

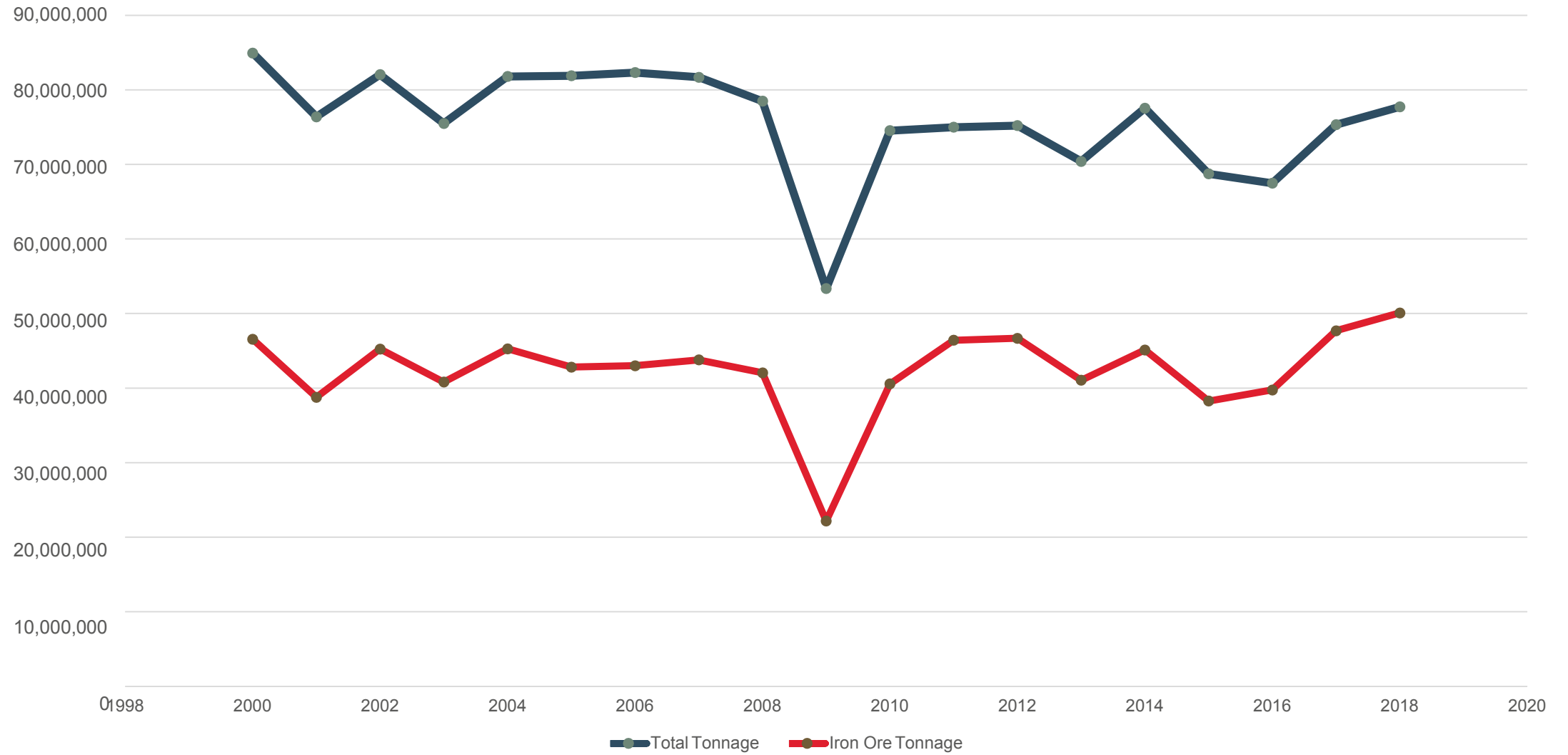
Soo Locks
Dredging
Icebreaking

Jim Weakley
Lake Carriers Association
Port of Green Bay Symposium
March 19, 2019

SOO LOCKS RESILIENCY



Soo Annual Tonnage



SOO LOCKS ASSET RENEWAL PLAN

Asset Renewal Plan will maximize reliability and reduce risk through 2035

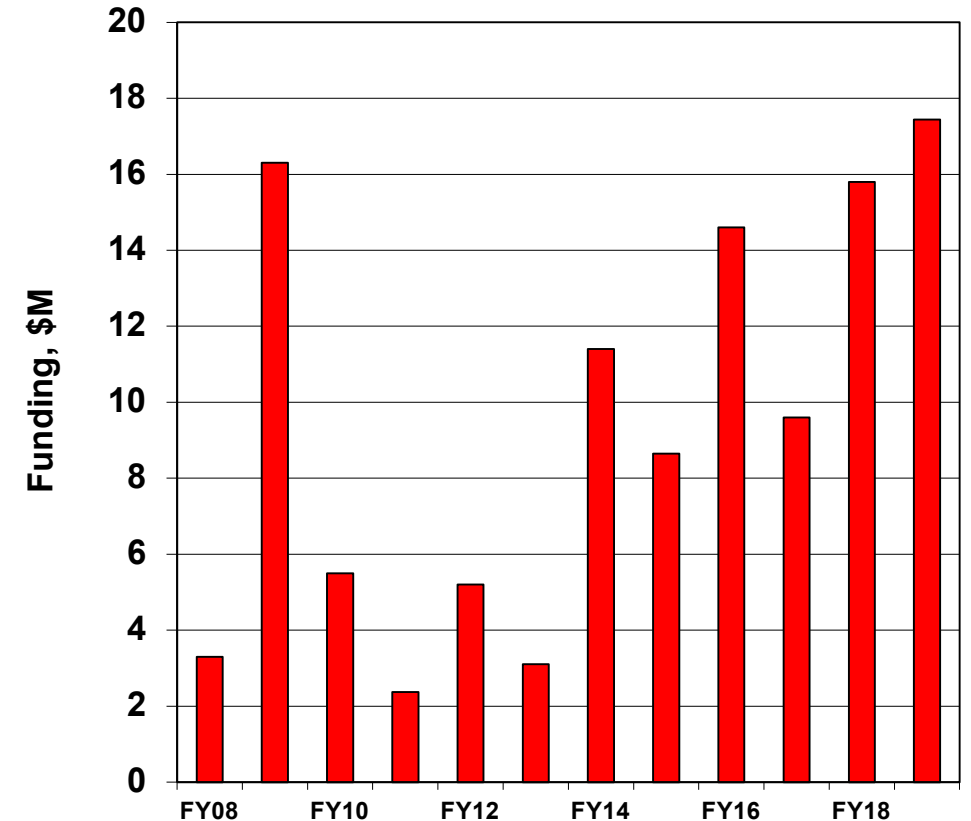
\$115M funded to date through FY19.

