

Great Lakes Navigation Update

February 2015



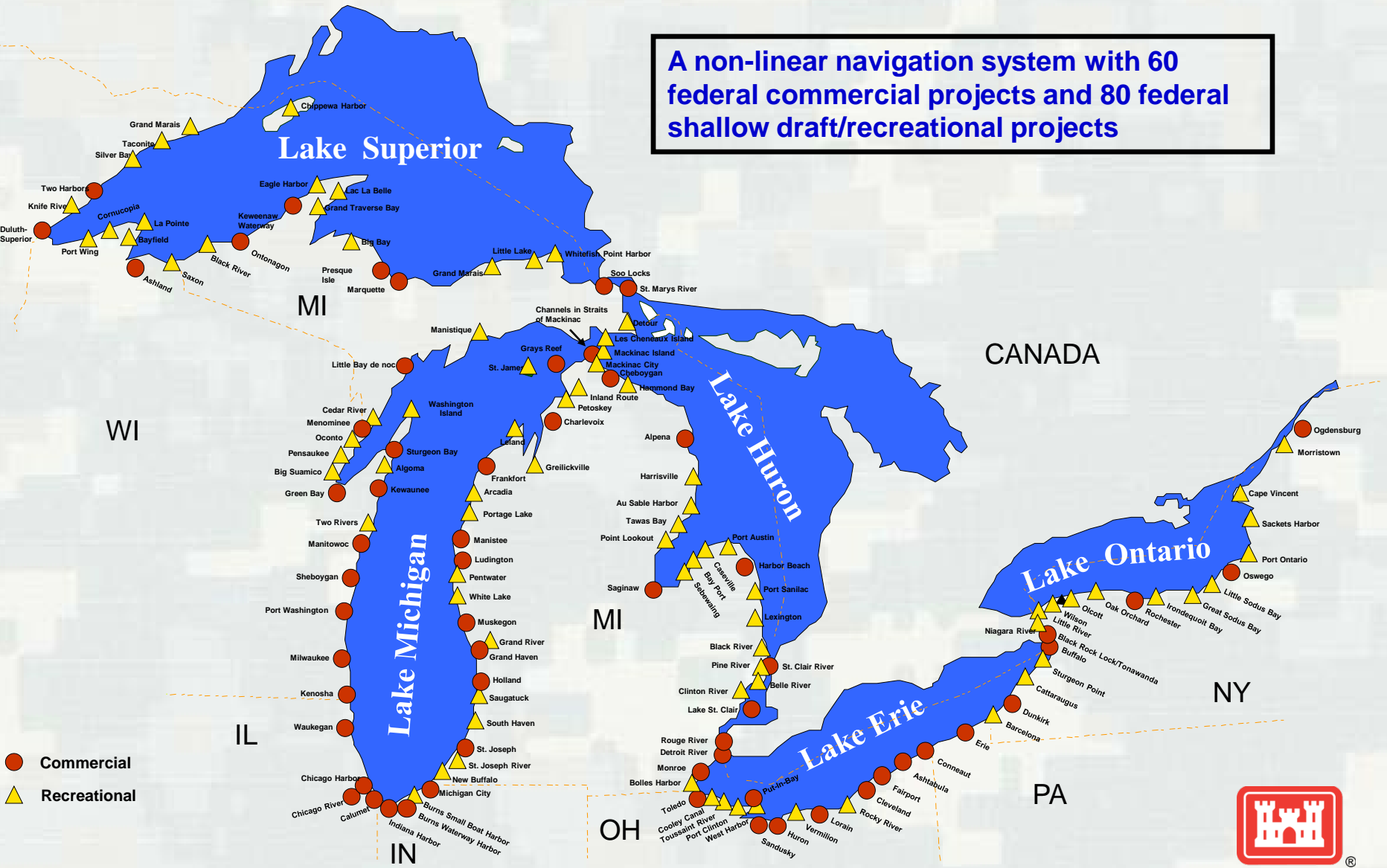
®

US Army Corps of Engineers
BUILDING STRONG®



Federal Projects on the Great Lakes

A non-linear navigation system with 60 federal commercial projects and 80 federal shallow draft/recreational projects



- Commercial
- ▲ Recreational



FY15 Corps Funding Status

- Congress passed the FY15 Consolidated and Furthering Continuing Appropriations Act; enacted Dec 16, 2014.
- The FY15 Appropriations bill included FY15 President's Budget with some adjustments, plus additional O&M funds for ongoing work – to be allocated by USACE HQ

