

Great Lakes Navigation Stakeholder Meeting

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April 9, 2014



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US Army Corps of Engineers
BUILDING STRONG®



Great Lakes Navigation Meeting

Great Lakes Navigation Program

- Trends and Key Issues
- FY13 Accomplishments
- FY14 Navigation Program
- FY15 President's Budget
- Soo Locks Reliability

Mike O'Bryan/Marie Strum

District Operations Chiefs

- Key Project Updates

Josh Feldmann
Dave Wright
Steve Hungness

Legislative Update

Steve Fisher
Jim Weakley



FY 13 Accomplishments

Great Lakes Navigation

\$85.9M Great Lakes Navigation O&M

Key Items in FY13 Budget

\$31.0M in Dredging (15 projects - 2.4M cubic yards)

\$12.0M in Dredged Material Management

\$3.1M in Soo Asset Renewal

No Appropriation from Congress – Year Long Workplan

Modest decreases – 1-10% due to sequestration

Additional funding for emergency dredging at Saginaw

No other additional projects funded with Corps regular budget

Hurricane Sandy added 22 dredging, 7 structure repair projects; 7 State of MI funded dredging



FY14 Corps Funding Status

- Congress passed the FY14 Consolidated Appropriations Act; enacted Jan 17, 2014.
- The FY14 Appropriations bill included FY14 President's Budget plus additional O&M funds for ongoing work allocated by USACE HQ.



FY 14 Great Lakes Navigation O&M

\$94.9M Great Lakes Navigation Operations & Maintenance

Key Items in FY14 Appropriation

\$39.9M in Dredging (18 projects – 3.1M cubic yards)

\$10.6M in Dredged Material Management

\$1.6M in Soo Asset Renewal

Additional Funding for Ongoing Work

- Navigation Maintenance \$ 25.72M
- Deep-draft harbor and channel \$ 128M
- Inland waterways \$ 42M
- Small, remote, or subsistence nav \$ 40M



FY14 Corps Funding Additional Allocation

- Final allocation was announced on March 4.
\$23M was applied to Great Lakes Navigation projects.
 - Dredging: \$13.8M additional funds for dredging
 - 12 new projects, 6 projects received additional funds (FY14 total – 30 projects, \$44M)
 - Soo Locks Asset Renewal \$5.5M
 - Chicago Lock – gate winches \$853K
 - Black Rock Lock – gate rehab \$1.1M
 - Port Washington structure repair \$950K



Named Projects in FY14 Appropriation Dredging Funding

Duluth-Superior

Green Bay

Calumet

Indiana Harbor

Holland

Grand Haven

Saginaw River

Detroit River

Toledo

Sandusky

Cleveland

Buffalo

Fairport

Lorain

Waukegan

Burns

Monroe

St. Marys River



Red text projects received additional funding



FY 14 Additional Dredging Funding Low Use Projects

Black River, Port Huron, MI
Cheboygan
Erie
Huron
Irondequoit Bay
Kewaunee

La Pointe
Leland
Manitowoc
Menominee
Rochester
St. Joseph



FY14 Dredging Funding and Dredging Requirements



-  Commercial
-  Recreational
-  FY14 State of MI Funded Dredging
-  FY14 Sandy Funded Dredging
-  FY14 Funded Dredging
-  FY14 Unbudgeted Dredging Need



FY 15 Funding

Great Lakes Navigation

\$102.5M Great Lakes Navigation President's Budget O&M

Key Items in FY15 President's Budget

\$39.2M in Dredging (16 projects - 2.7M cubic yards)

