

Great Lakes Waterways Conference

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US Army Corps of Engineers
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Agenda

- FY13 Maintenance Dredging
- Key FY14 Needs
- Duluth-Superior – 21st Ave Pilot
- Green Bay – Cat Island Restoration
- SOO Locks Asset Renewal
- St. Marys River Rock Cut



FY13 Dredging Requirements Due to Shoaling



Key FY13 Detroit District O&M Activities

- Duluth Maintenance Dredging w/ Pilot Project for Disposal at 21st Avenue
- Continuation of Repairs to St. Marys River Rock Cut
- Soo Locks Asset Renewal – Compressed Air System Replacement
- Renard Island CDF Closure (CG funds)

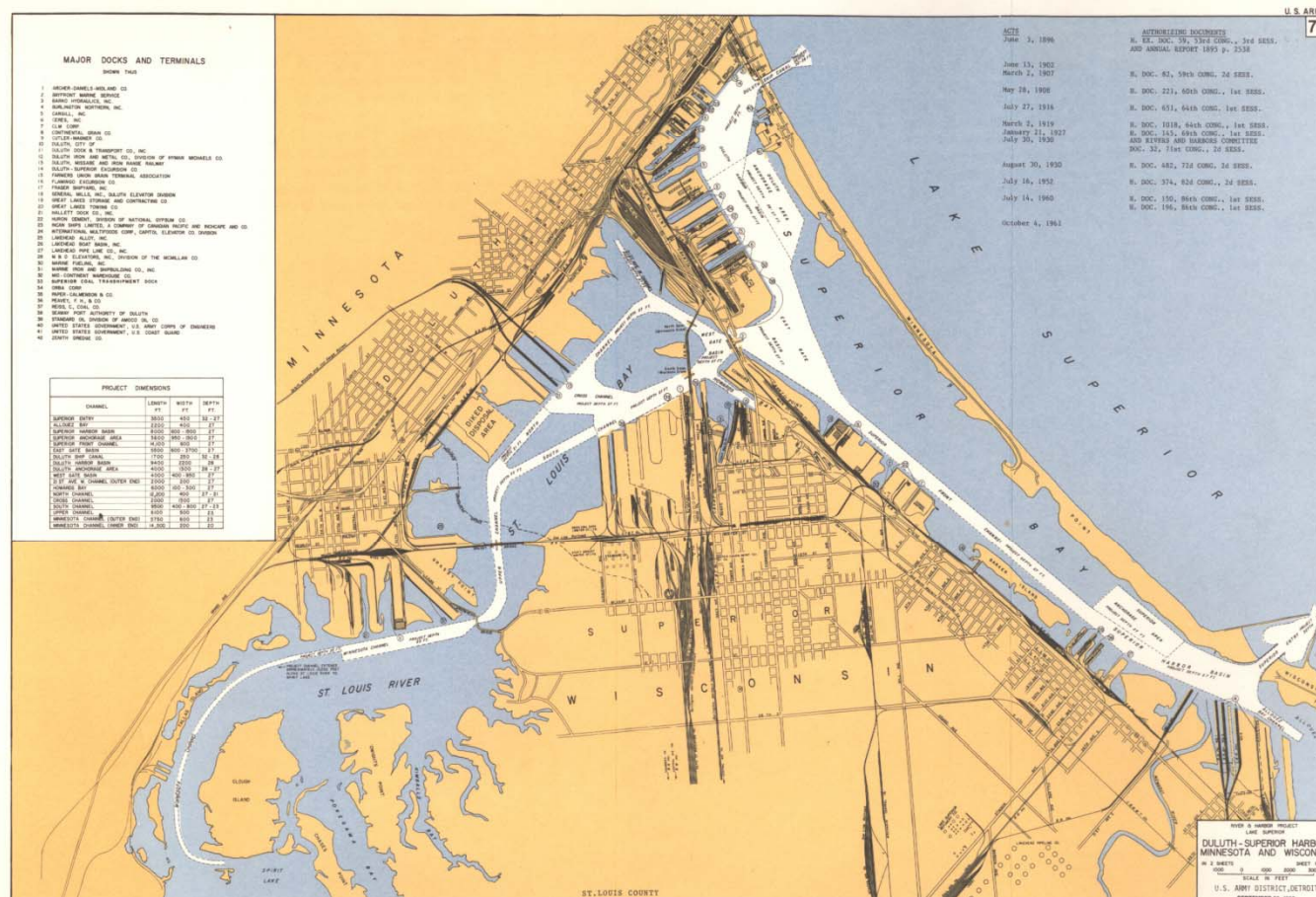


Key FY14 Detroit District O&M Needs

- St. Marys River Dredging (Course 8 below Rock Cut)
- Continuation of Repairs to St. Marys River Rock Cut
- Soo Locks Asset Renewal – Poe Lock Dewatering Pump Controls



