.5M – MacArthur Tainter Valve Machinery: Additional funding needed to complete project due to refinement of design.
Completed Work: Downstream Deepening & Sabin Lock Cofferdam

Remaining Work:

Phase 1
- Upstream Channel Deepening

Phase 2
- Upstream Approach Walls

Phase 3
- New Lock Chamber

WE ARE HERE

* Early completion could be realized with efficient funding, favorable weather conditions and continuing contracts clause
# FUNDING HISTORY AND CAPABILITIES

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Allocation/ (Capability)</th>
<th>Activities Funded/ Capabilities</th>
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| Prior to 2018 | $32.0M | • Design and planning efforts  
• Downstream Channel Deepening construction completed  
• Sabin Lock Cofferdam construction completed |
| 2019 | $69.2M  
$32.3M Fed  
$36.9M State of MI | • Upstream Channel Deepening: complete design & award construction contract in Q1 of FY20  
• Upstream Approach Walls: complete design  
• New Lock Chamber: resume design |
| 2020 | $75.3M/ ($125.3M)* | • Upstream Channel Deepening: complete and manage construction  
• Upstream Approach Walls: complete design, AOA, award and manage construction contract  
• New Lock: continue design  
**$50M remaining capability identified in fiscal year 2020** |
| 2021 | ($173.2M)* | • Upstream Channel Deepening – manage construction  
• Upstream Approach Walls – complete and manage construction  
• New Lock - complete design and advertise construction contract |
| 2022 | ($129.3M)* | • Upstream Approach Walls – manage construction  
• New Lock – year 2 of construction contract |
| 2023-2028 | ($501.7M)* | • New Lock - Manage and complete construction |

*Fully funded costs escalated through midpoint of construction

Remaining $15M in State of MI Funds to be used for future needs
## FY20 WORK PLAN CAPABILITIES

### New Lock Capabilities

<table>
<thead>
<tr>
<th>Capability</th>
<th>Capability Description</th>
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<tbody>
<tr>
<td>$35M</td>
<td>Upstream Approach Walls Completion of Construction (increased from $16.6M, details on slide 13)</td>
</tr>
<tr>
<td>$15M</td>
<td>Upstream Channel Deepening Additional Construction Funds (increased from $7.4M)</td>
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<tr>
<td>$0</td>
<td>New Lock Chamber Construction of Downstream Coffer Dam Cells (Further design and schedule analysis resulted in decision to not pull a portion of the coffer dam construction forward)</td>
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<tr>
<td>$50M</td>
<td>TOTAL</td>
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### Additional Soo Locks FY20 Work Plan Capabilities
- Soo Locks Routine Work and Asset Renewal FY20 Work Plan Capabilities (O&M Funded) (details on slide 5) = $15.6M
- Major Rehab FY20 Work Plan Capabilities (CG Funded) (details on slide 6) = $11.5M
CONSTRUCTION SEQUENCING

- FY20: Upstream Channel Deepening (UCD)
- FY21: Upstream Channel Deepening and Upstream Approach Walls (UAW)
- FY22: Upstream Approach Walls and New Lock Chamber (NLC)
- FY23 Forward: New Lock Chamber
UPSTREAM CHANNEL DEEPENING

Scope: Deepen upstream approach channel to depth of 30 feet
Solicitation Number: W911XK20B0001
Design Status: Design complete
Construction Status: Construction award expected in the coming weeks
Scope: Rehabilitate approach walls upstream of New Soo Lock
- Install 1,900’ of 34’ diameter SSP Cells
- Install 1,000’ of SSP transition wall
- Install 1,100’ of SSP faced wall
- Install 1,100’ of Soldier pile wall
- Install new mooring bollards and lighting

Design Status: In Progress (funded by State of MI)

Construction Status: Contract award expected in FY20 4th Quarter.

Funding Capability Identified in FY20 Work Plan

Estimated Performance Period: 24 Months
Major Drivers of Cost Increase

- Additional 1,200’ of wall rehab on Western end of Approach Wall due to Ship Simulation Study results
- Rehab of Pier lighting and concrete cap
- Increased Mob/Demob cost estimate
- Miscellaneous design refinements such as the type of anchor wall used for transition walls and closure of sluiceway
UPSTREAM APPROACH WALL CONTRACTOR ENGAGEMENT

- Industry Feedback Sessions Conducted 23 Oct 19 – 24 Oct 19
- Pre-Proposal Conference to be held on site at Soo Locks in Mar 2020
NEW LOCK CHAMBER

Scope: Construct new 1,200’ long by 110’ wide by 32’ deep chamber and rehabilitate downstream approach walls
Design Status: In Progress - 70% Design to be complete in May 2020
Construction Status: Funding capability identified in FY21 Budget
Estimated Performance Period: 5-8 Years
PROJECT’S ECONOMIC IMPACT

- $1.03B Total Project Cost
- Estimated 7-10 years of construction
- 1,240 jobs created on an annual basis
  - 600 direct jobs
  - 210 indirect jobs
  - 430 induced jobs
- 735,000 tons of domestically-quarried limestone
- 35,000 tons of American-made cement
- 20,000 tons of American-made steel
EMERGING TOPICS

- Public Private Partnership (P3) Withdrawn by State of Michigan

- On-Site Resident Office for Integrated Project Office (IPO)

- The IPO plans to temporarily use the Visitor Center and a portion of the Admin Bldg for a duration to be determined
CONGRESSIONAL ENGAGEMENTS

Completed:
• Great Lakes Governors and Premiers Meeting in D.C.,
  16 Oct 19 - 17 Oct 19

Upcoming:
• Detroit District Congressional Visits to D.C., 02 Mar 20 –
  06 Mar 20
NEW LOCK UPCOMING DATES

• Upstream Channel Deepening Contract Award: In Coming Weeks
• Upstream Approach Walls Contract Advertisement: Feb 2020
• Upstream Approach Walls Pre-Proposal Meeting: Mar 2020
• Upstream Channel Deepening Construction Start: Apr 2020
• New Lock at the Soo Fiscal Year 20 3rd Quarter Update: Apr 2020
• Upstream Approach Walls Award: FY20 4th Quarter
• New Lock Chamber Industry Days: Jul 2020

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