\$9.8M in Dredged Material Management

\$5.35M in Soo Asset Renewal

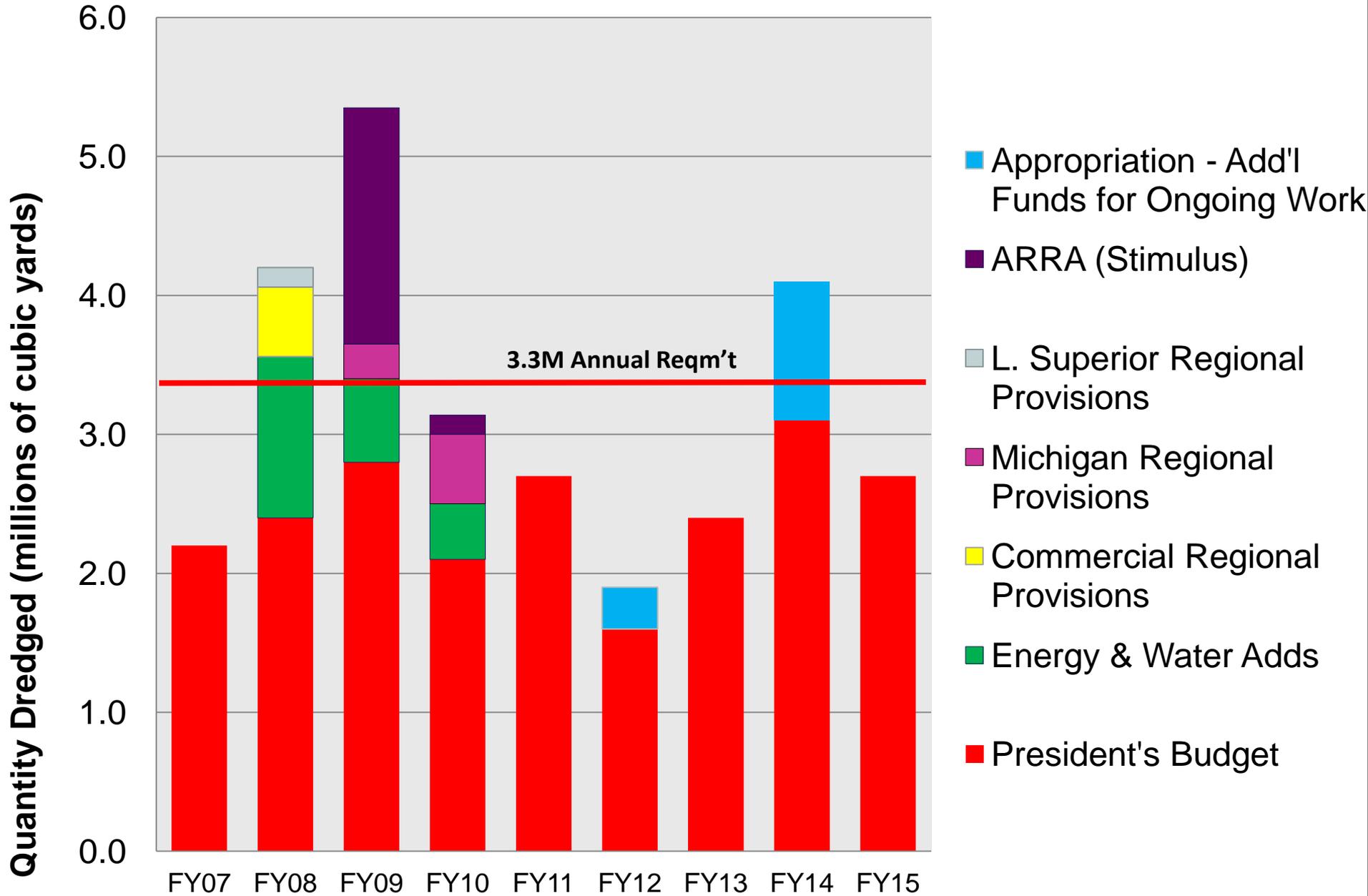
- FY15 GL Navigation O&M President's Budget is 28% greater than the FY12 President's Budget