Project Area in Duluth-Superior



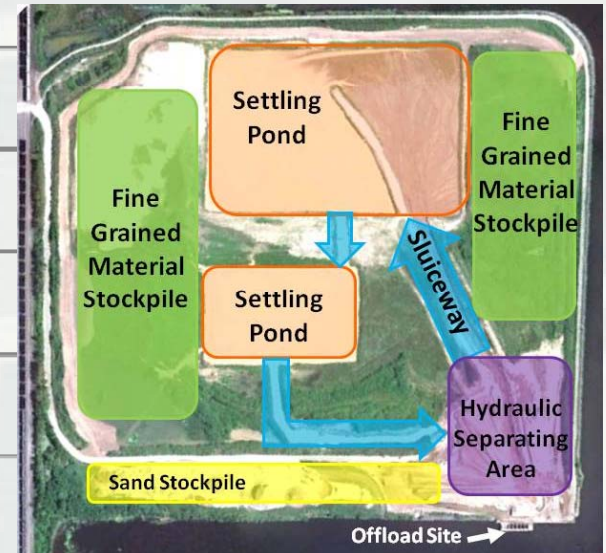
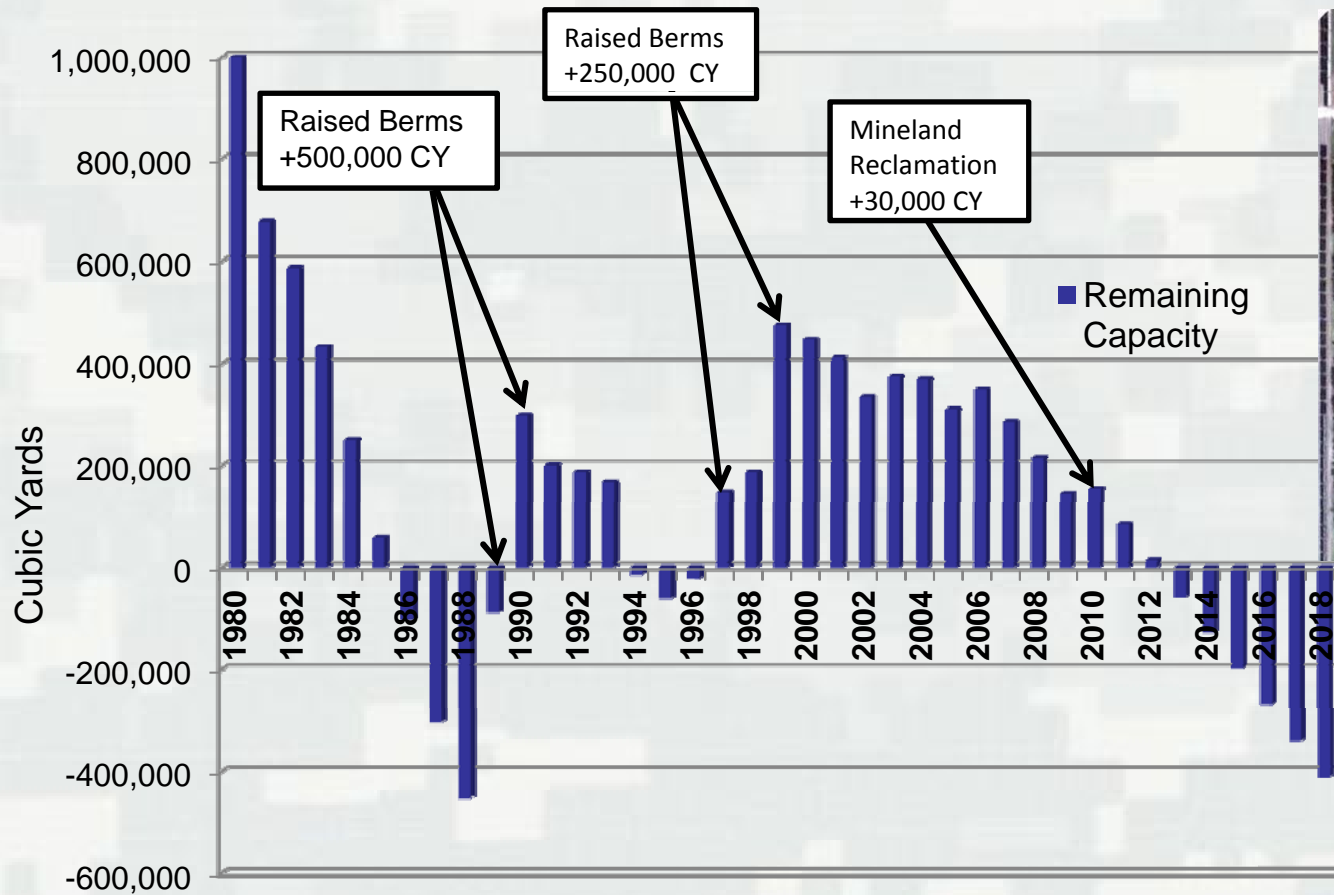
Approximately 110,000 cy of dredged material requiring placement each fiscal year

