



US Army Corps
of Engineers
Great Lakes &
Ohio River Division

Michigan Waterways Commission Meeting



Great Lakes Navigation

Overview of the Corps' Navigation Mission

Water Levels & Impacts on Navigation

Recap of 2007 Navigation Season

Navigation System Funding & Trends

FY 2008 Maintenance Dredging Program

**Wayne Schloop, PE
Chief, Operations
Detroit District**



US Army Corps
of Engineers
Great Lakes &
Ohio River Division

Great Lakes Navigation

Overview of the Corps' Navigation Mission



US Army Corps
of Engineers
Great Lakes &
Ohio River Division

Dredging

Great Lakes Navigation





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Breakwaters

Great Lakes Navigation



- 160+ miles of breakwaters on the Great Lakes
- Most built between 1860 and 1940
- Timber crib construction (typical)
- Low Lake water levels are accelerating deterioration



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Ohio River Division

Soo Locks











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Great Lakes Navigation

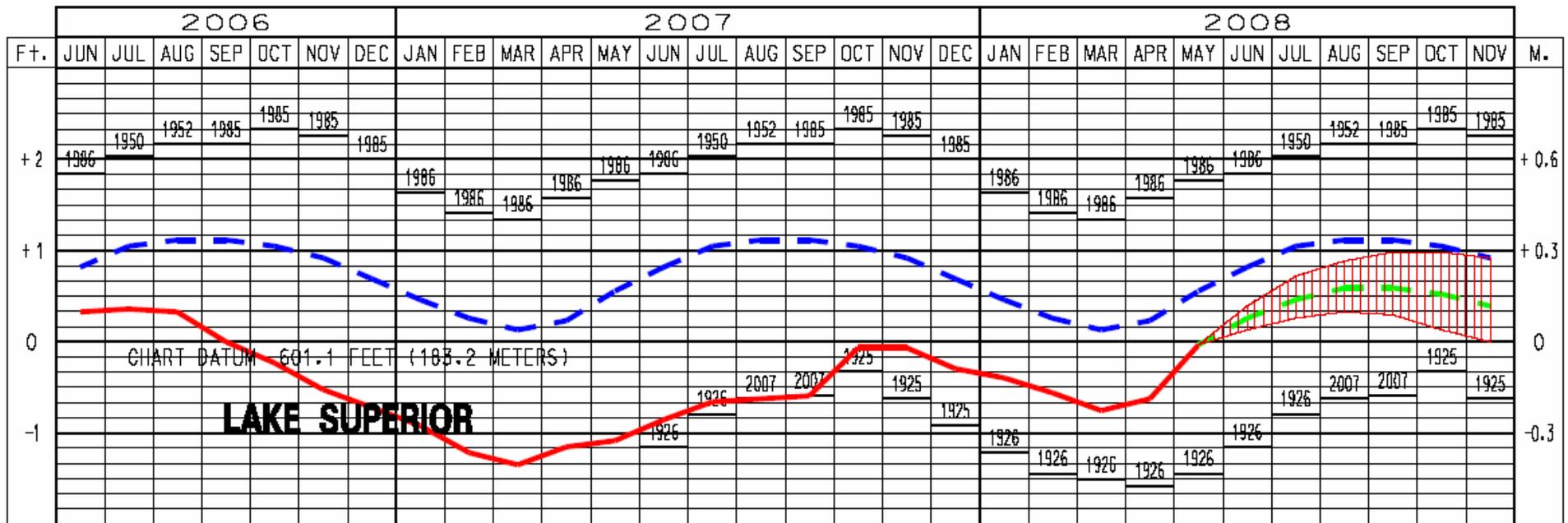
Water Levels & Impacts on Navigation



US Army Corps
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Great Lakes &
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Water Levels