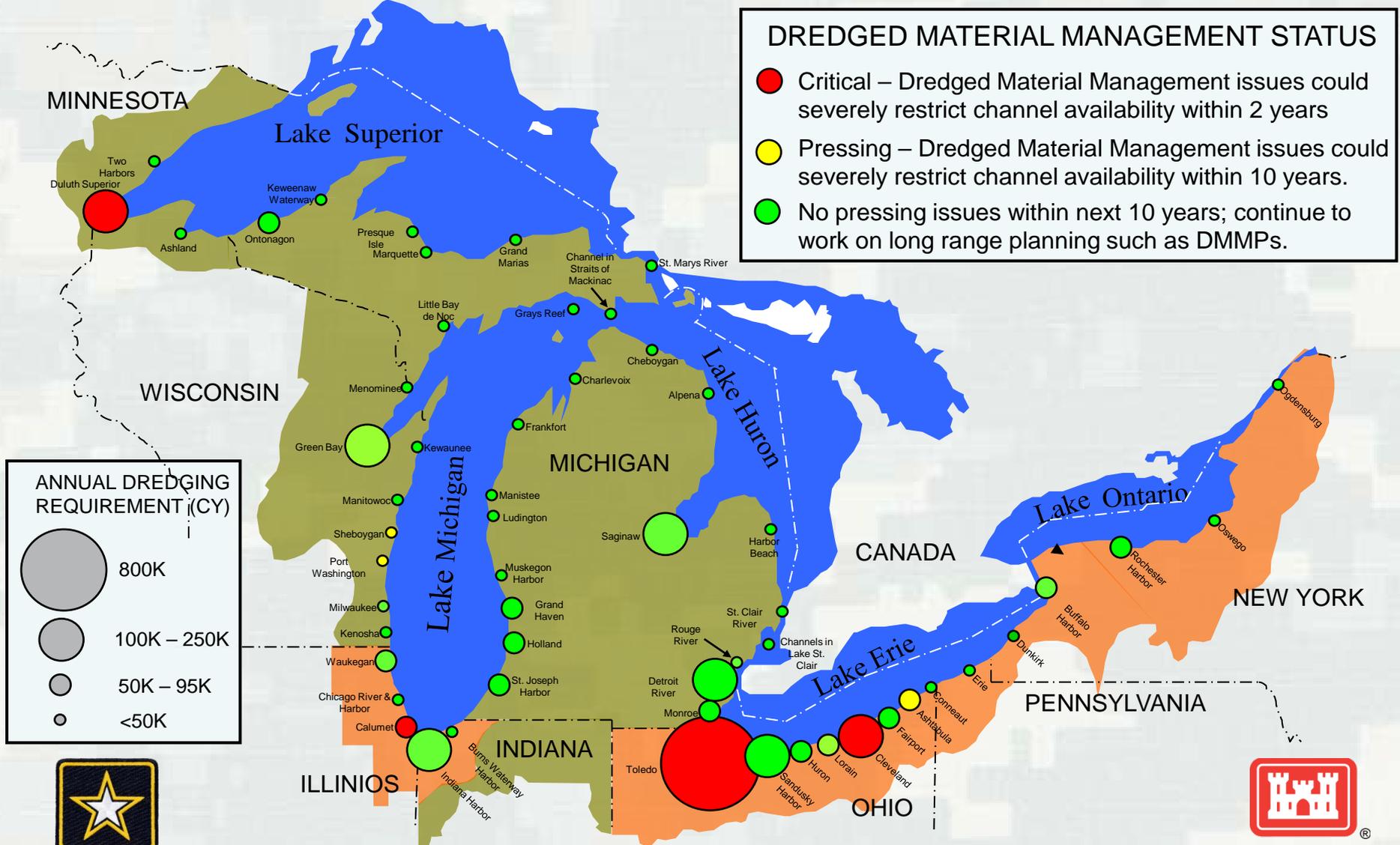
FY15 President's Budget Dredging Projects