Key projects completed to date:

- Poe and MacArthur Lock Embedded Anchorages
- Poe Hydraulics Replacement
- New Poe Stoplogs
- Poe Miter and Quoin Block Replacement
- West Center Pier Repair
- New Compressed Air System

Remaining key priorities (\$75M remaining needs):

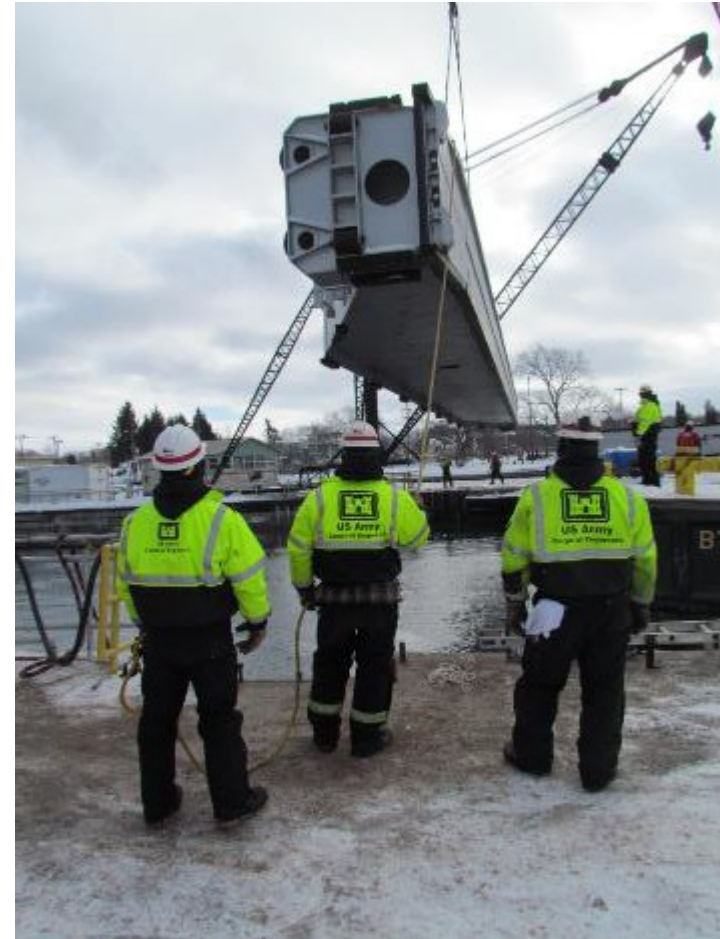
- Poe Lock Gate 1 Replacement
- Steamplant Replacement (FY19)
- New heavy lift crane (FY19)
- Poe Gate 1 Rehab