LAKE SUPERIOR WATER LEVELS - JUNE 2008

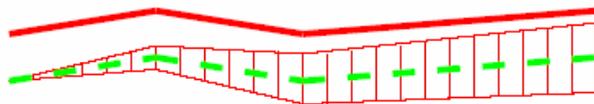


LEGEND

LAKE LEVELS

RECORDED

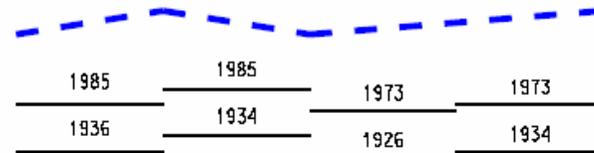
PROJECTED



AVERAGE **

MAXIMUM **

MINIMUM **



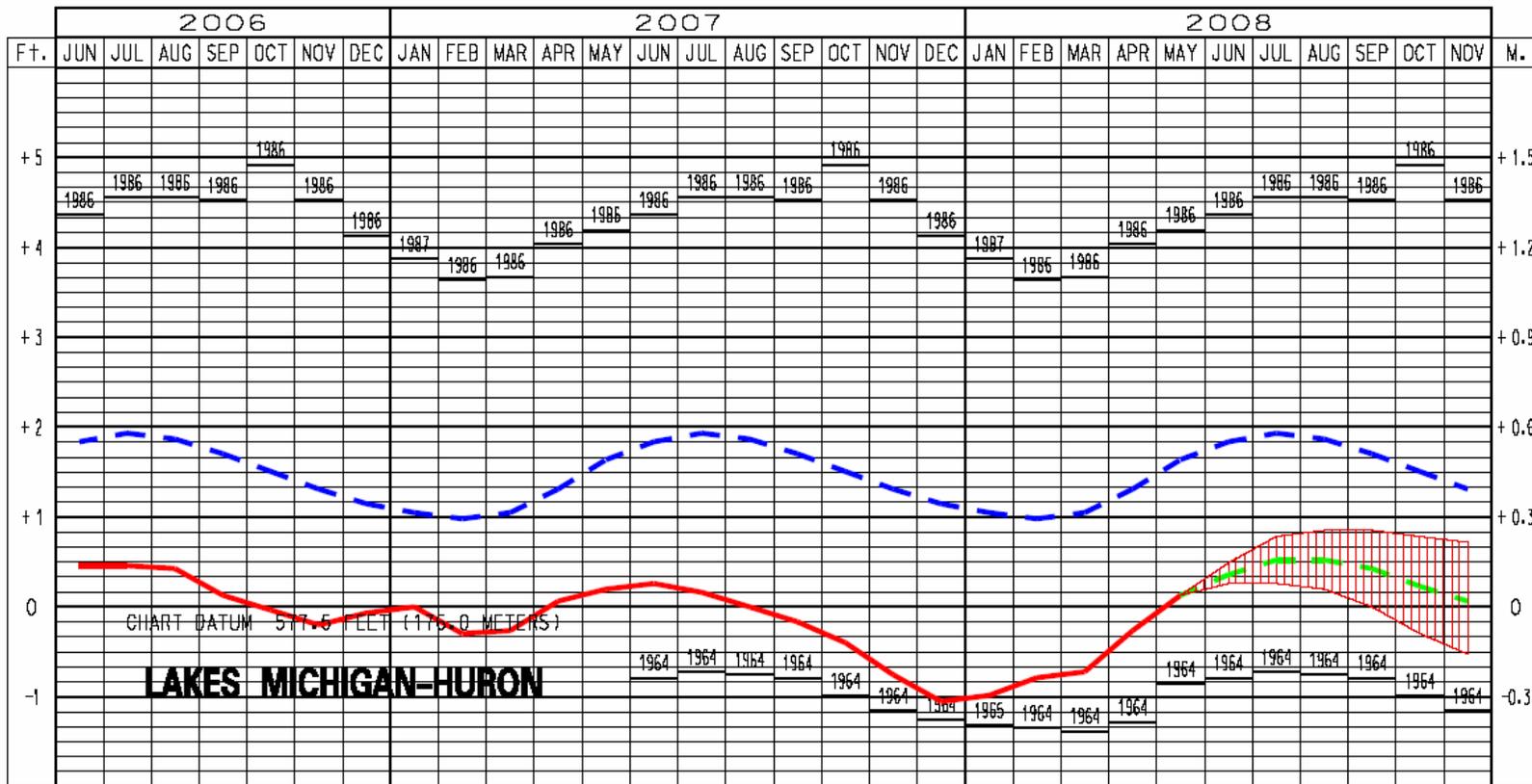
** Average, Maximum and Minimum for period 1918-2007



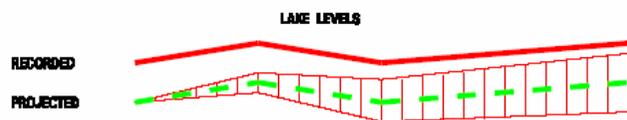
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Water Levels

LAKES MICHIGAN-HURON WATER LEVELS - JUNE 2008



LEGEND



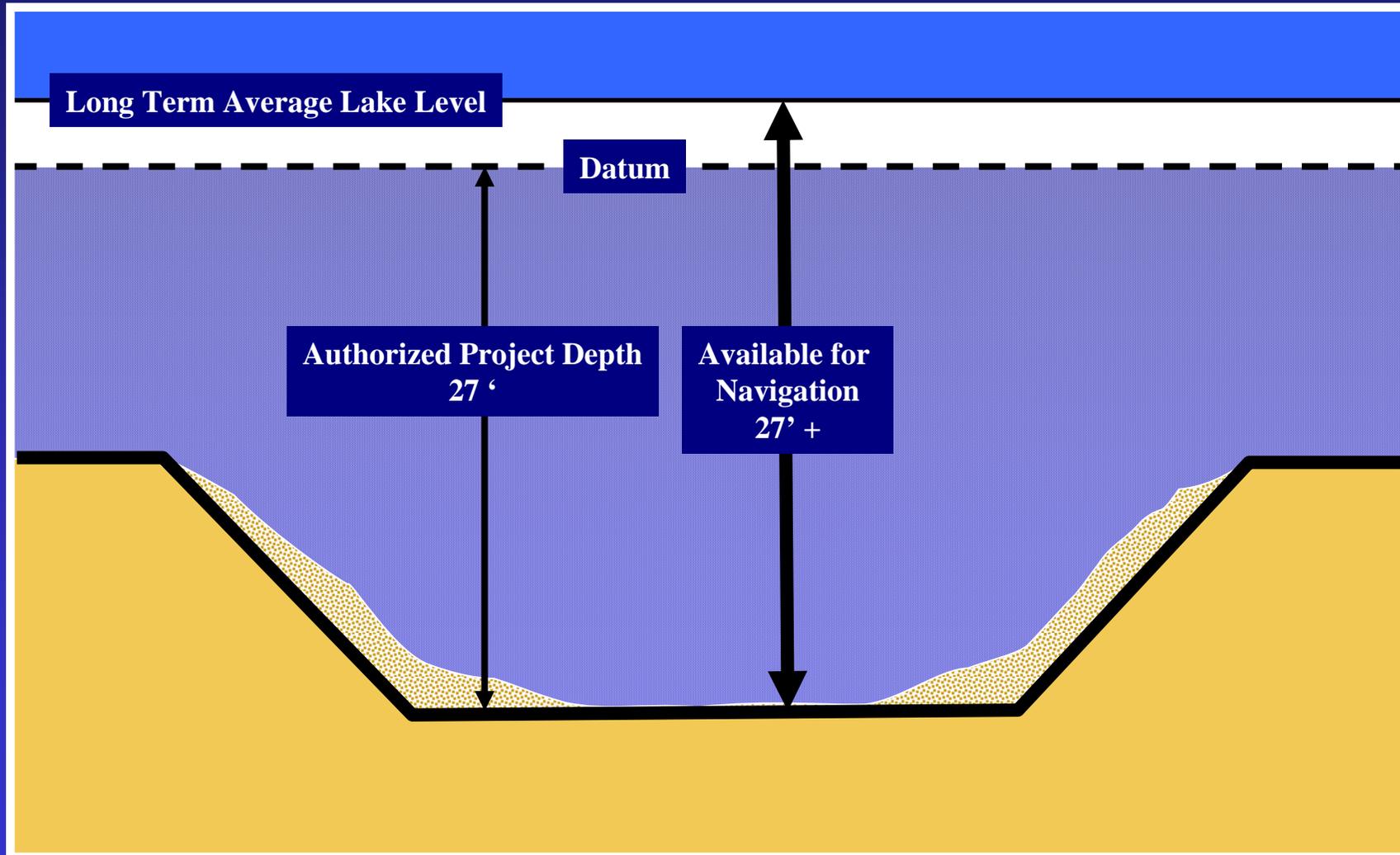
LAKE LEVELS

AVERAGE **	MAXIMUM **	MINIMUM **
1985	1985	1936
1973	1973	1926
1934	1934	1934



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Historical Water Levels “Normal” Conditions