Dredging Funding Trends 2007 - 2015



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



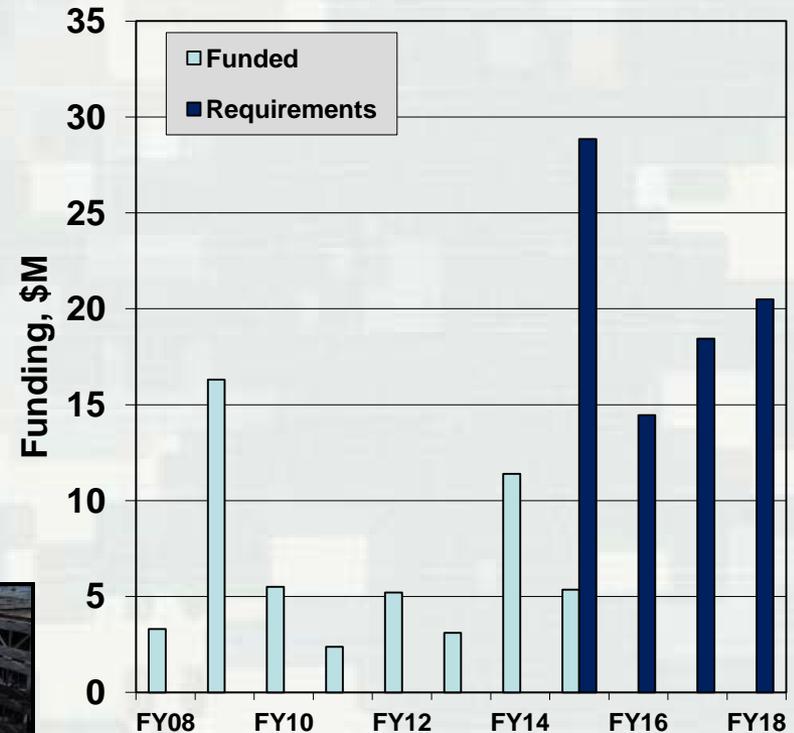
Soo Locks Reliability



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
 - Crib Dam construction
 - Compressed Air System
 - Mac Lock modernization design
- Remaining funding required \$69 million over 5 years
 - Poe and Davis Pump Well Valves
 - Poe Electrical Rehabilitation
 - MacArthur Interlocks and Controls Upgrade



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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 to be completed by the end of FY14 by contract
- Involving industry throughout the assessment
- Survey of top shippers/operators that move coal and iron ore through the locks. Determine how a closure would affect businesses, what their response would be, and what costs would be associated with that response.
- Incorporate updated probabilities of failure combined with costs to the users to determine possible impacts on project benefits.



Expert Elicitation Meeting

March 2014

- Brought industry together with Corps
- What would you do in significant unscheduled Poe Outage?
- Options discussed: increased shipping through Escanaba, Lightering through MacArthur Lock, rail to a transloading facility below the locks, foreign commodity sourcing, and trucking

Results:

- ▶ Lightering promising but can only handle 40-50% iron ore
- ▶ None of the identified closure alternatives- either singly or in combination- were capable of meeting 100% of the demand
- ▶ None of these alternatives would be immediately available in the event of a closure
- ▶ Because of the lack of alternate modes, a significant unscheduled outage would have severe adverse impacts on industry