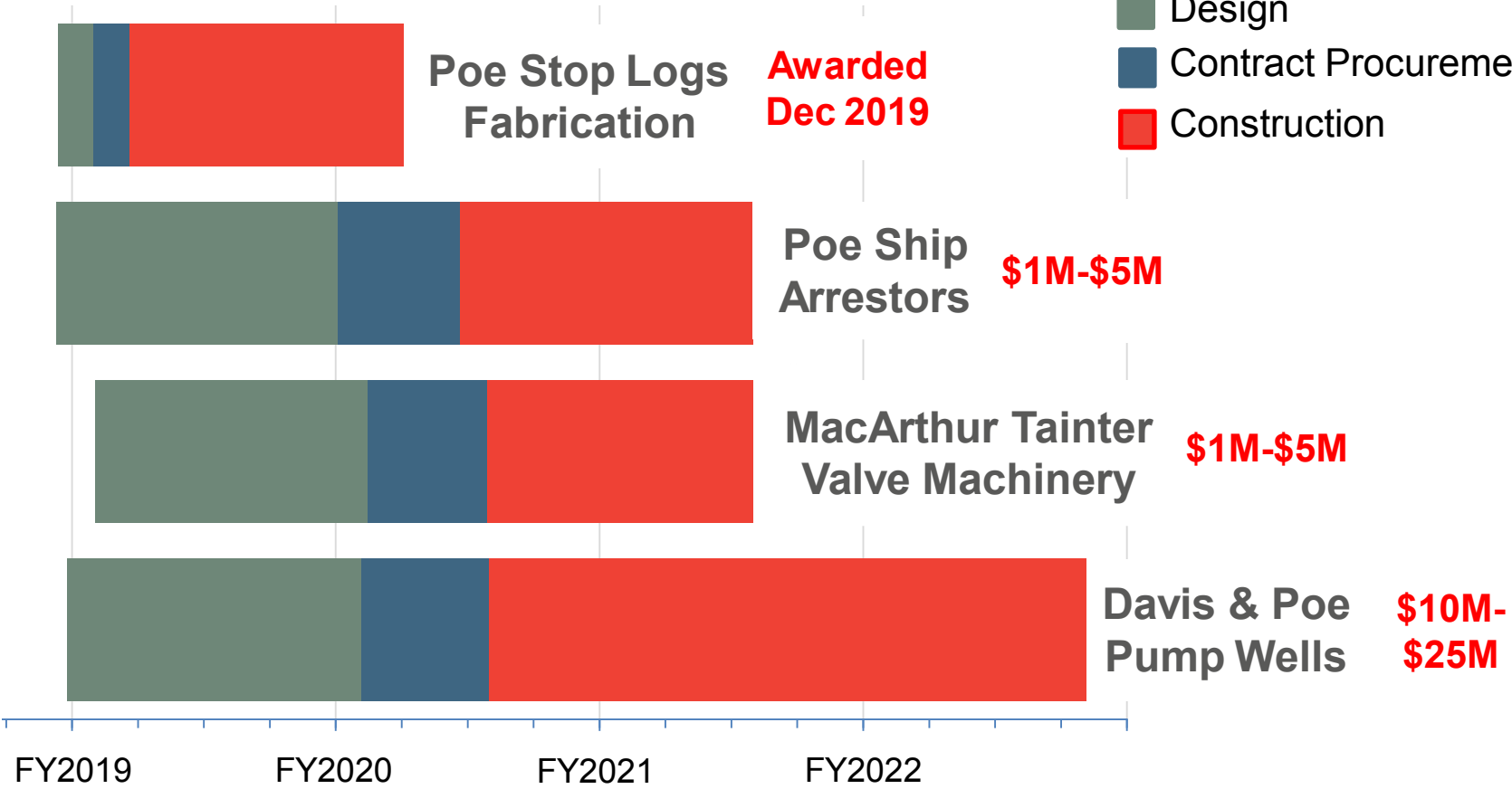
MAJOR REHABILITATION

\$57.58M Soo Locks Major Rehabilitation (CG Funding) – Fully Funded FY18 Work Plan

- Poe Lock Stoplogs
- Poe Lock Ship Arrestors
- Davis/Poe Pump Well System (100 yr)
- Mac Lock Tainter Valve



SOO MAJOR REHAB CONSTRUCTION SCHEDULE



PROPOSED NEW SOO LOCK

Existing

Proposed



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

TIMELINE

- **June 29, 2018** – Director’s Report signed by James Dalton, Director of Civil Works:
 - ✓ Transmits New Soo Lock Economic Validation Study to Assistant Secretary of the Army for Civil Works (ASACW)
 - ✓ Project exceeds 902 limit; requires 902 limit increase legislation
 - ✓ BCR of “floor scenario” is 2.42 @ 2.75% (2.32 @ 7%)
 - ✓ Range of sensitivity analyses – all were essentially >1.0
 - ✓ Value to the Nation – mentions DHS study – confirmed no alternate mode, one of nation’s most economically vital industries is also its least resilient.
 - ✓ Received \$32M to date; this is not a new start but rather a continuation of an existing project

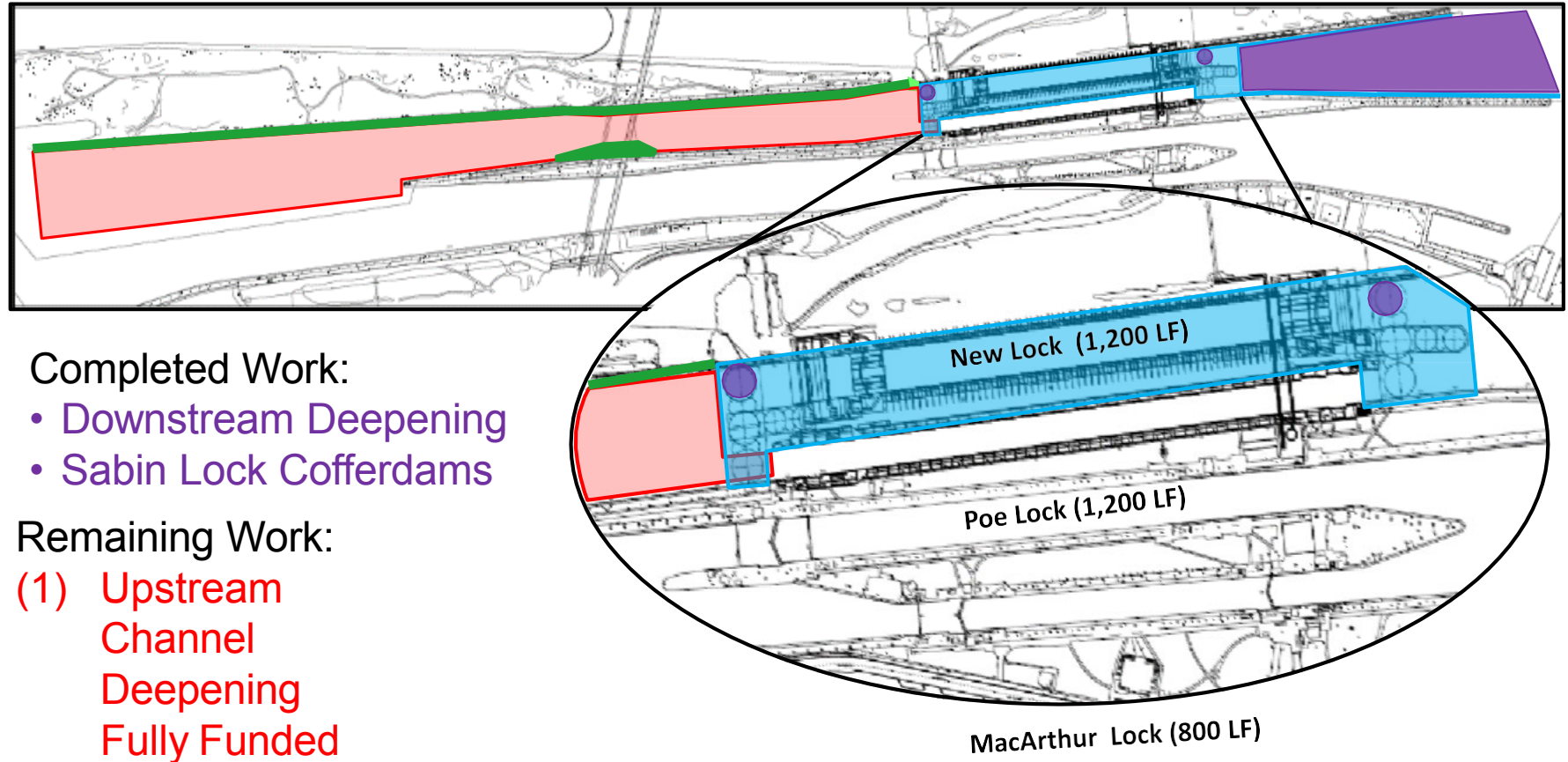
- **Oct 23, 2018:** Section 1401 of WRDA 2018 – Authorization for construction at a project first cost of \$922,432,000