Limited remaining capacity at Erie Pier



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Duluth Harbor CDF Capacity

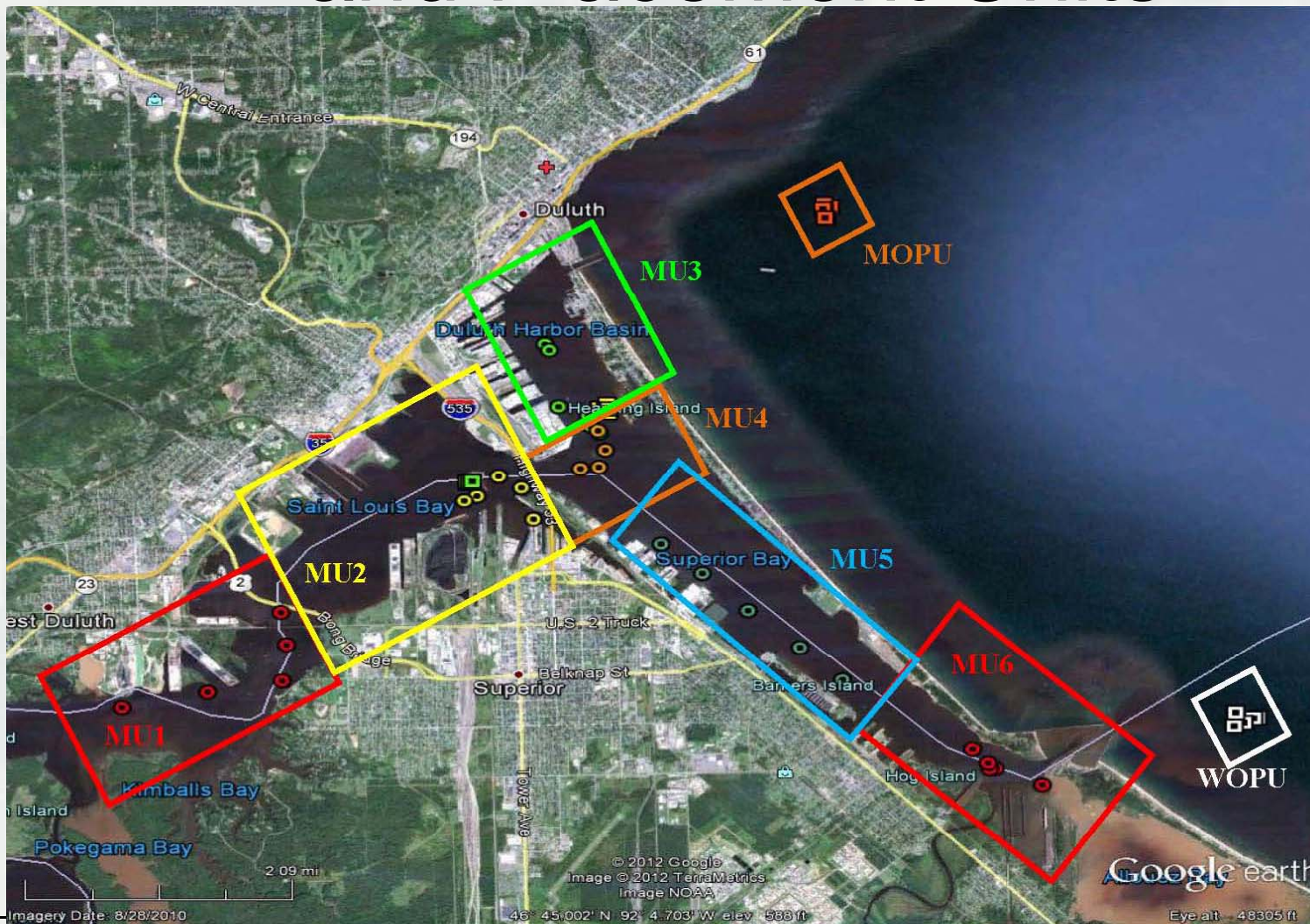


- 21st Avenue Site- 75 acres, 800k CY capacity, \$1.5M
- Pursuit of Open Water Placement - testing ongoing
- Mineland Reclamation - pilot study, 30,000 CY