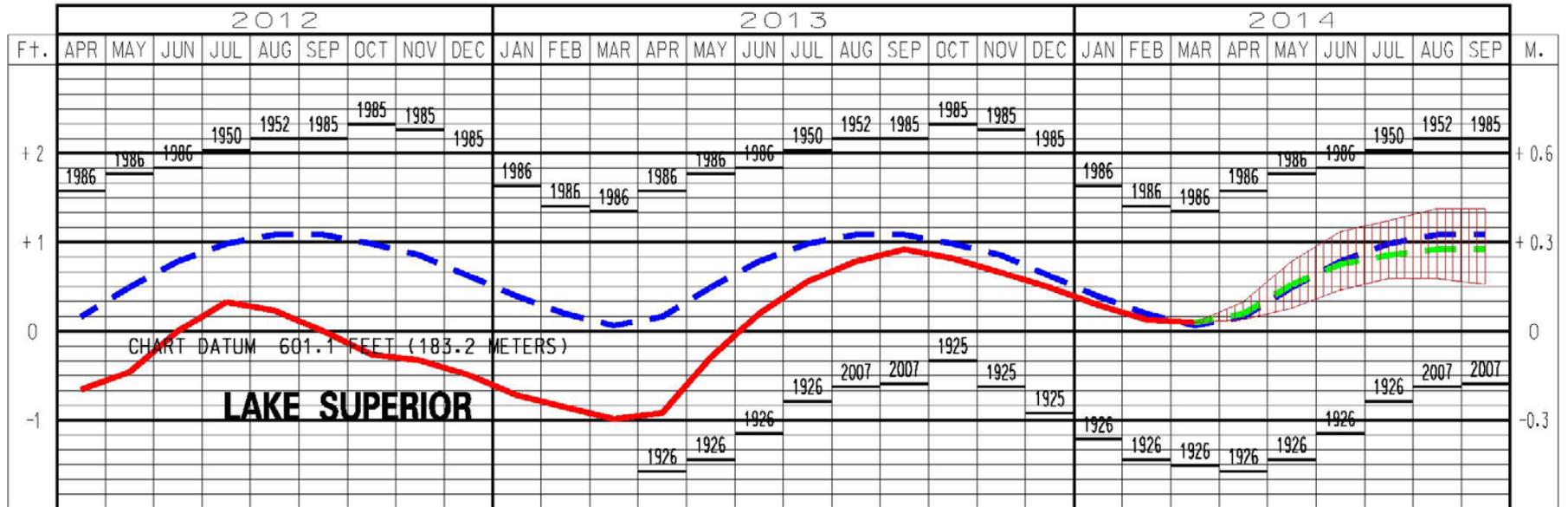


Peaking & Ponding

- New Superior Regulation Plan expected 2014
- Expect to see gates open more of the year (fewer gates at ½ gate setting) but also max amount of gates open will be less
- Moderates chances of drastic changes from month to month
- Ponding allowed if U.S. Slip > 176.09m
- Peaking/ponding can cause rapid changes in water levels downstream of locks
- Chance to review peaking & ponding criteria
- Opportunity to discuss impacts and propose modifications



LAKE SUPERIOR WATER LEVELS – APRIL 2014

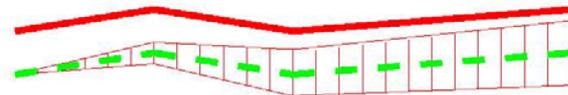


LEGEND

LAKE LEVELS

RECORDED

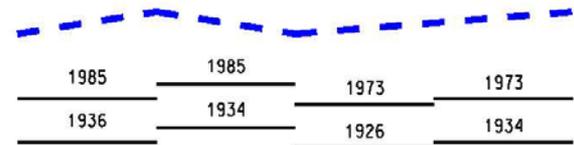
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AVERAGE **