- **Nov 21, 2018:** FY19 Workplan released. \$32.388M for New Lock channel deepening

- **Dec 21, 2018:** Gov Snyder signed Memorandum of Agreement for \$52M in contributed funds; funding was received Jan 9, 2019

- **FY20 President’s Budget funding proposed \$75.3 million!**

CONSTRUCTION PHASES



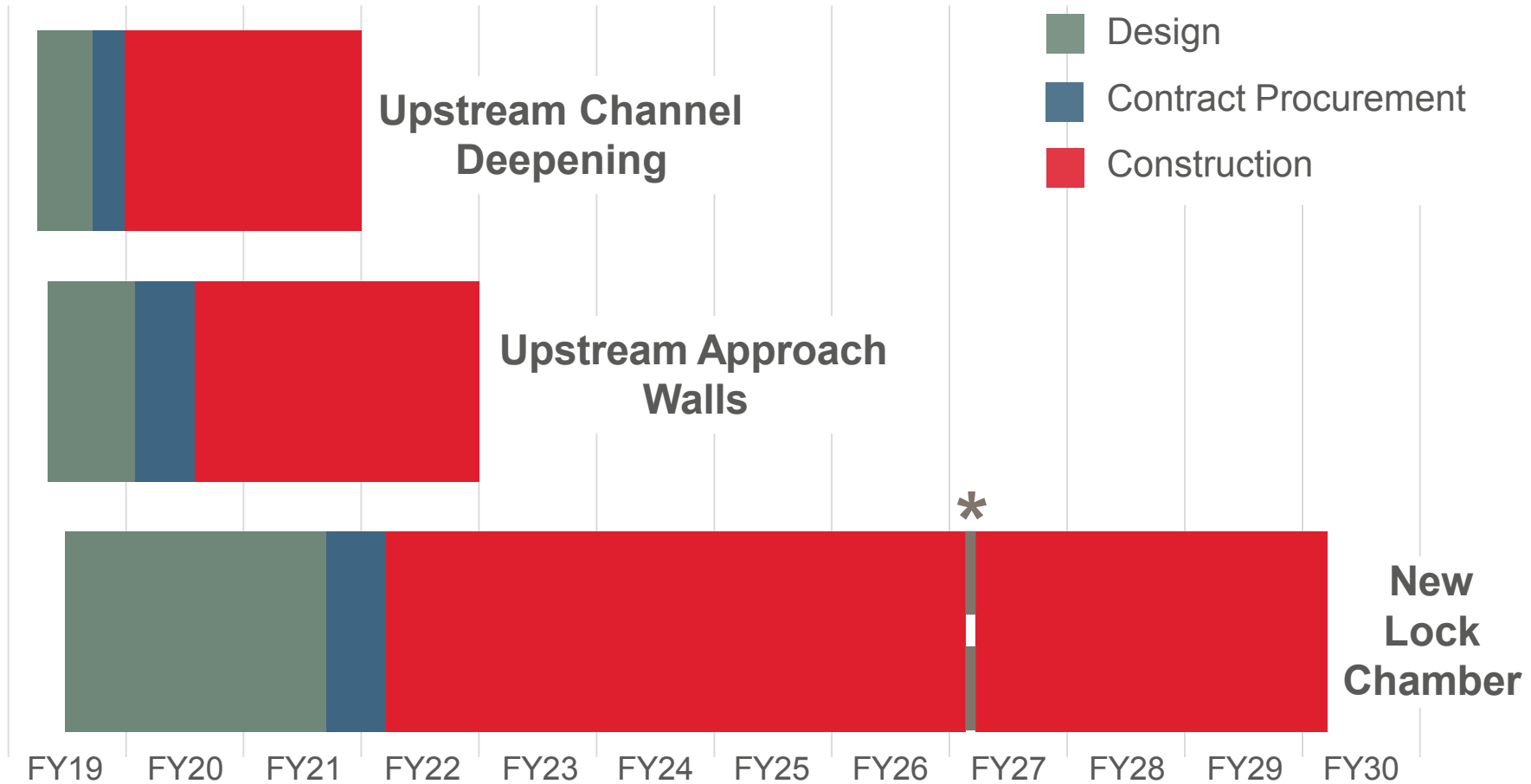
Completed Work:

- Downstream Deepening
- Sabin Lock Cofferdams

Remaining Work:

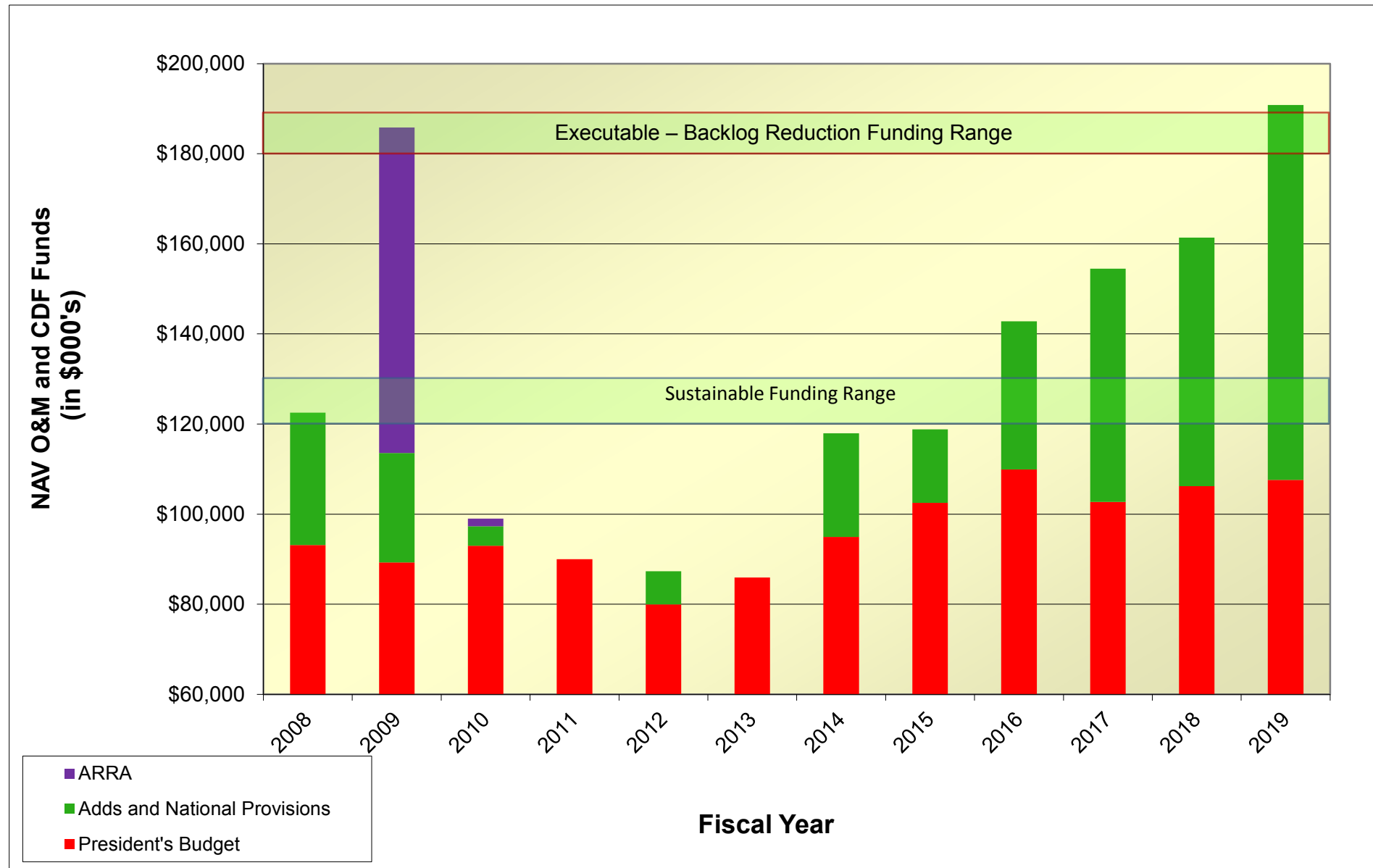
- (1) Upstream Channel Deepening Fully Funded
- (2) Upstream Approach Walls Design Fully Funded
- (3) New Lock Chamber Design Partially Funded

NEW SOO LOCK DESIGN AND CONSTRUCTION SCHEDULE (with Efficient Funding)