Additional Funding for Ongoing Work

- | | |
|-------------------------------------|---------|
| - Navigation Maintenance | \$45M |
| - Deep-draft harbor and channel | \$165M |
| - Small, remote, or subsistence nav | \$42.5M |



FY15 Projects Funded from Additional Funds for Ongoing Work

\$6.0M Dredging

- Rouge River, MI
- Burns Harbor, IN
- Sturgeon Bay, WI
- St. Joseph Harbor, MI
- Holland Harbor, MI
- Waukegan Harbor, IL

\$3.3M Soo Asset Renewal

\$0.59M Chicago Lock Electrical Repair

\$2.122M Fox Locks Transfer Payment

\$1.2M Calumet Harbor dredged material management and shoreline protection



FY 15 Great Lakes Navigation Program

\$115.7M Great Lakes Navigation Operations & Maintenance

Key Items

\$46.2M in Dredging (21 projects – 3.1M cubic yards)

\$10.3M in Dredged Material Management

\$8.65M in Soo Asset Renewal

\$3.1M Emergency Funding – Oct 31, 2014 Storm

Dredging – Muskegon, MI

Pier Repair – Grand Haven, MI

Total FY15 Program \$118.8M



FY15 Dredging Funding and Dredging Requirements



FY 16 Great Lakes Navigation

\$111.6M Great Lakes Navigation Operations & Maintenance

Key Items

\$49M in Dredging (25 projects – 3.4M cubic yards)