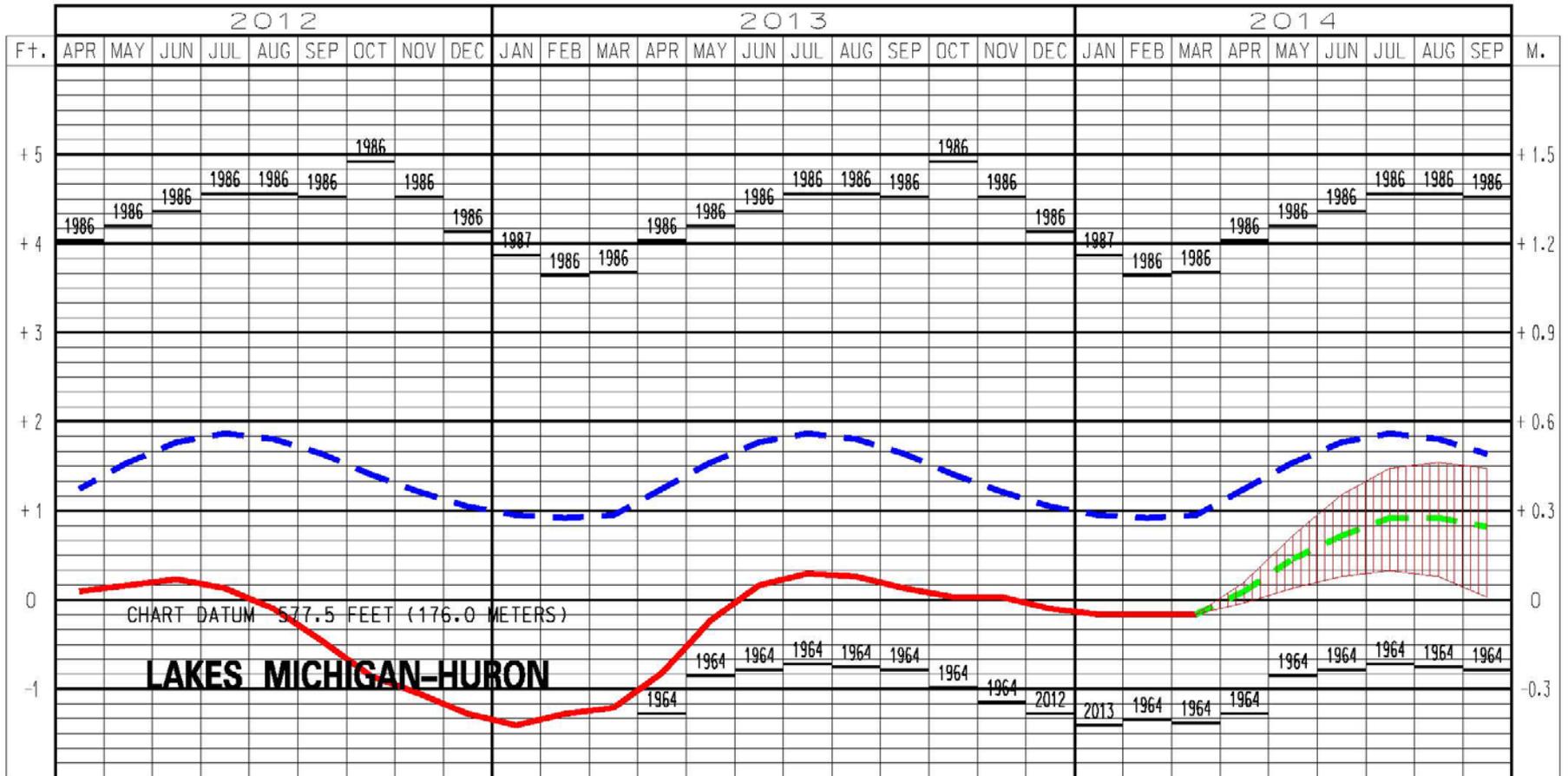
MAXIMUM **

MINIMUM **



** Average, Maximum and Minimum for period 1918-2013

LAKES MICHIGAN-HURON WATER LEVELS - APRIL 2014

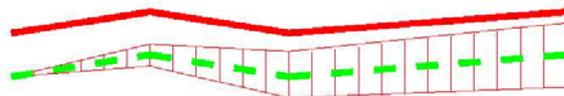


LEGEND

LAKE LEVELS

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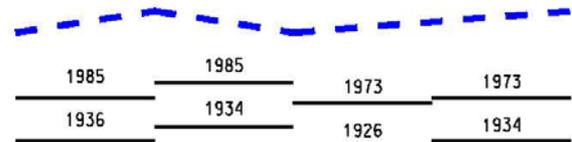