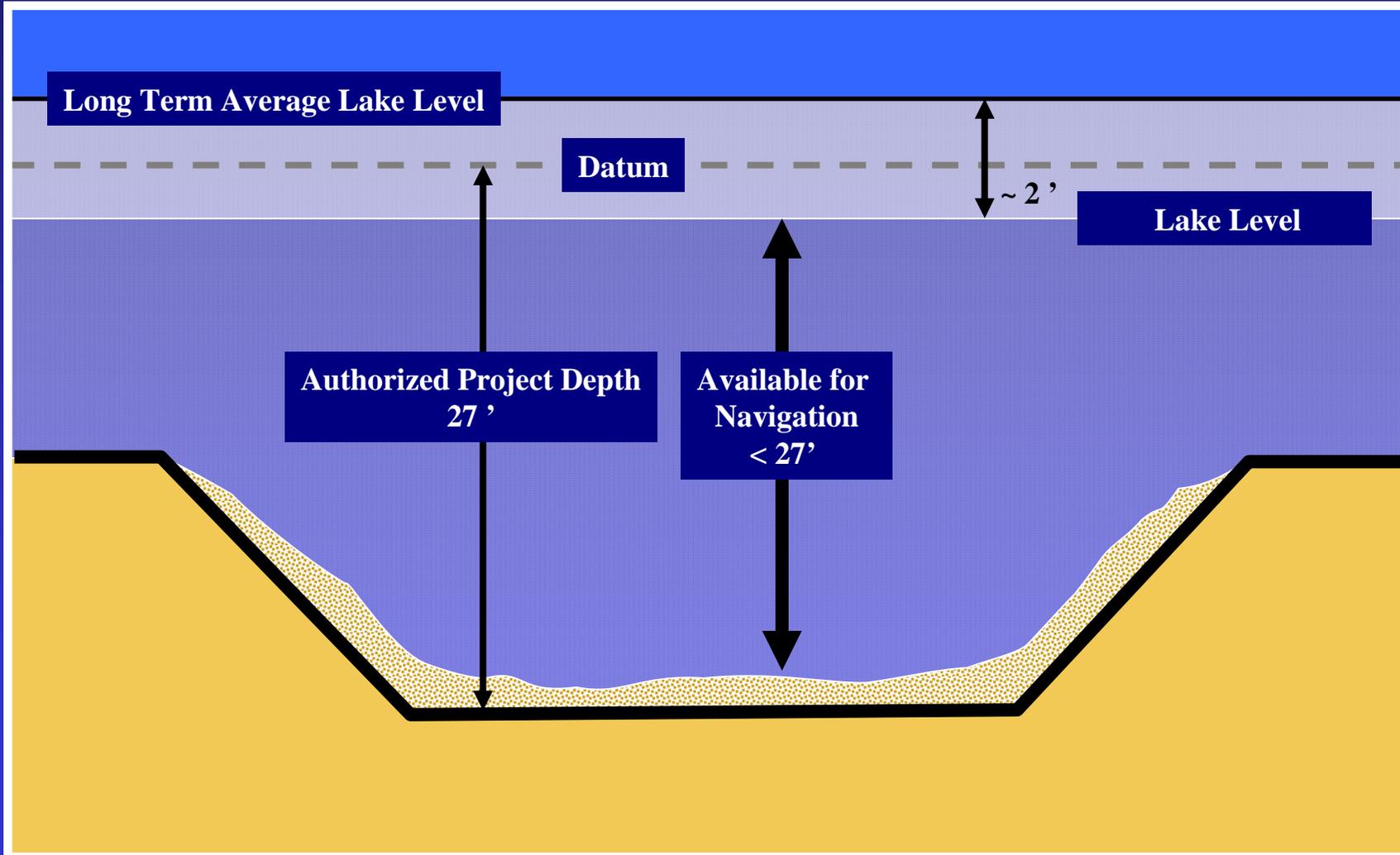




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Conditions: 1999 to 2003

Water Level Below Datum

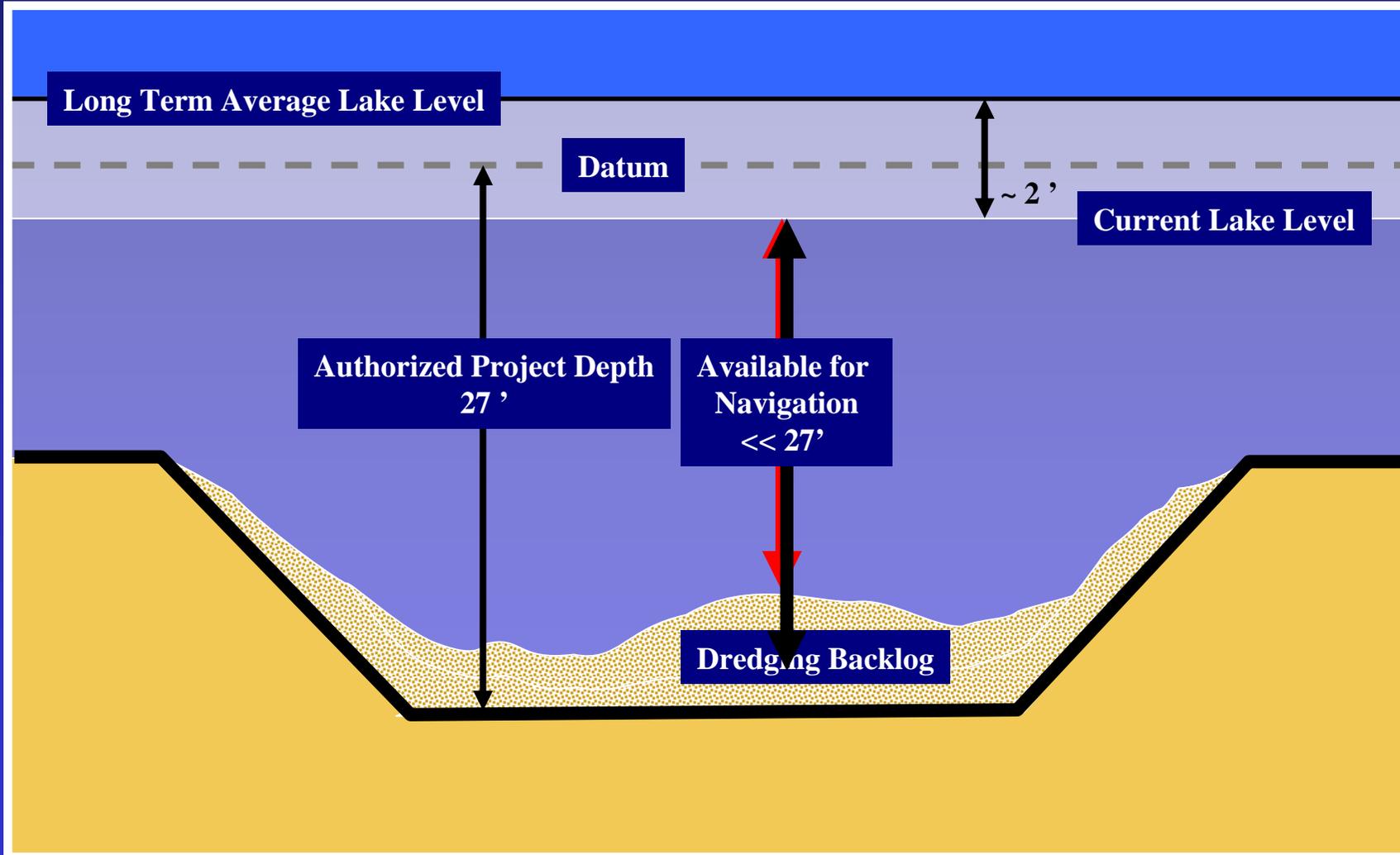




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2007 Condition

Below Datum w/Dredging Backlog





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Great Lakes Navigation

Recap of 2007 Navigation Season



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Groundings on the Great Lakes