- Exterior Berm Raising – performed in 1990s - increased capacity by 750k CY
- Fill Management - Interior berm raising, pond excavation, construction of MSE Wall/ Intermediate Offloading Platform ongoing



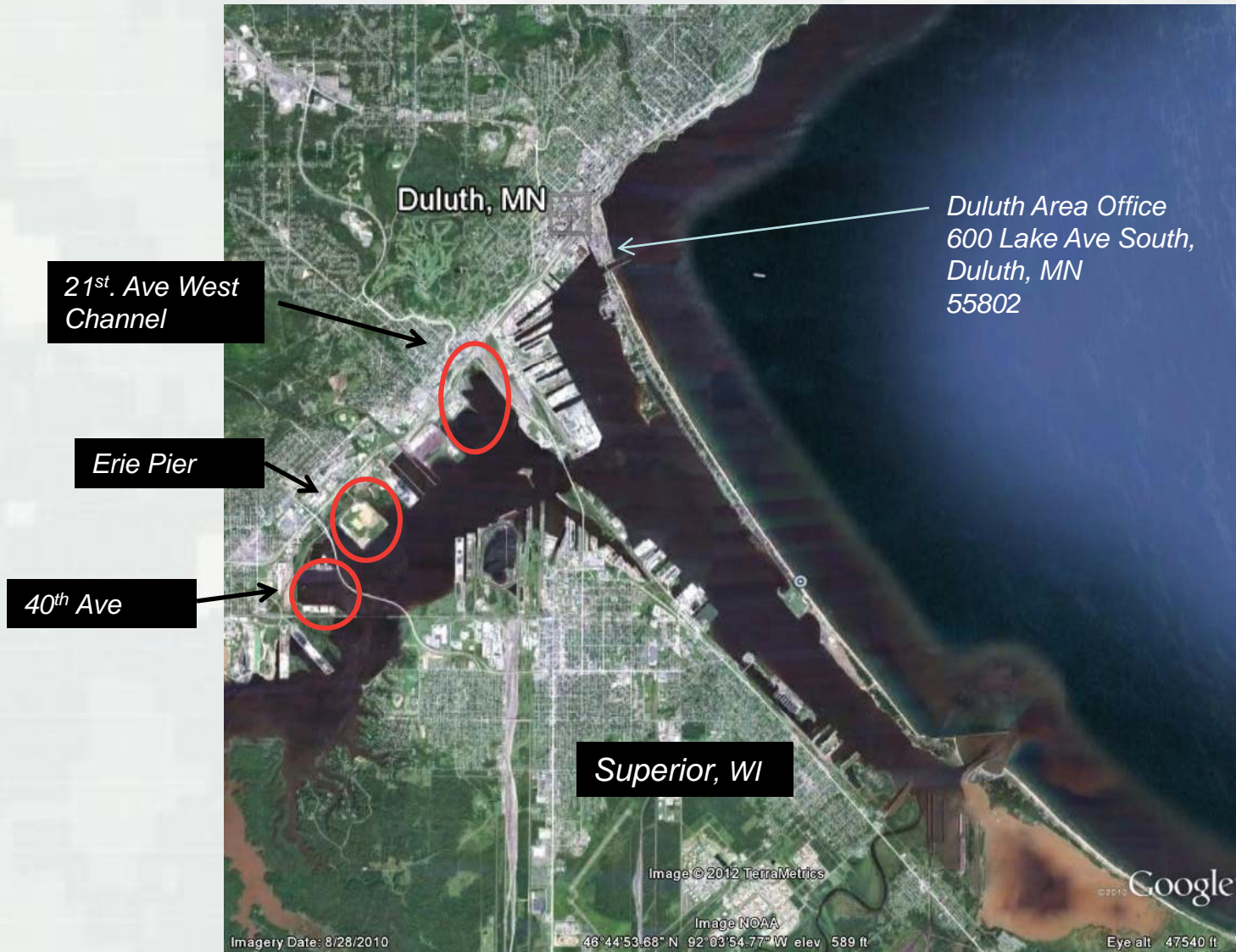
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Open Water Management Units and Placement Units