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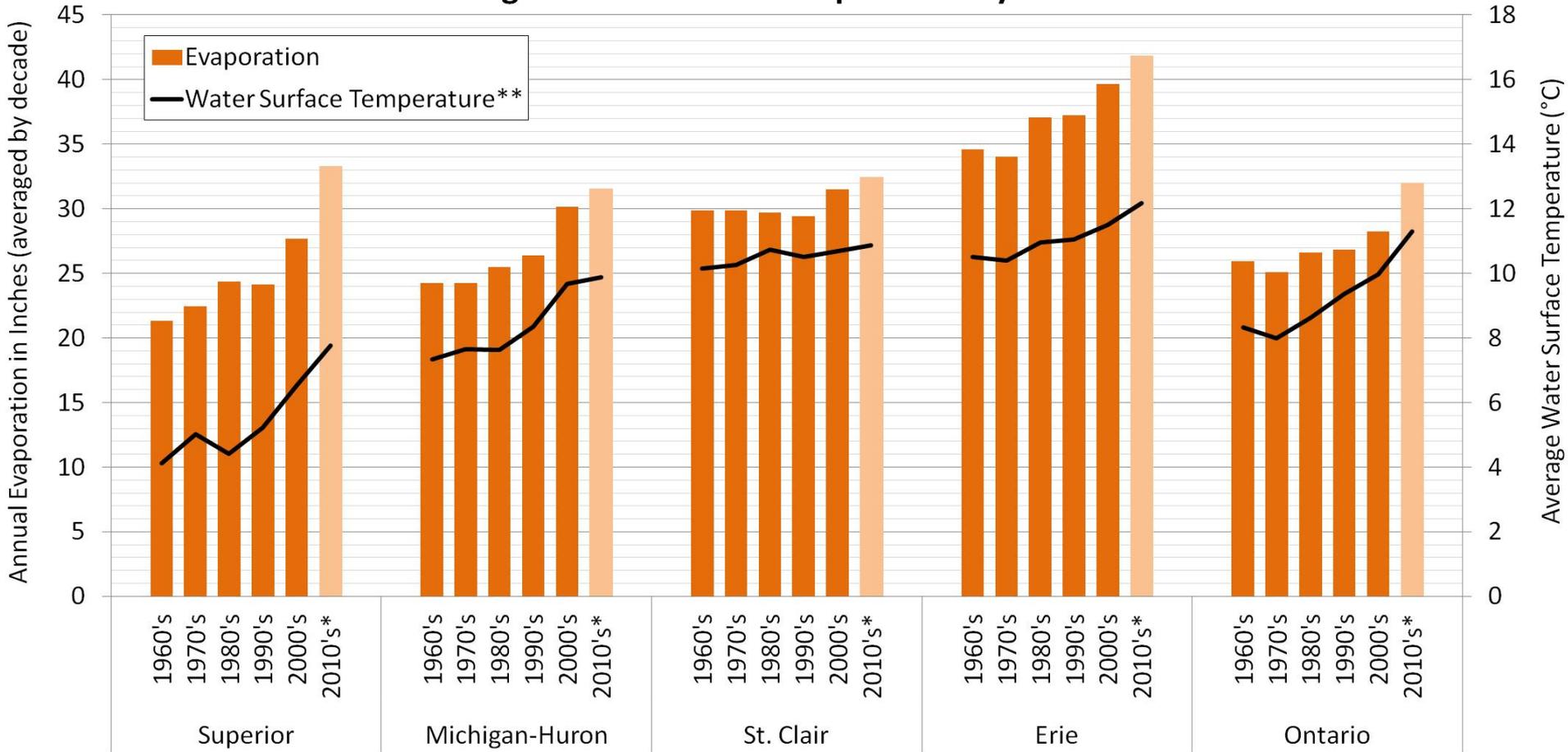
MAXIMUM **

MINIMUM **



** Average, Maximum and Minimum for period 1918-2013

Changes in Great Lakes Evaporation by Decade

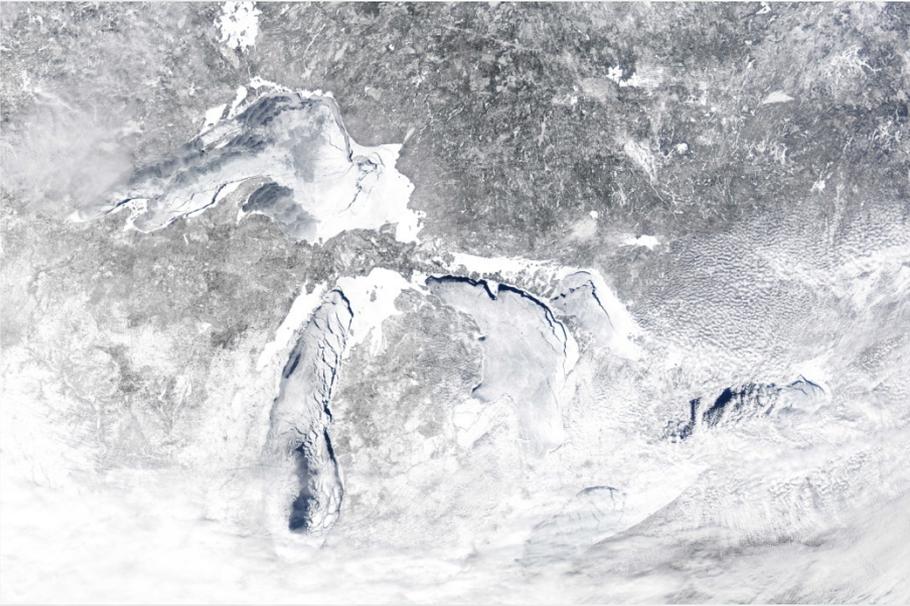


Notes:

*Data used to estimate the 2010's decade is provisional data from 2010 - 2012.