Muskegon Harbor, MI

- 22 AUG 2007
- 10 SEP 2007
- 13 NOV 2007
- 8 JAN 2008

Grand Haven Harbor, MI

- 3 DEC 2007

St Joseph, MI

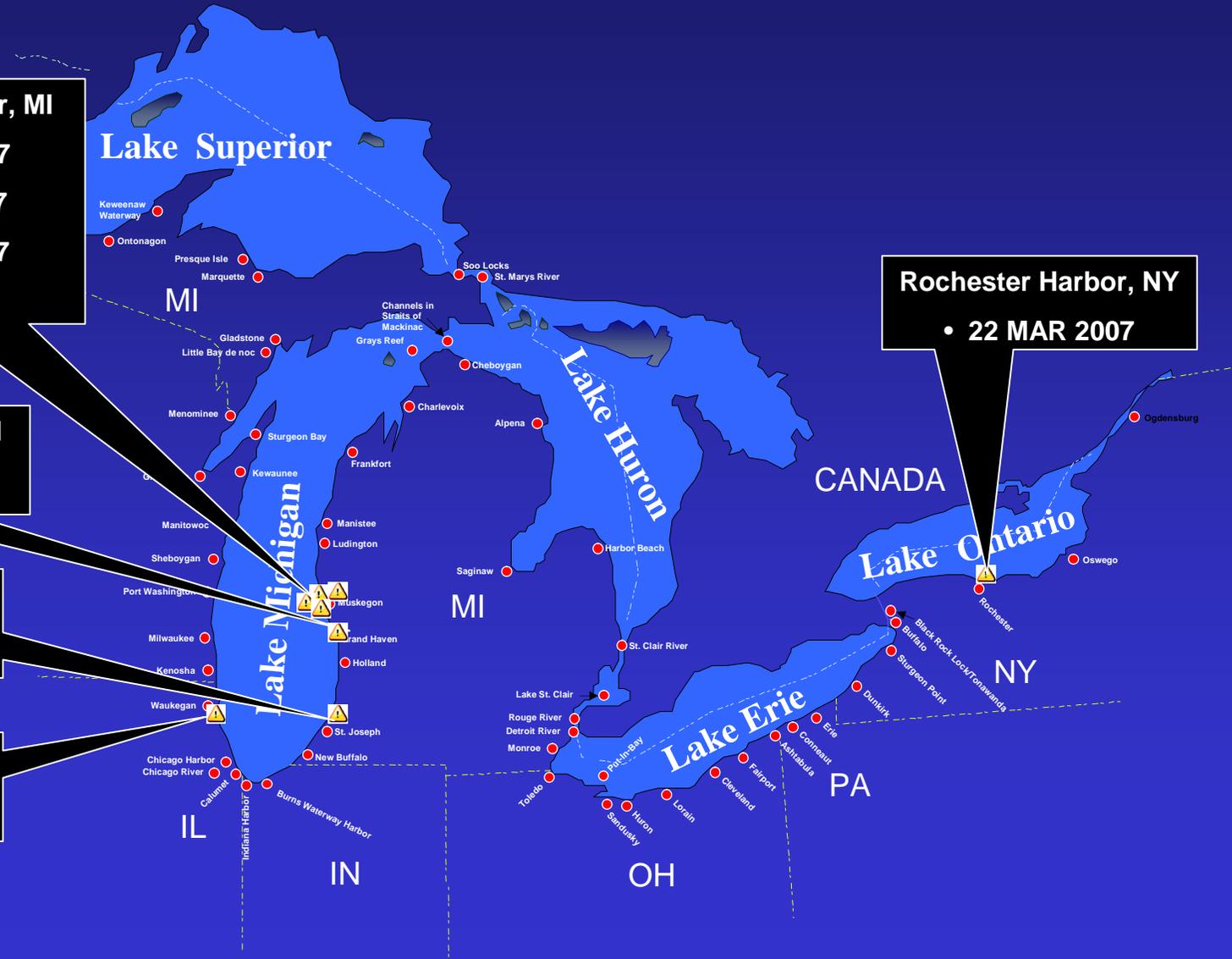
- 24 MARCH 2008

Waukegan Harbor, IL

- MID-OCTOBER 2007

Rochester Harbor, NY

- 22 MAR 2007





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Muskegon Harbor





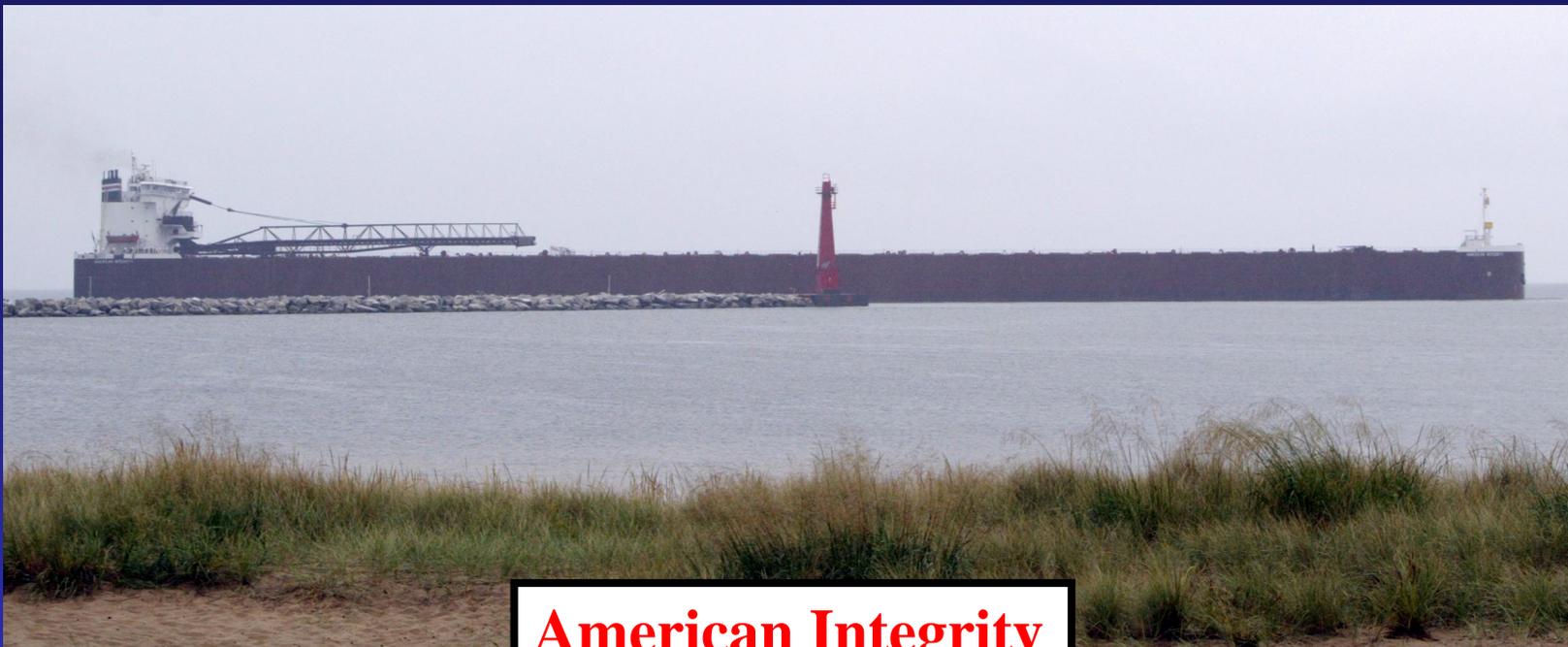
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Muskegon Harbor

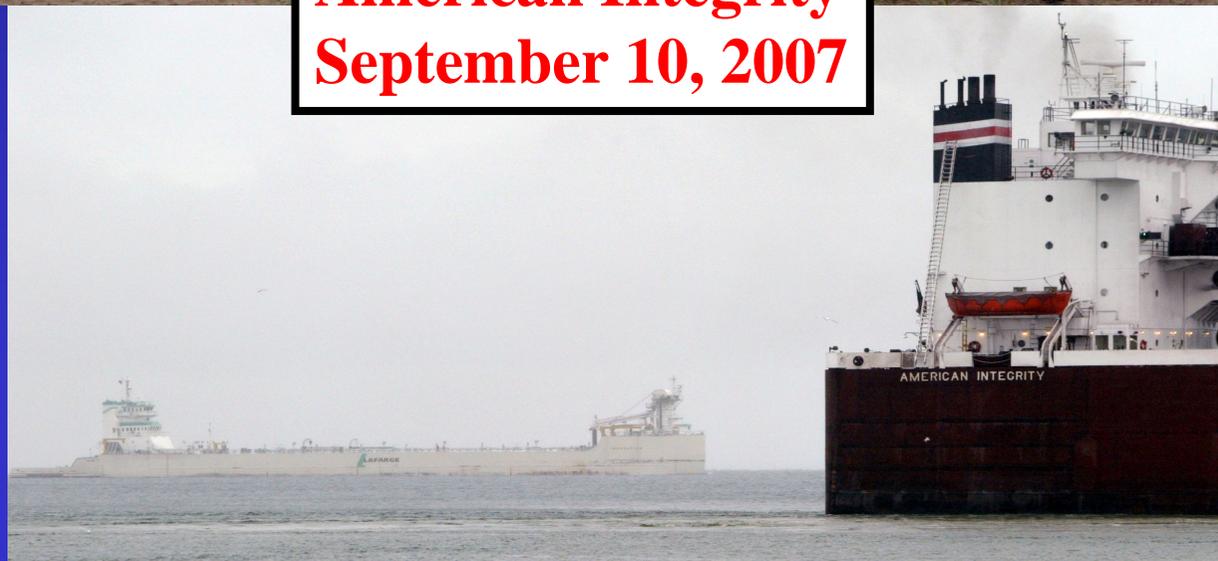


Indiana Harbor
August 22, 2007

Muskegon Harbor



**American Integrity
September 10, 2007**



Monroe Harbor



Monroe Harbor



Monroe Harbor

Prior to Dredging



After Dredging





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Little Lake Harbor



LITTLE LAKE ENTRANCE

LAKE SUPERIOR



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Little Lake Harbor





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Portage Lake Harbor





US Army Corps
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Portage Lake Harbor