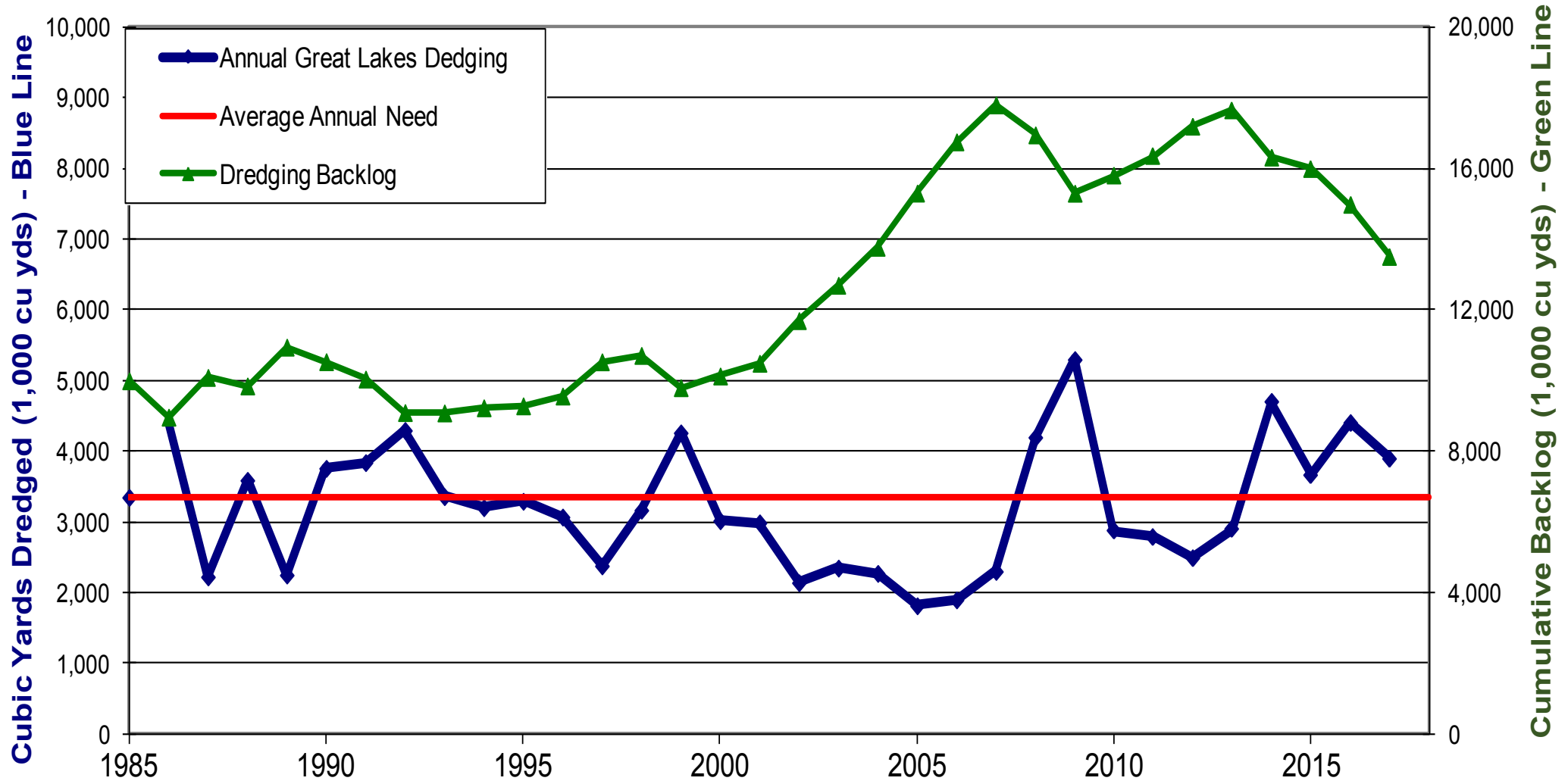


* Early completion could be realized with efficient funding and favorable weather conditions

GL Navigation Funding History



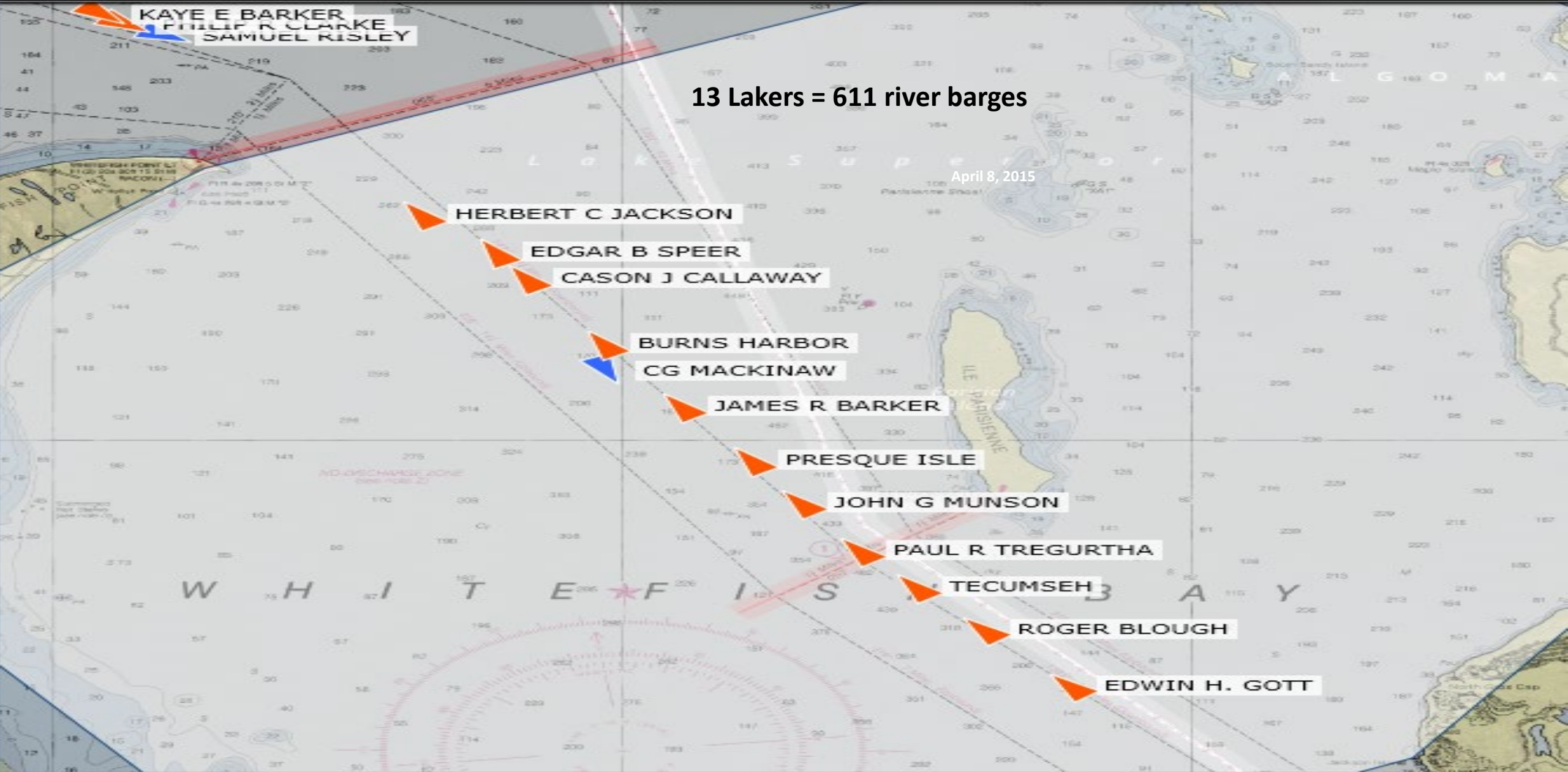
Great Lakes Dredging Backlog 1985-2017





WATERWAYS NEED TO BE VIABLE CONDUITS FOR COMMERCE





13 Lakers = 611 river barges

April 8, 2015

KAYE E BARKER
PHILIP R CLARKE
SAMUEL RISLEY

HERBERT C JACKSON

EDGAR B SPEER

CASON J CALLAWAY

BURNS HARBOR

CG MACKINAW

JAMES R BARKER

PRESQUE ISLE

JOHN G MUNSON

PAUL R TREGURTHA

TECUMSEH

ROGER BLOUGH

EDWIN H. GOTT

Canadian & U.S. Icebreaking Assets On the Great Lakes Are Minimal

- Canada has reduced its Great Lakes icebreaking fleet from 7 to 2 vessels since 1984.
- U.S. has reduced its Great Lakes icebreaking fleet from 12 to 9
- Last winter at the same time, 5 of the 9 USCG breakers were out of service for scheduled or unscheduled maintenance