\$8.4M in Dredged Material Management

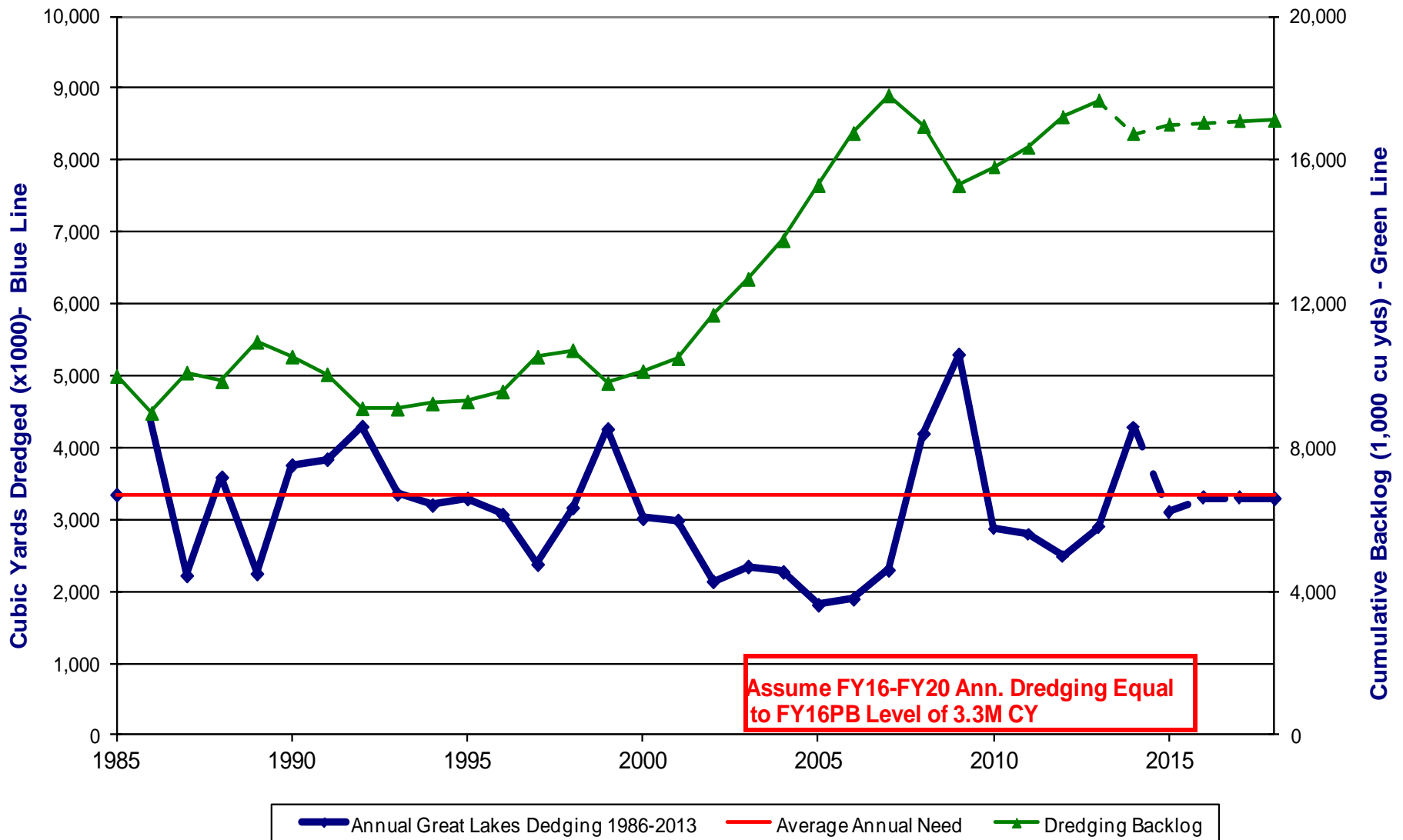
\$3.7M in Soo Asset Renewal



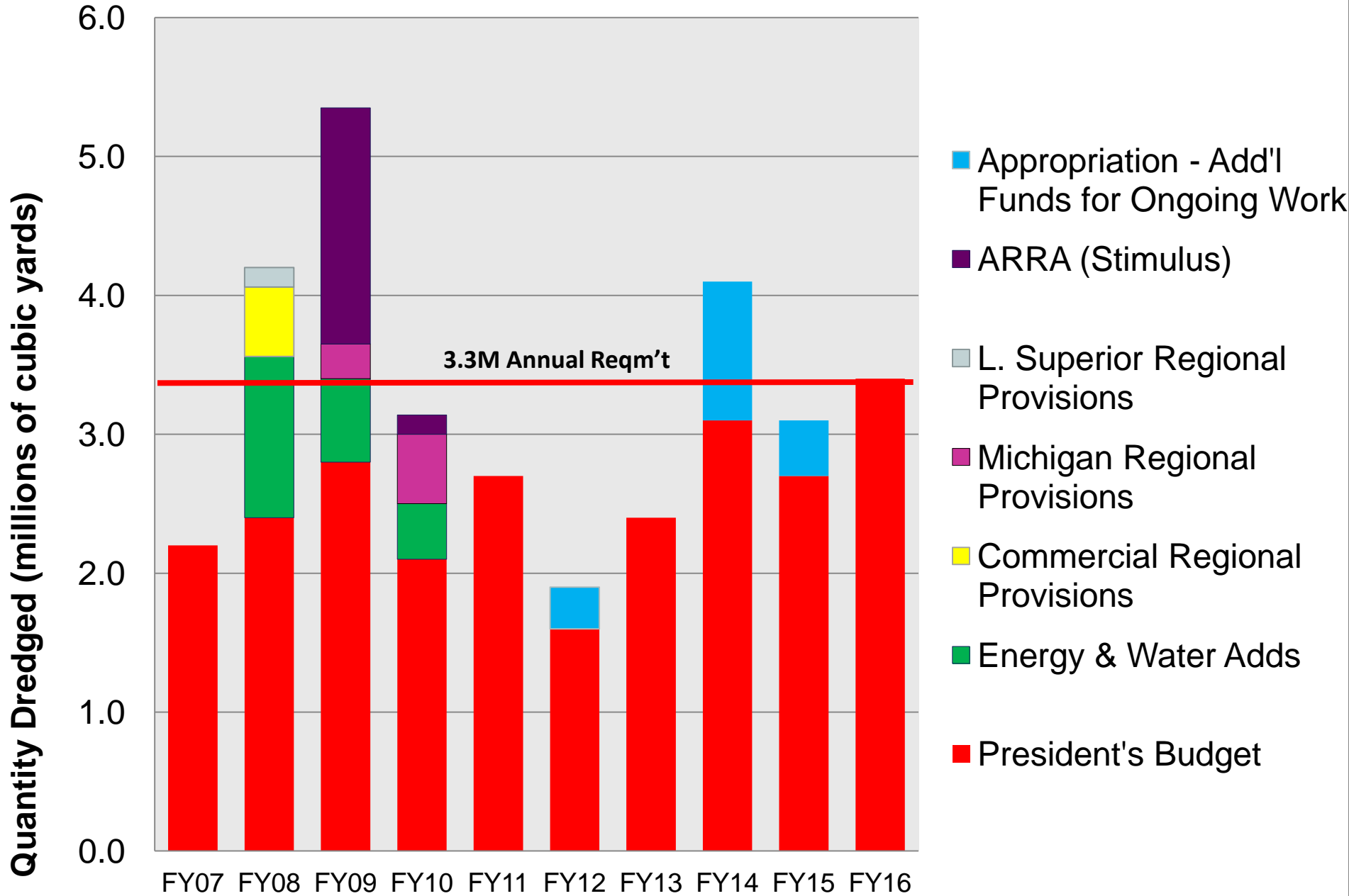
FY16 President's Budget Dredging Projects