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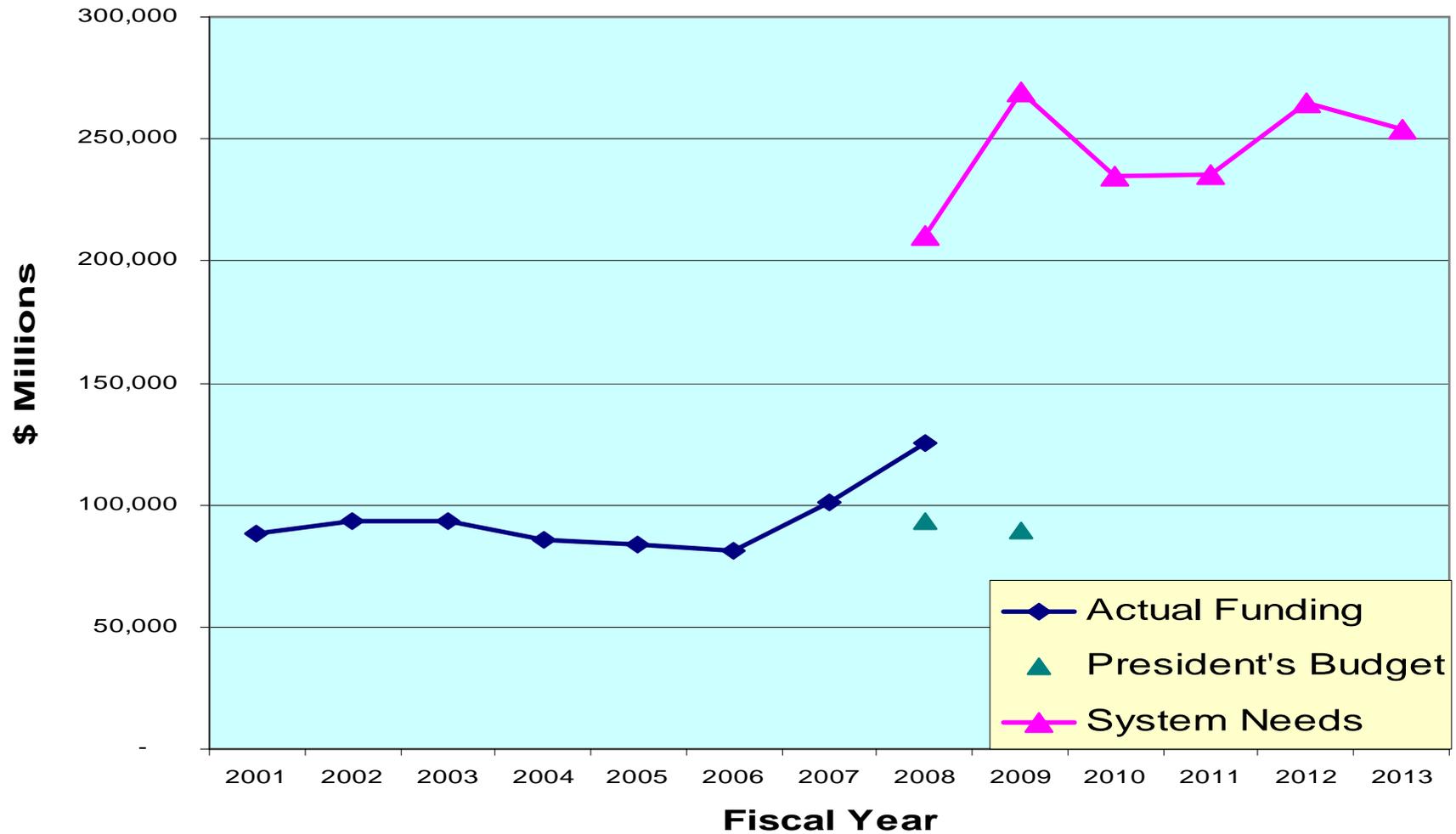
Great Lakes Navigation

Navigation System Funding & Trends



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Great Lakes Navigation Funding