LAKE MICHIGAN USCG VESSEL ASSET COMPARISON (1-140')

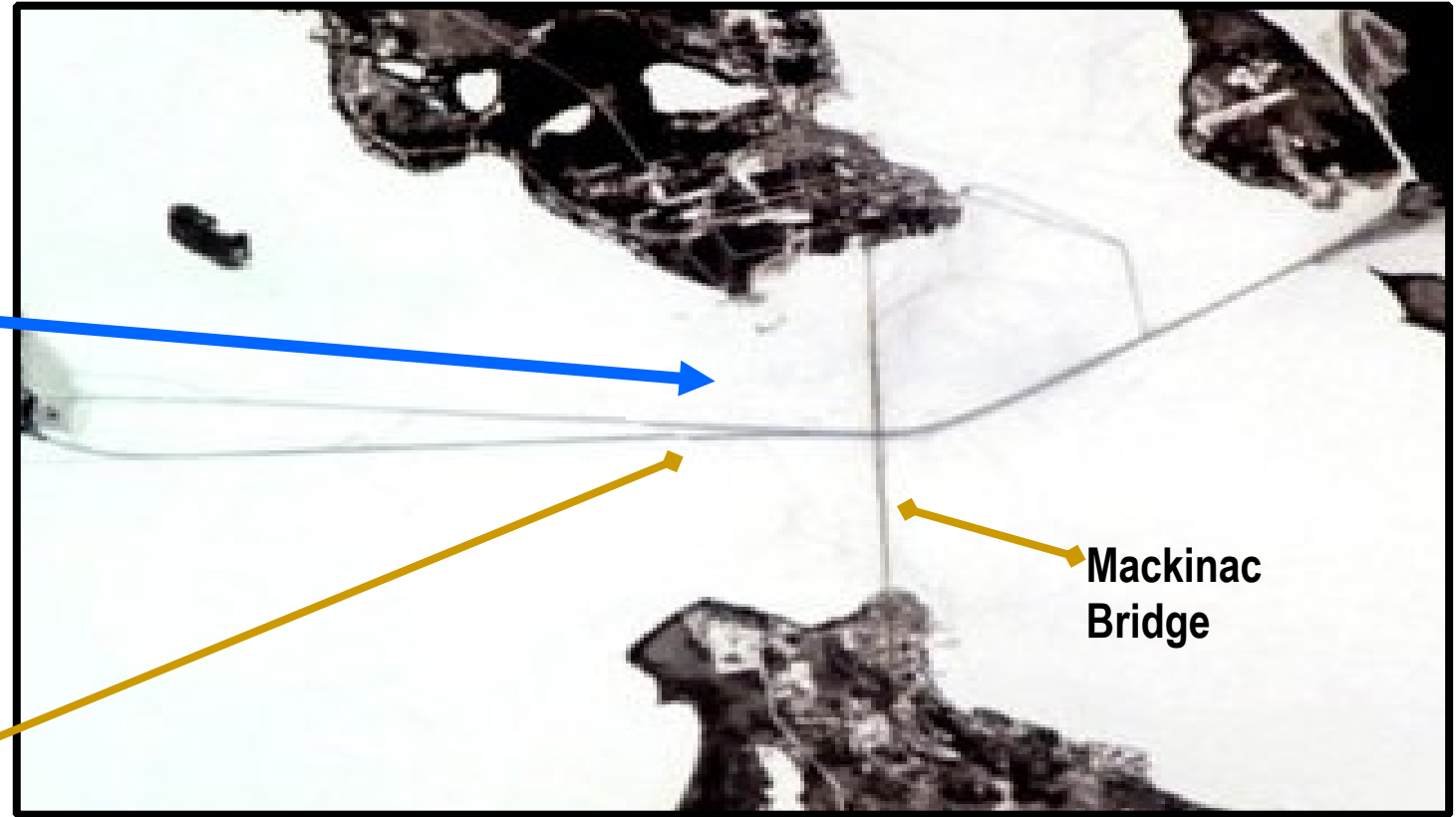
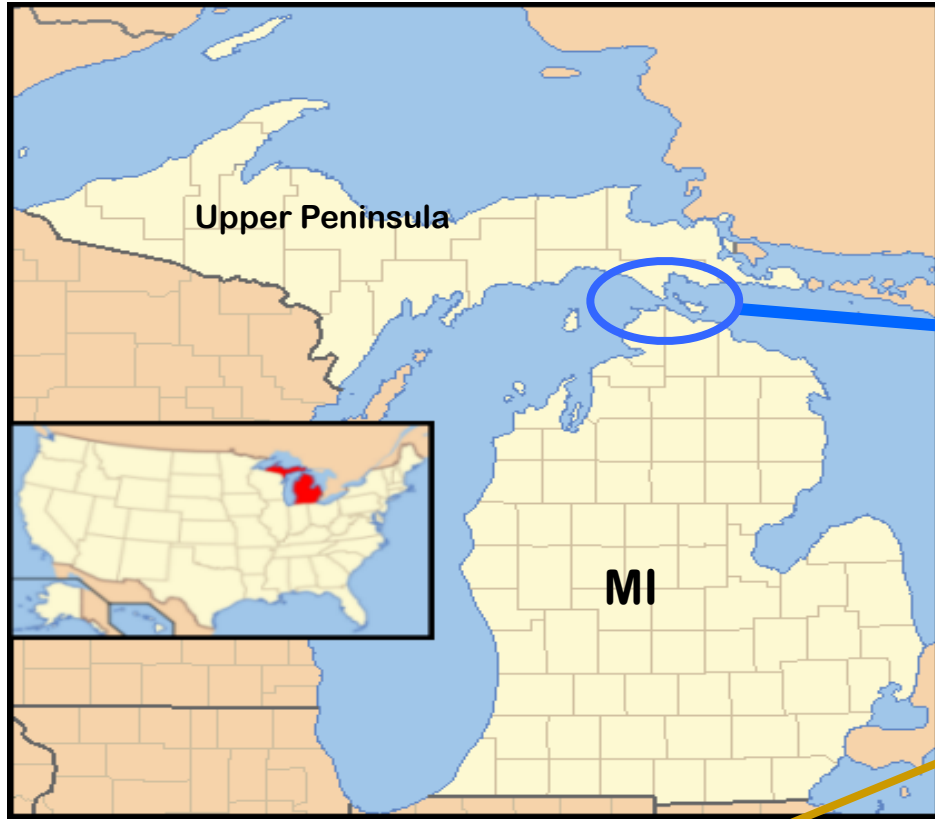
COAST GUARD VESSELS

