



Great Lakes Dredging





Detroit District Dredging Status

- **611 miles of channel**
- **30 commercial harbors (Detroit District)**
- **61 shallow draft (recreational) harbors**
- **6.8% of US Domestic + International maritime commerce (Great Lakes)**
- **25 of Top 100 US Ports (Great Lakes)**
- **5.24 million cubic yards of critical dredging backlog**
- **Funded for 800,000 cubic yards of dredging projects annually (15%)**
- **Annual sediment load > 800,000 cu yds**



O&M Issues

- **Funding Challenges**

- **Critical Dredging Backlog**
- **Critical Structural Repairs**
- **Mitigation Funding Eliminated**

- **High Cost of Doing Business on the Great Lakes**

- **Lack of Cost-effective disposal options**

- **Federal Shallow Draft Harbors not in FY05 budget**

- **Great Lakes Low Water Levels x 5th Year**





Great Lakes Dredging

“The challenge”

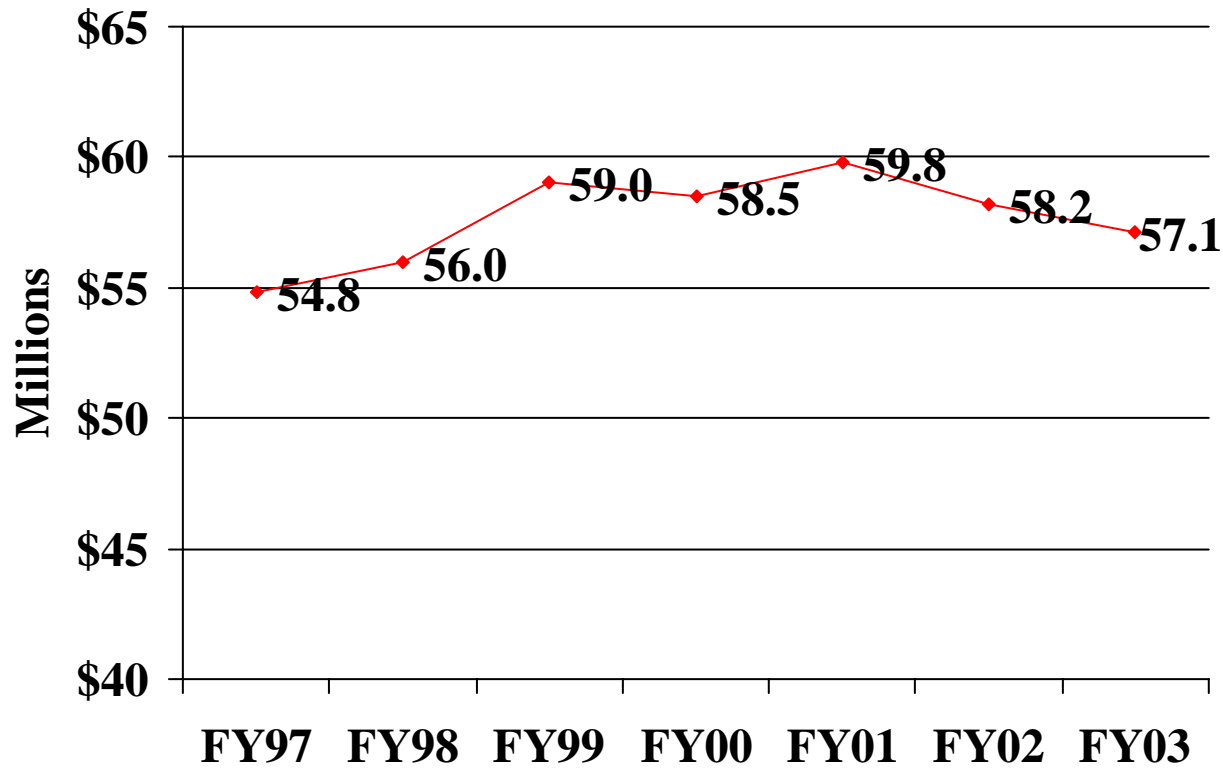




US Army Corps
of Engineers

Detroit District

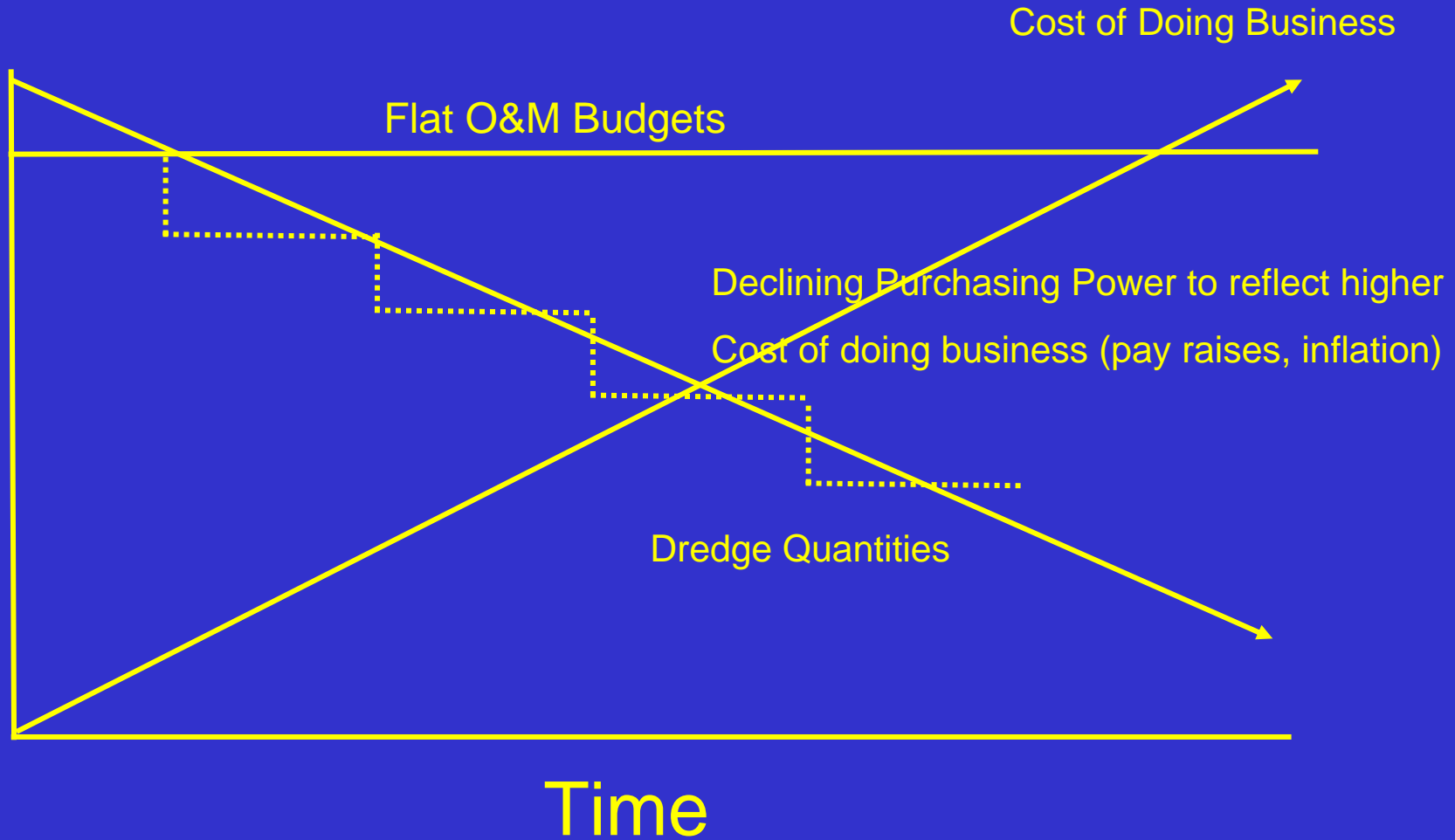
Actual O&M Funding Allocations





Great Lakes Dredging

“The challenge”