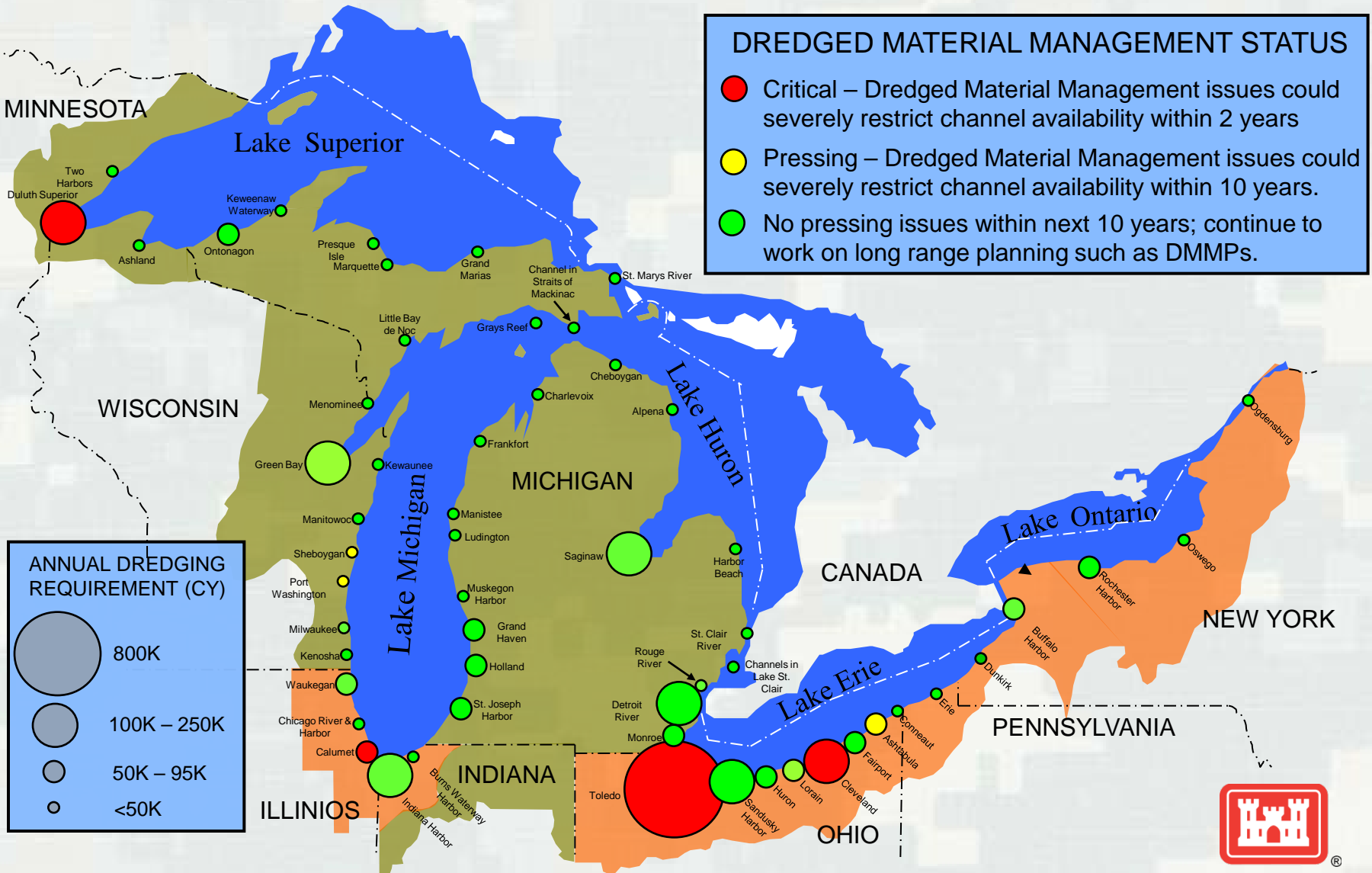
Backlog Growth Under Constrained Dredging Funding 2013-2020



