GREAT LAKES NAVIGATION UPDATE

Marie T. Strum, P.E.
U.S. Army Corps of Engineers
Great Lakes Navigation Team Leader

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GL Dredging Team

“The views, opinions and findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.”
GREAT LAKES NAVIGATION SYSTEM

Example of Interdependence of 8 Interdependent Ports

- Non-linear complex system of interdependent
- Commercial are ports dependent on each other
- 95% of traffic is internal to the Great Lakes
- System saves $3.9* Billion per year over next least costly mode of transportation

* Updating to incorporate latest information on overland rail capacity
GL NAVIGATION FUNDING HISTORY

Executable – Backlog Reduction Funding Range

Sustainable Funding Range

Fiscal Year


$200,000 $180,000 $160,000 $140,000 $120,000 $100,000 $80,000 $60,000

NAV O&M and CDF Funds (in $000's)

ARRA

Adds and Workplan

President's Budget
Great Lakes Navigation Operations & Maintenance
$88.4M + $55.8M = $146.2M

Key O&M Items
$37.3M in Dredging (18 projects; 2.6M cy) ($27.8M + $9.5M)
$11.4M in Dredged Material Management ($6M + $5.4M)
$16.9M in Soo Locks Maintenance ($2.6M + $14.3M)
$5.9M in Chicago Lock Maintenance
$2.0M in Black Rock Lock Maintenance
$20.3M in Navigation Structure Maintenance/Repair

Construction General
$75.3M + $50M = $125.3M New Soo Lock
$12.3M Indiana Harbor CDF Construction
Great Lakes Navigation Operations & Maintenance
$104.8M

Key O&M Items
$37.1M in Dredging (16 projects; 3.1M cy)
$5.9M in Dredged Material Management
$23.5M in Lock Operations & Maintenance
$4.5M for Black Rock Lock Miter Gates

Construction General
$123.2M New Soo Lock
$16M Calumet CDF Construction
DREDGING
FY20 Dredging Funding and Dredging Requirements

[Map of Great Lakes showing locations and dredging needs]
HISTORICAL FUNDING
GREAT LAKES LOW USE PROJECTS (<1M TONS)

President's Budget  Workplan/ Appropriation
Great Lakes Dredging Backlog 1985-2019

- Annual Great Lakes Dredging
- Average Annual Need
- Dredging Backlog
Current Dredged Material Placement Methods

Percentages by volume (1998-2014)

- NEAR SHORE
- CDF
- OPEN WATER
- UPLAND

14%
45%
37%
4%

Lake Superior
- Duluth-Superior
- Ashland
- Menominee
- Sturgeon Bay
- Kewad""
SOO LOCK RELIABILITY
MAINTAINING EXISTING SOO LOCKS FACILITY (O&M FUNDED)

O&M – Asset Renewal
• Higher cost component repairs and replacements (Asset Renewal) - $117.5M thru FY20

FY20 Funded Work
• $2.6M Poe Lock Gate 1 Repairs
• $500K Poe Gate Sill Repairs
• $4.4M Crane Replacement - Lock Maintenance
• $8M Acquisition of Aquadigger to replace Nicolet - Strike Removal
• $2.1M Hydropower Medium Voltage Breaker Replacement – Lock Power Supply

Winter Maintenance (Jan-Mar 2020)
• Poe Lock Gate 1 Repairs – crack/diagonal repairs
• Poe Lock Gates 1 & 3 Sill Repairs – concrete spalling
• Poe Lock Gate 1 Emptying and Filling Valve Repair

FY21 Priorities
• MacArthur Lock Ship Arrestor Repairs
• Asset Renewal Priorities:
  • Poe Lock Gate 1 – final phase (repairs & coating replacement)
  • Poe Gate 4 – initial phase (crack repairs)
  • Center Dike Rehab (initial phase)
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**Davis and Poe Pumpwells ($37.3M FY21 Capability)**

- The pumpwell system currently services the Poe and Mac lock and will service the New Lock once constructed.
- Design revealed unacceptable safety and construction risk in rehabilitating 100 - 120 year old wells under operational buildings.
- Due to comparable costs a new well is being constructed instead of rehabilitating existing wells.
PROPOSED NEW SOO LOCK

New lock will have **same dimensions** as existing Poe Lock (1200 ft. length by 110 ft. width and a depth of 32 ft.)
NEW LOCK STATUS

Phase 1
- Upstream Channel Deepening (UCD)

Phase 2
- Upstream Approach Walls (UAW)

Phase 3
- New Lock Chamber (NLC)

FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27 FY28 FY29 FY30

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* Early completion could be realized with efficient funding, favorable weather conditions and continuing contracts clause

UCD 2021 Work Area
UCD 2020 Work Area
NLC 2022 Forward Work Area
UAW 2022 Work Area
UAW 2021 Work Area

Design
Contract Procurement
Construction
Scope: Deepen upstream approach channel to depth of 30 feet
Construction Status:
Construction awarded 30 January to Trade West Construction Co.
Construction began in late April
Estimated Performance Period: 20 Months
**Scope**: Rehabilitate approach walls upstream of New Soo Lock

**Design Status**: Contract Advertisement in May 2020

**Construction Status**: Contract award expected in Fall 2020

**Estimated Performance Period**: 24 Months
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 June 2020

Construction Status: Construction Funding Capability Identified in FY21 ($102.3M of $152.3M capability included in the FY21 PBud Request)

Estimated Performance Period: 5-8 Years
OUTREACH

Web Site:  www.lre.usace.army.mil/greatlakes/navigation

• Harbor Fact Sheets
• Updated CDF Fact Sheets
• Presentations

Mailing Lists:  send information to glnavigation@usace.army.mil

Marie Strum
(313) 226-6444
Marie.T.Strum@usace.army.mil
QUESTIONS?