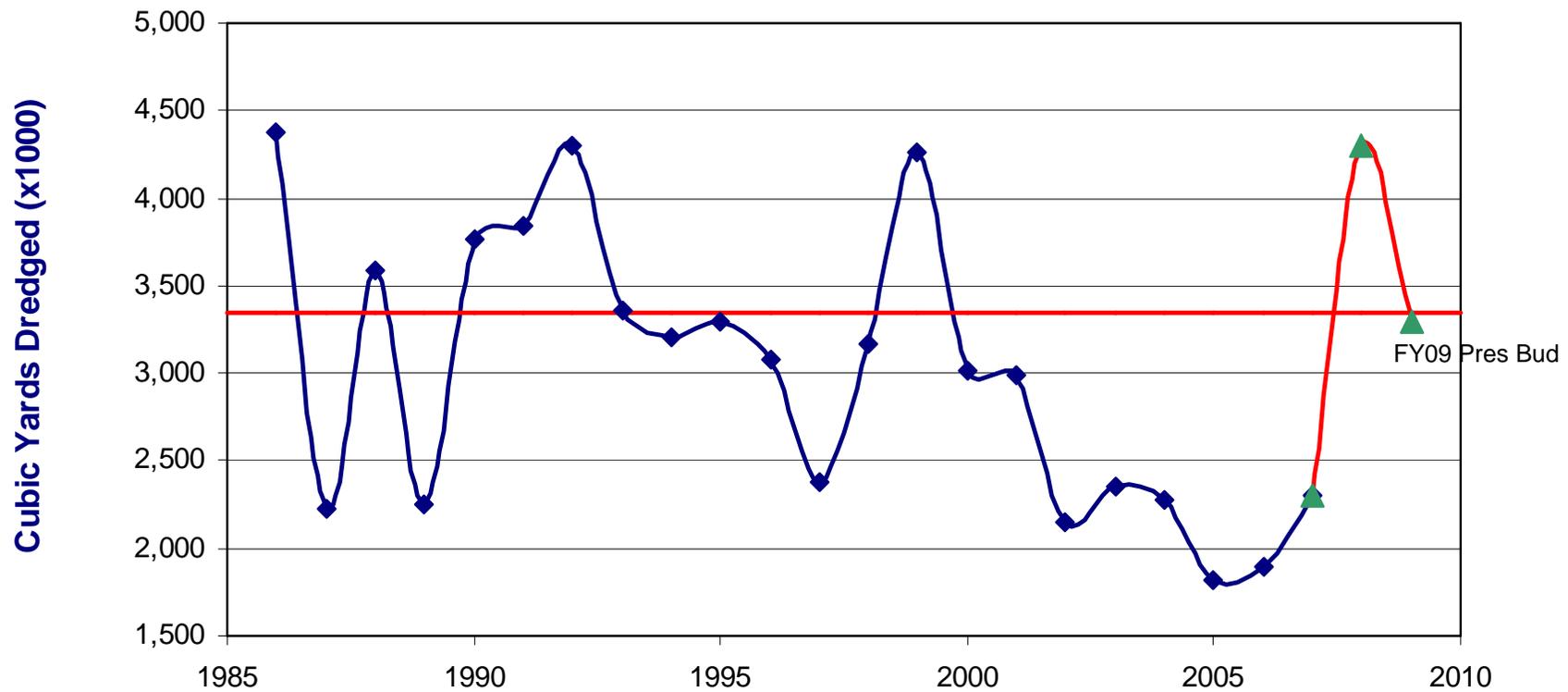




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Great Lakes Dredging Trends

Annual Great Lakes Dredging 1986-2009





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Great Lakes Navigation

FY 2008 Maintenance Dredging Program



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Great Lakes Navigation FY08 Dredging Program

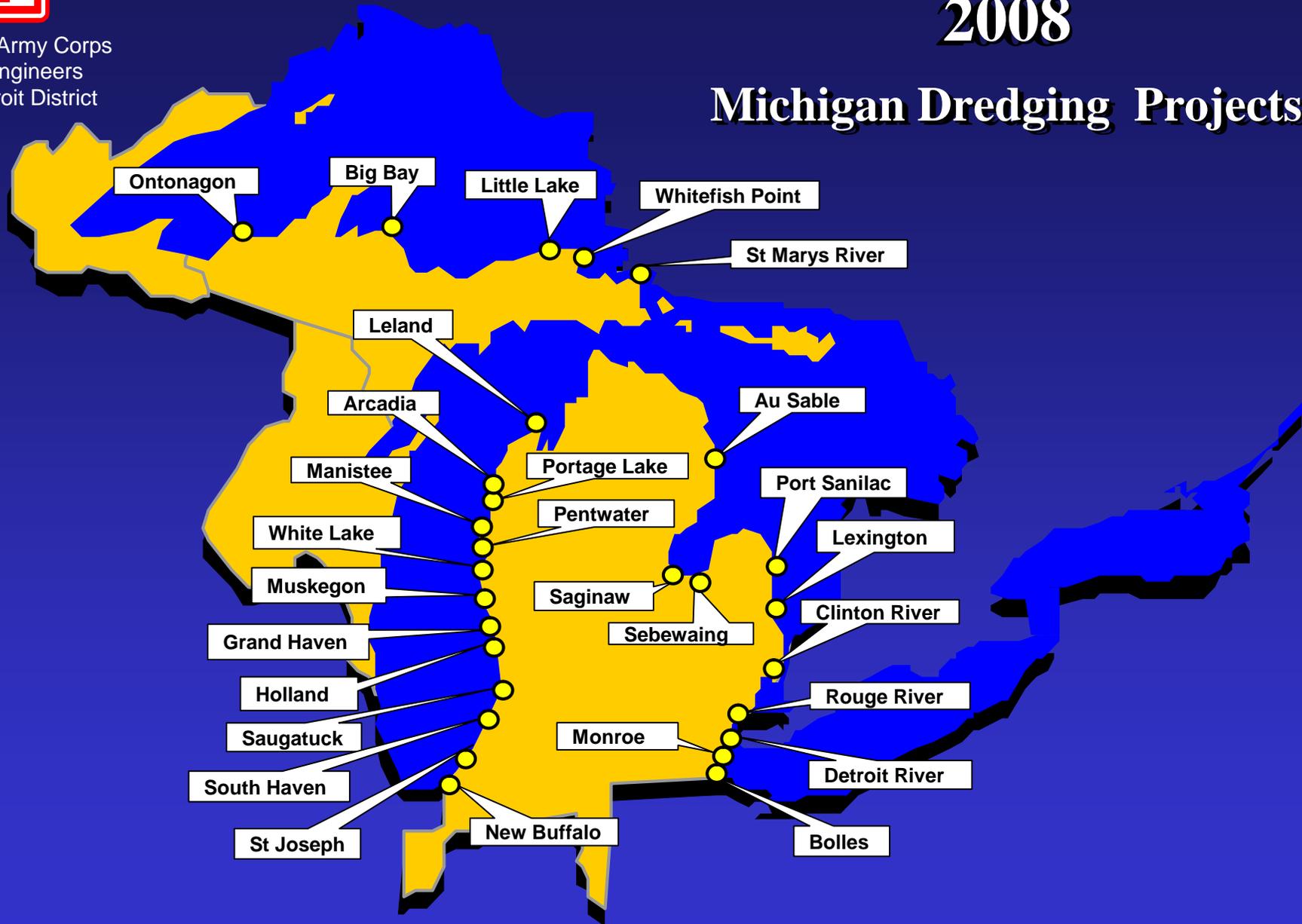
	FY07	FY08 PB	FY08 Omnibus
Maintenance Dredging	20 projects 2.3M cubic yards	22 projects 2.6M cubic yards	53 projects 4.3M cubic yards



US Army Corps
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Detroit District

2008

Michigan Dredging Projects





US Army Corps
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2008 Michigan Dredging Projects