Critical Backlog Yardage

COMMERCIAL HARBORS ONLY

ALPENA HARBOR, MI (#97)	50,000	\$120,000	MANITOWOC HARBOR, WI	174,134	\$ 1,781,340
ASHLAND HARBOR, WI	60,458	\$1,279,160	MENOMINEE HARBOR, WI / MI	62,985	\$606,865
CHARLEVOIX HARBOR, MI	4,000	\$110,000	MILWAUKEE HARBOR, WI (#100)	120,000	\$1,619,000
CHEBOYGAN HARBOR, MI	16,875	\$238,750	MONROE HARBOR, MI	30,000	\$233,000
DETROIT RIVER, MI (#39)	816,733	\$4,940,398	MUSKEGON HARBOR, MI	65,000	\$365,000
DULUTH-SUPERIOR MI/WI (#18)	300,000	\$2,675,000	ONTONAGON HARBOR, MI	56,000	\$376,000
FRANKFORT HARBOR, MI	24,000	\$159,000	PORT WASHINGTON HARBOR, WI	20,000	\$186,000
GRAND HAVEN HARBOR, MI	382,000	\$2,307,000	PRESQUE ISLE HARBOR, MI (#51)	30,000	\$310,000
GRAYS REEF PASSAGE, MI	Strikes	\$85,000	ROUGE RIVER, MI	65,000	\$690,000
GREEN BAY HARBOR, WI	750,000	\$13,235,000	SAGINAW RIVER, MI (LOWER)	250,000	\$2,510,000
HARBOR BEACH HARBOR, MI	97,929	\$1,049,290	SAGINAW RIVER, MI (UPPER)	418,520	\$3,806,680
HOLLAND HARBOR, MI	210,000	\$1,300,000	SHEBOYGAN HARBOR, WI	300,000	\$2,345,000
KENOSHA HARBOR, WI	104,347	\$1,322,164	ST CLAIR RIVER, MI (#81)	12,000	\$244,000
KEWAUNEE HARBOR, WI	50,000	\$640,000	ST JOSEPH HARBOR, MI	145,000	\$1,230,000
KEWEENAW WATERWAY, MI	100,000	\$915,000	STURGEON BAY HARBOR, WI	180,000	\$1,649,000
LUDINGTON HARBOR, MI	120,000	\$735,000	TWO HARBORS HARBOR, MN (#43)	5,185	\$132,270
MANISTEE HARBOR, MI	120,000	\$640,000	<u>TWO RIVERS HARBOR, WI</u>	<u>100,000</u>	<u>\$1,385,000</u>
			TOTAL	5,240,166	\$51,219,917