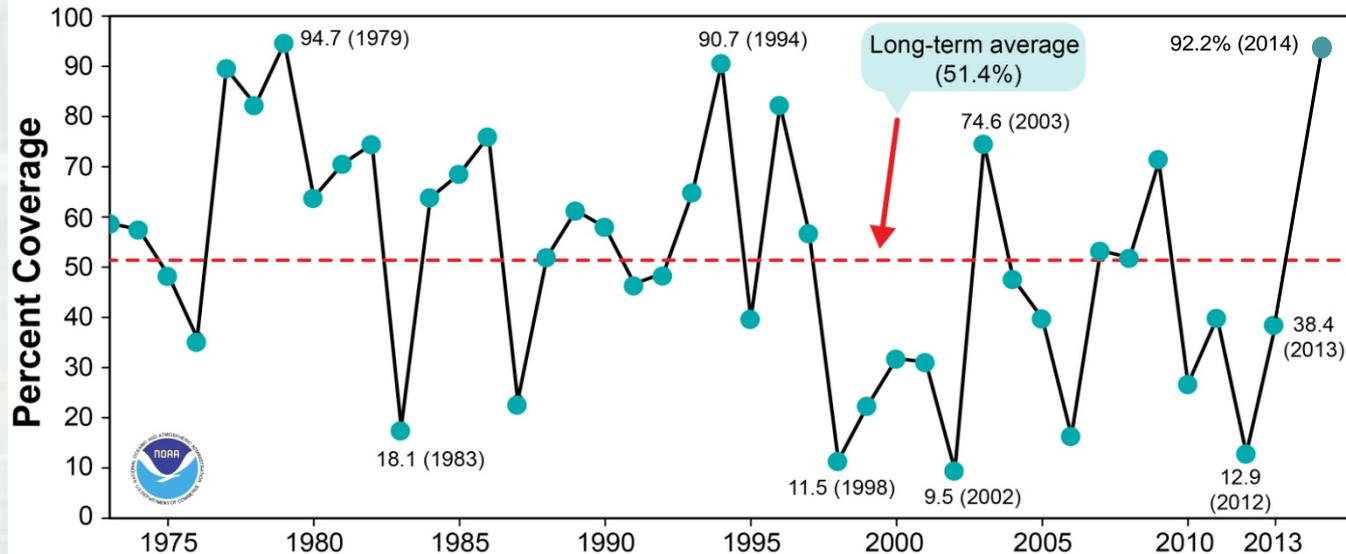
**Water temperature data is a combination of modeled and observed water surface temperatures.





6 MAR 14 – 92.2% ice coverage
Most severe since 1994
2nd on record after 1979

Great Lakes Annual Maximum Ice Coverage 1973-2013



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Ice Impacts to Shipping

- Ice conditions in late Dec/early Jan – slowed down traffic significantly to end the season
- Worst ice conditions in recorded history caused many problems at season opening.
- Locks opened March 25; first vessel locked through April 4
- First time since 1994 no vessels at opening of season
- Convoy took 9 days to travel from Duluth to the Soo, as opposed to typical 24-48 hours.
- Impacts to power plants, steel mills
- Other impacts to industry? Need feedback on alternate modes considered, general cost impacts





Mackinaw locking through March 21, 2014

Ice "rubble field" in Whitefish Bay from the Mackinaw - March 2014



Chicago Lock Ice Conditions



Communication

- Great Lakes Brochure
- Web Site:
www.lre.usace.army.mil/greatlakes/navigation
 - ▶ Fact Sheet Books available today/updated on website
 - ▶ Presentations
- Mailing Lists – send information to [glnavigation @usace.army.mil](mailto:glnavigation@usace.army.mil)



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



Questions?