LOCATION

Arcadia Harbor, MI

AuSable Harbor, MI

Big Bay Harbor, MI

Bolles Harbor, MI

Clinton River, MI

Detroit River, MI

Grand Haven Harbor, MI

Holland Harbor, MI

Leland Harbor, MI

Lexington Harbor, MI

Little Lake Harbor, MI

Manistee Harbor, MI

CURRENT STATUS

Dredging Completed by MCM Marine

Bid Opening Scheduled for 17 July 2008

Awarded 11 June 2008 to Ryba Marine

Bid Opening Scheduled for 19 June 2008

Bid Opening Scheduled for 22 August 2008

Awarded The King Company is Mobilizing

Dredging in Progress by The King Company

Dredging Completed by The King Company

Dredging Completed by MCM Marine

Awarded 20 May 2008 to MCM Marine

Dredging in Progress by MCM Marine

Awarded 15 April 2008 to MCM Marine



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2008 Michigan Dredging Projects

LOCATION

Monroe Harbor, MI

Muskegon Harbor, MI

New Buffalo Harbor, MI

Ontonagon Harbor, MI

Pentwater Harbor, MI

Port Sanilac Harbor, MI

Portage Lake Harbor, MI

Rouge River, MI

Saginaw River, MI

Saugatuck Harbor, MI

Sebewaing River, MI

CURRENT STATUS

Bid Opening Scheduled for 19 June 2008

Dredging Completed by The King Company

Dredging in Progress by MCM Marine

Awarded 11 June 2008 to MCM Marine

Dredging Completed by MCM Marine

Awarded 20 May 2008 to MCM Marine

Awarded 19 May 2008 to MCM Marine

Awarded 10 June 2008 to Luedtke

Bid Opening Scheduled for 12 August 2008

Awarded 2 June 2008 to The King Company

Bid Opening Scheduled for 27 June 2008



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2008 Michigan Dredging Projects

LOCATION

South Haven Harbor, MI

St Joseph Harbor, MI (Inner)

St Marys River, MI

White Lake Harbor, MI

Whitefish Point Harbor, MI

CURRENT STATUS

Awarded 2 June 2008 to The King Company

Dredging in Progress by :

Great Lakes Dock and Materials

Bid Opening Scheduled for 1 August 2008

Awarded on 19 May 2008 to MCM Marine

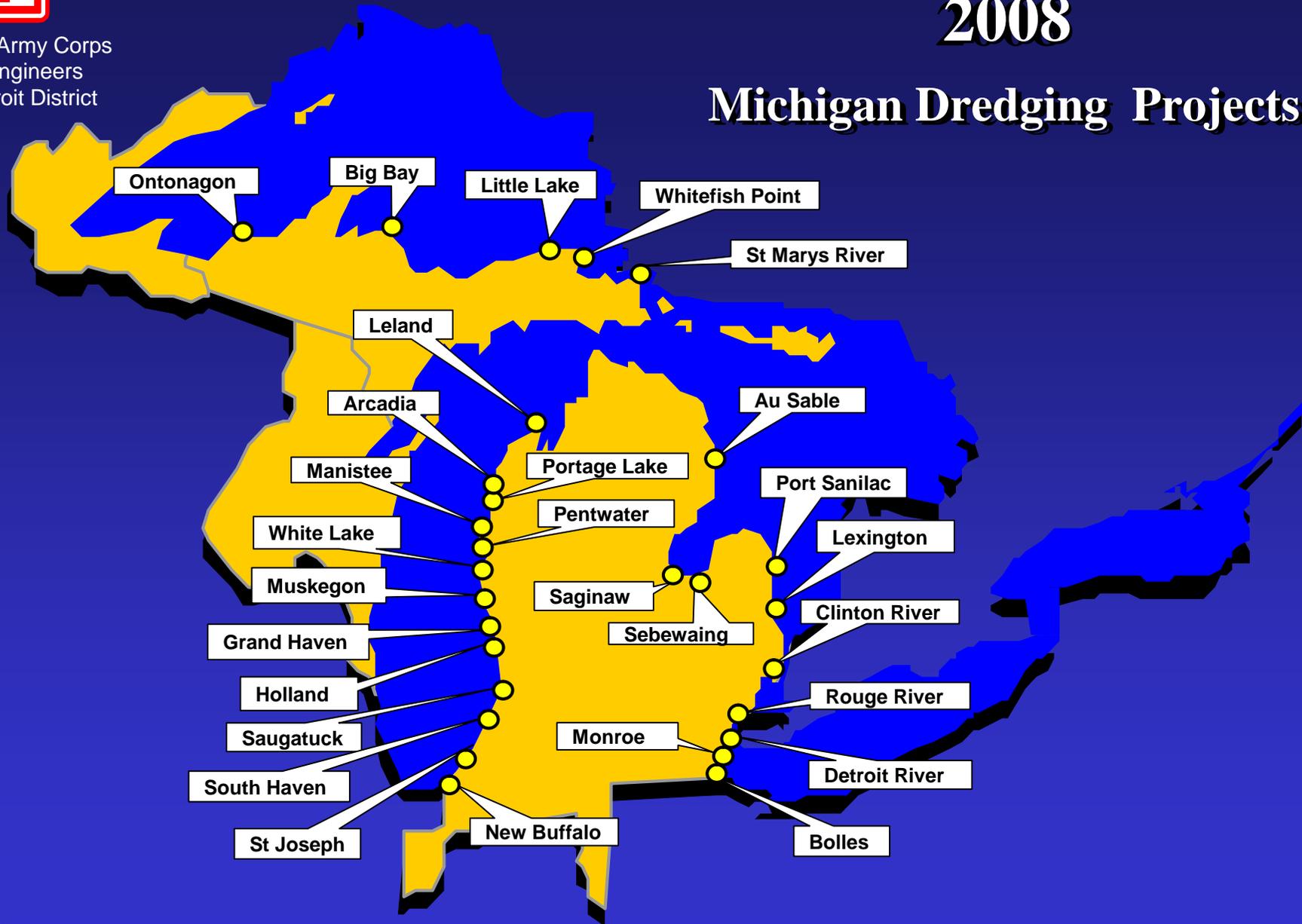
Awarded 11 June 2008 to Ryba Marine



US Army Corps
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Detroit District

2008

Michigan Dredging Projects



Little Lake Harbor



Little Lake Harbor



The background of the image is a close-up of the American flag, showing the blue field with white stars and the red and white stripes. In the lower right corner, there is a small, gold-colored figurine of a castle or fortress. A dark blue rectangular box is overlaid on the center of the image, containing white and yellow text.

Wayne.Schloop@us.army.mil

(313) 226-5013