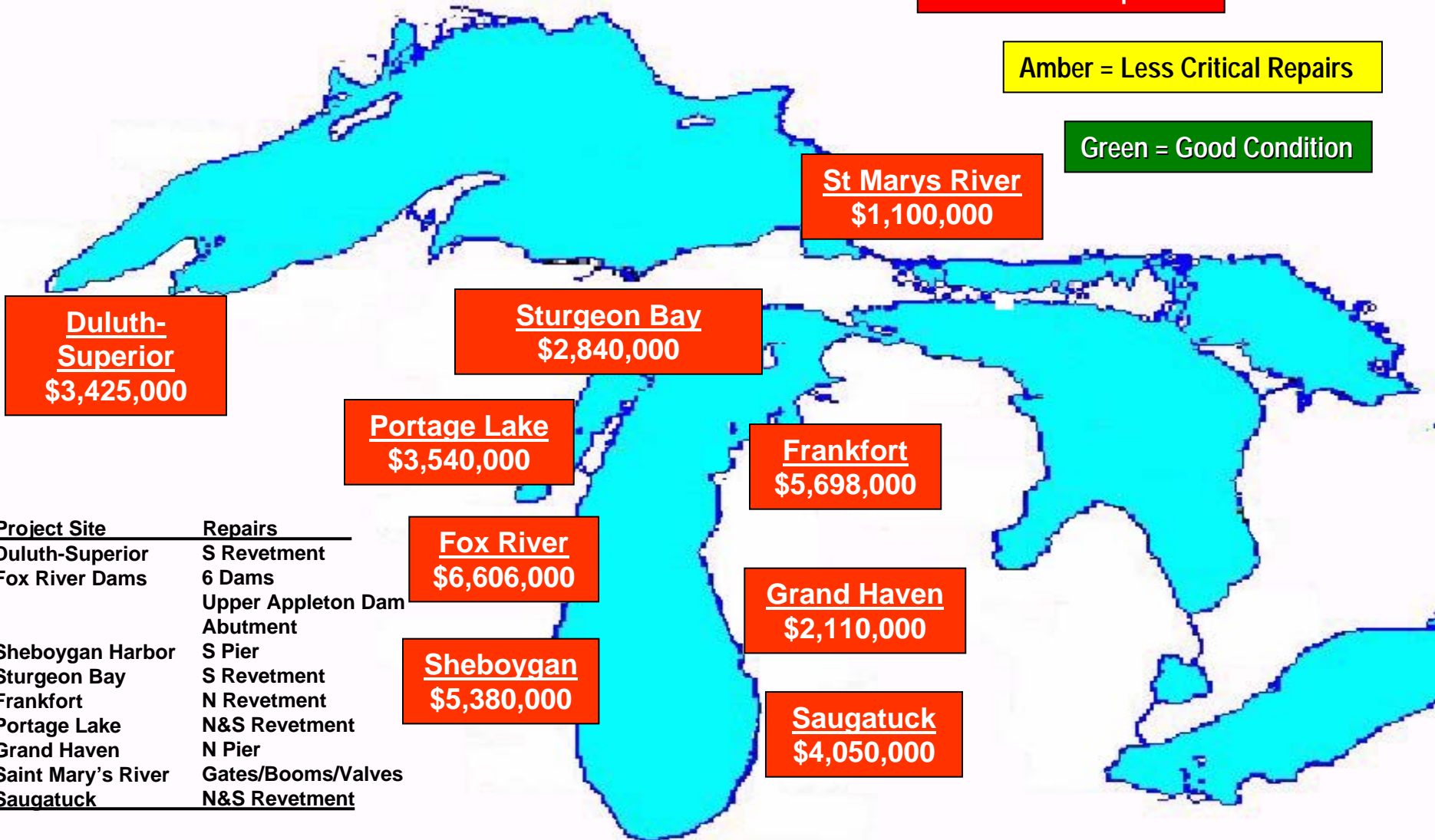


Structural Condition

Red = Critical Repairs

Amber = Less Critical Repairs

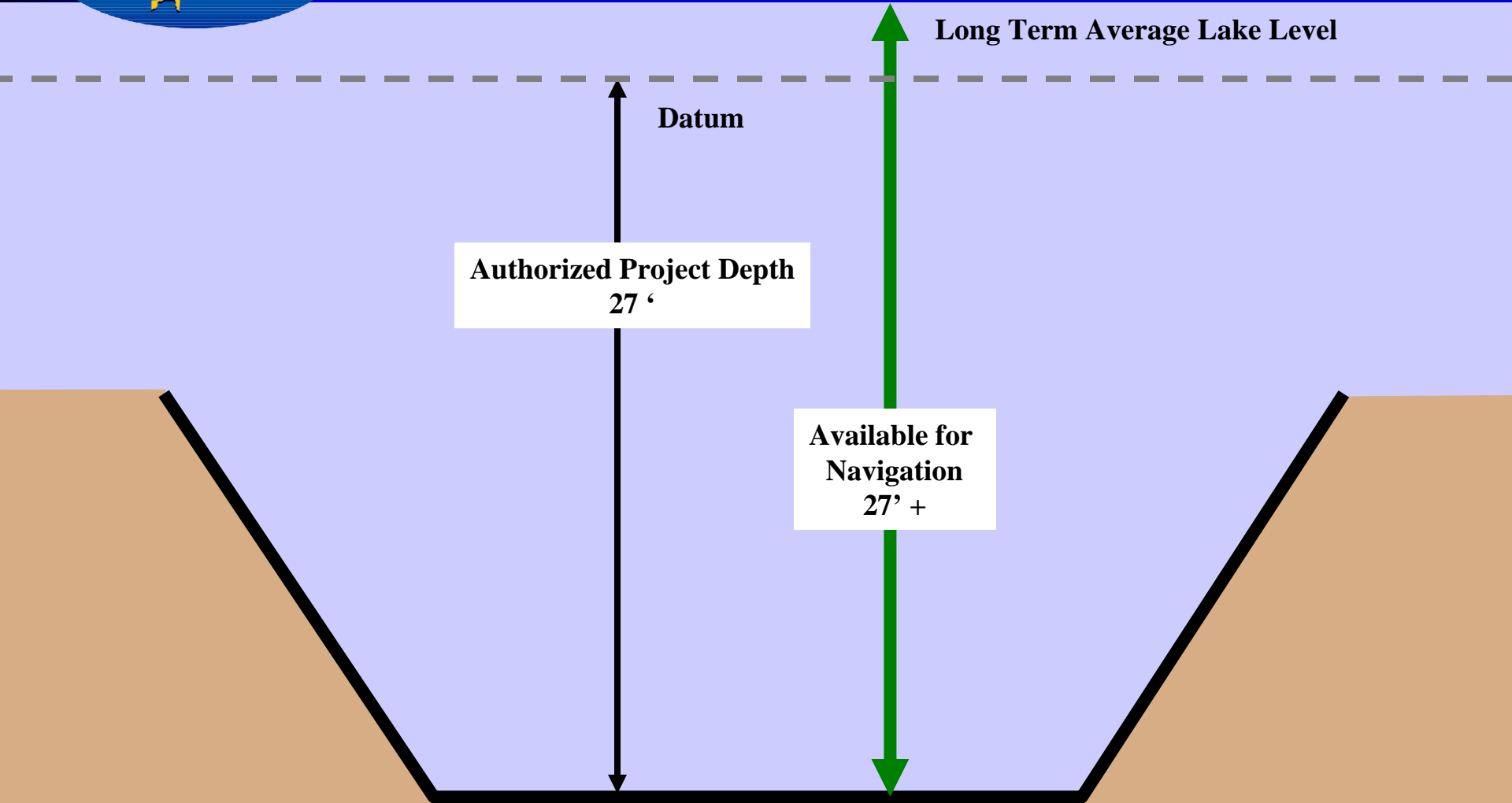
Green = Good Condition



Project Site	Repairs
Duluth-Superior	S Revetment
Fox River Dams	6 Dams
Upper Appleton Dam	Abutment
Sheboygan Harbor	S Pier
Sturgeon Bay	S Revetment
Frankfort	N Revetment
Portage Lake	N&S Revetment
Grand Haven	N Pier
Saint Mary's River	Gates/Booms/Valves
Saugatuck	N&S Revetment