65 FEET AND GREATER IN LENGTH

East Coast-Coast Guard Assets			Lake Michigan-Coast Guard Assets	
<u>Size of Vessel</u>	<u>Number</u>		<u>Size of Vessel</u>	<u>Number</u>
418	1			0
378	2			0
270	11			0
225	3			0
210	7			0
175	8			0
160	2			0
140	4		140	1
123	0			0
110	16			0
100	1			0
75	3			0
87	21			0
65	11			0
TOTAL	90		TOTAL	1

STRAITS OF MACKINAC

CONNECTING LAKE HURON & LAKE MICHIGAN



The icebreaker paths run right-to-left, connecting the open water of Lake Michigan with the open water of Lake Huron between Mackinac Island and Round Island.

LACK OF ADEQUATE ICEBREAKING COSTS **\$1.3 MILLION** **IN DAMAGES**

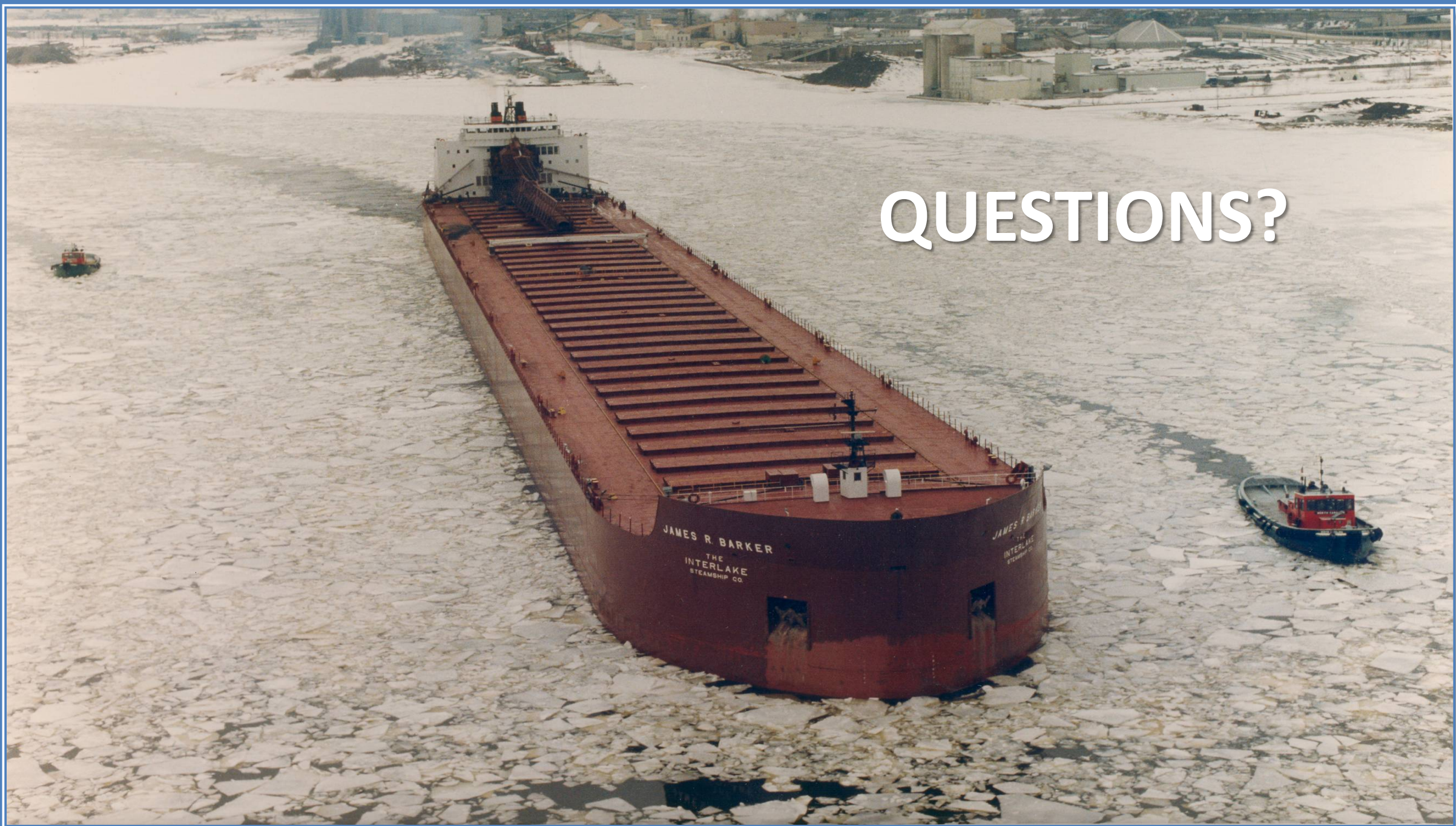


▶▶▶ The Solution ◀◀◀

- Appropriate and additional \$10 M to update Mackinaw design for new GLIB, Hiawatha
- Build second heavy GLIB
- Update Mackinaw to Hiawatha's standards during mid-life overhaul
- Great Lakes "donates" 225' to SLEP
- 16 years later 225' returns to Lakes
- Harmonize commercial icebreaking policy with Canada

Who Killed the Sister Ship To the Heavy Icebreaker *Mackinaw*?





QUESTIONS?