Dredging Funding Trends 2007 – 2016



Current Dredged Material Management Conditions



Dredged Material Management Initiatives

Initiatives underway to reduce requirements/increase efficiencies:

- ✓ Leverage EPA funding from **Legacy Act and GLRI** (both dredging and dredged material management)
- ✓ Work with states and local sponsors on finding beneficial uses of dredged material and reuse for CDF material
- ✓ Work with states on acceptability of testing protocols for open lake placement



Harbor Structure Condition Assessments



Cost to Restore Most Critical Harbors to Acceptable Level of Risk:

- Ashtabula Harbor \$39.0M
- Chicago Harbor \$19.6M
- Cleveland Harbor \$10.0M
- Fairport Harbor \$28.0M
- Lorain Harbor \$14.0M
- Milwaukee Harbor \$33.0M

Total: \$143.6M



A – Failure Unlikely
B – Low Risk of Failure
C – Medium Risk of Failure
D – High Risk of Failure
F – Failed

- Commercial
- ▲ Recreational

Regional Risk Communication Meetings



Soo Locks Reliability



The Soo Locks

A Lynch Pin of the Great Lakes Navigation System

- 70% of the commercial commodities transiting the Soo Locks are limited by size to the Poe Lock
 - Security concerns - foreign crews in vessels are capable of seriously damaging or destroying locks
 - There is currently no redundancy for the Poe Lock

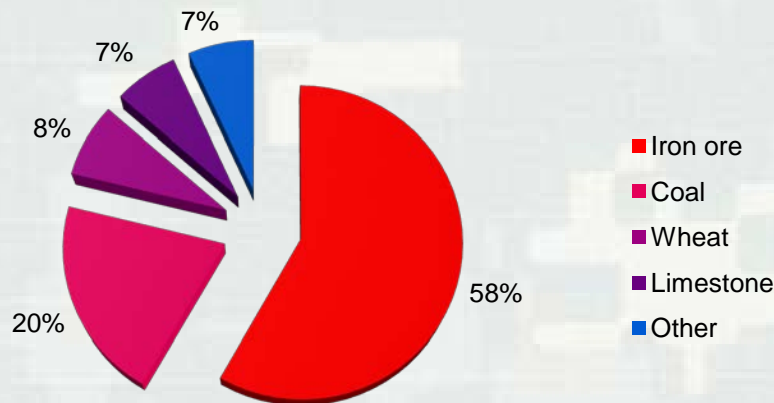
- The economic impact of a 30-day unscheduled closure of the Soo Locks = \$160M
- Two major efforts are underway to improve reliability of the Soo Locks
 1. Maintain existing infrastructure through Asset Renewal Plan
 2. New replacement lock with the same dimensions as the Poe Lock- BCR sensitivity analysis underway



Soo Locks – Iron Ore Impact Assessment

- Iron ore is by far the number one commodity transiting the Soo Locks
- 97% of iron ore mined in U.S. comes from Mesabi Range in MN or Marquette Range in MI.
- Integrated steel mills are located on the lower lakes Great Lakes; do not have the infrastructure to accept iron ore by any means but ship.
- Most of this iron ore passes through the Soo Locks.