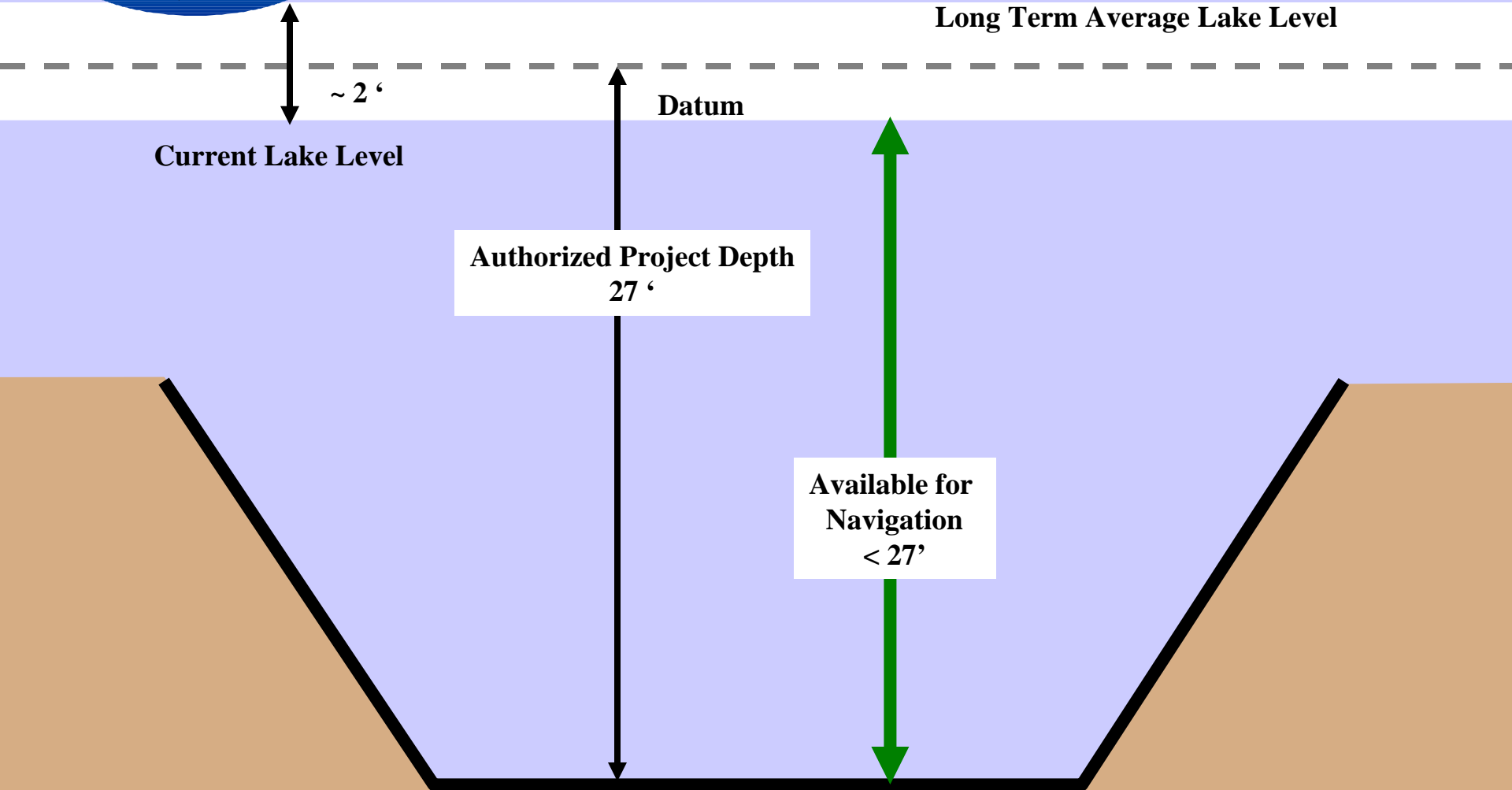


Normal Conditions



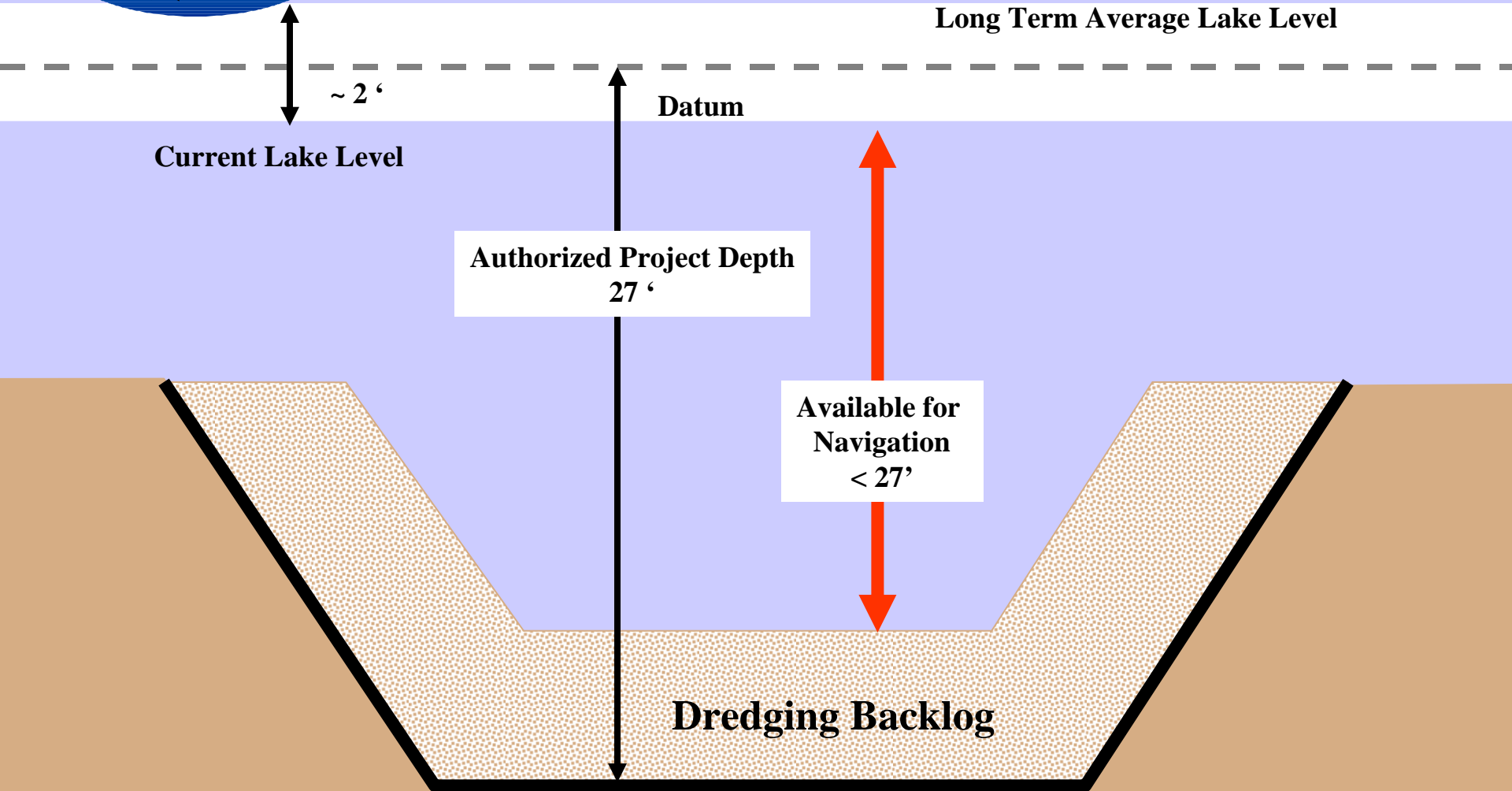


Lake Level Below Datum





Dredging Backlog



1" of available depth = 250 Tons



Funding Constraints & Maintenance Dredging Requirements

Cost of Dredging

- Typical maintenance dredging cycle
 - 10,000-100,000 cubic yards
 - \$6-\$20 per cubic yard
- Project configuration
 - length of pumping or hauling distances
 - Type of dredging equipment
- Dredged material placement method



Funding Constraints & Maintenance Dredging Requirements

Cost of Dredging, Cont'd

- Environmental Windows
 - Generally allowed Nov 1 - April 1
 - Also for 1 month in June, July or August
- Classification of bottom sediments
 - Varies by state
 - Regulation of dredged material placement



Where Do We Go From Here?

- Dredge Contracting Efficiencies
 - MATOC
 - Bundling Opportunities
 - Hopper Dredge(s) on Great Lakes

Multiple Award Task Order Contract For Great Lakes Dredging



- Contracts applicable throughout Great Lakes and Ohio River Division
- Entire contract procurement process reduced to eight days
- Real-time survey data can now be used in request for proposals
- Response time for emergency dredging services will be greatly reduced
- Fewer District resources will be expended in procurement of dredging services



Where Do We Go From Here?

- Dredge Contracting Efficiencies
 - MATOC
 - Bundling Opportunities
 - Hopper Dredge(s) on Great Lakes
- Most Efficient Dredging Practices
- New Disposal Options
 - Re-look Old Disposal Options



Where do We Go From Here?

- We don't need a new or even a better mousetrap...we need a completely different "anti-rodent" device altogether!
- Dredge + Dispose...versus...dredging without generating waste.
 - Snow Plow...versus...Snow Shovel
- "Just in time dredging"
- Better use of technology.
- Better use of customer input into decision-
- Expand the team that is focused on addressing this challenge.





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