Soo Locks 2013 Tonnage



Corps Locks: Value and Economic Consequences

Results – Ranked by Cost 30-day MAIN CHAMBER CLOSURE

	<u>mmtons</u>	<u>tons</u>	<u>30-day conseq</u>
<i>Soo Locks</i>	71.4	5	1
Calcasieu L, GIWW	36.7	19	2
Bowman L, GIWW	36.1	20	3
Lagrange L&D	25.4	25	4
Peoria LD	22.6	31	5
Bayou Boeuf Lock	25.9	24	6
Miss River LD24	23.9	27	7
Miss River LD22	23.3	29	8
Miss River LD19	20.8	33	9
Miss River LD25	23.9	28	10



Corps Locks: Value and Economic Consequences

Results – Ranked by tons MAIN CHAMBER CLOSURE

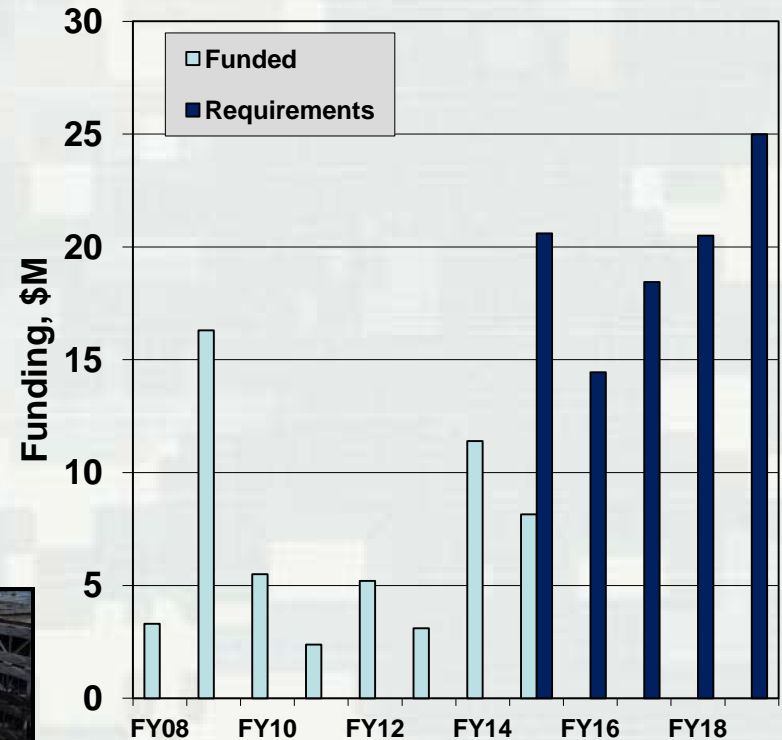
	<u>mmtons</u>	Ranked by: <u>30-day conseq tons</u>	
Ohio River LD 52	88.8	42	1
Ohio River LD 53	76.7	105	2
Newburgh LD	76.2	23	3
Smithland LD	75.0	128	4
Soo Locks	69.5	1	5
John T. Myers LD	69.4	49	6
McAlpine LD	65.2	137	7
Cannelton LD	64.9	46	8
Miss River LD27	58.7	38	9
Markland LD	55.6	96	10



Soo Locks Asset Renewal Long-Term Plan

Asset Renewal Plan will maximize reliability and reduce risk through 2035

- \$47.2M funded to date through FY14
 - New hydraulics, stop logs, utilities
 - Compressed Air System
 - Gate Anchorage Replacement
 - Mac Lock Controls Replacement
- Remaining key priorities
 - Poe Miter and Quoin Block Replacement
 - Poe Electrical Rehabilitation
 - Poe Lock Gate 1 Replacement



BUILDING STRONG®

New Replacement Lock



- WRDA 2007: Construction at 100% federal expense
- Inconsistent with Administration policy due to BCR of 0.73
- Currently conducting a partial benefits reanalysis to determine if some benefit categories were not captured or if insufficient information was used. If there is a large enough increase in benefits, a BCR revisit may be in order.



Benefits Analysis Status

- Evaluate potential benefits which might impact the BCR
- Review completed by end of FY14 by contract
- Involvement included District staff, Inland Navigation Planning Center of Expertise, Lake Carriers' Association, shippers, system users
- Survey of top shippers/operators that move coal and iron ore through the locks. The objective was to determine how a closure would affect businesses, what their response would be, and what costs would be associated with that response.
- Incorporated updated probabilities of failure and combined with costs to the users to determine possible impacts on project benefits.



Key Great Lakes Navigation Contacts

GL Navigation Business Line Manager

Mike O'Bryan – (313) 226-6444

Marie Strum – (313) 226-6794

Shamel Abou-El-Seoud - Chicago Operations Chief
(312) 846-5470

Josh Feldmann - Buffalo District Operations Chief
(716) 879-4393

Dave Wright - Detroit Operations Chief
(313) 226-3573

www.lre.usace.army.mil/greatlakes/navigation