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Duluth- Superior Harbor



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Duluth-Superior Hbr 21st Avenue Pilot Project:

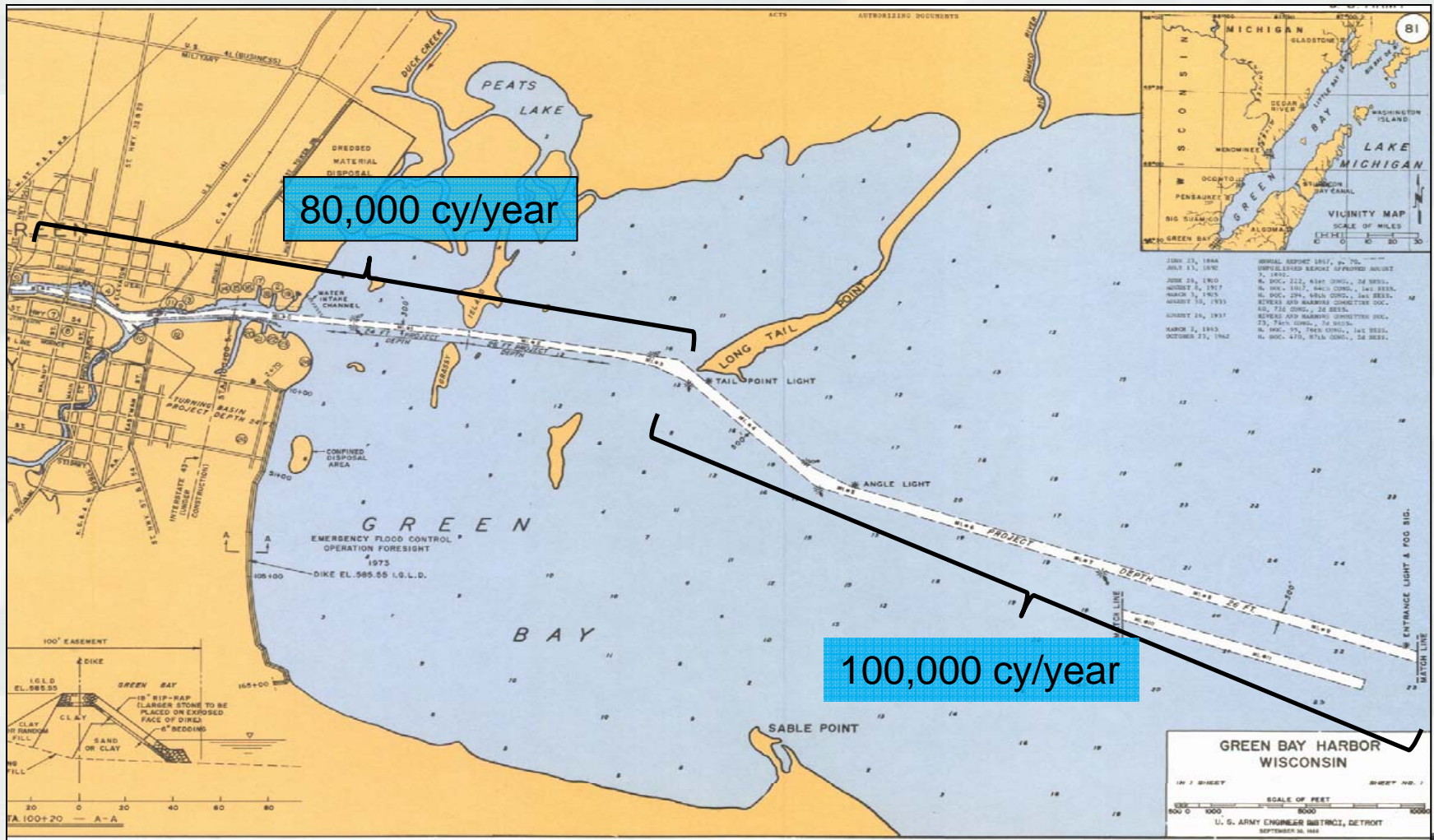
Potential for three
years placement of
suitable dredged
material

Pilot to demonstrate
and monitor
placement,
dispersion, plant
growth, etc.

Basis for pursuing
similar sites of
interest w/in the
harbor



Fox River and Green Bay, Wisconsin

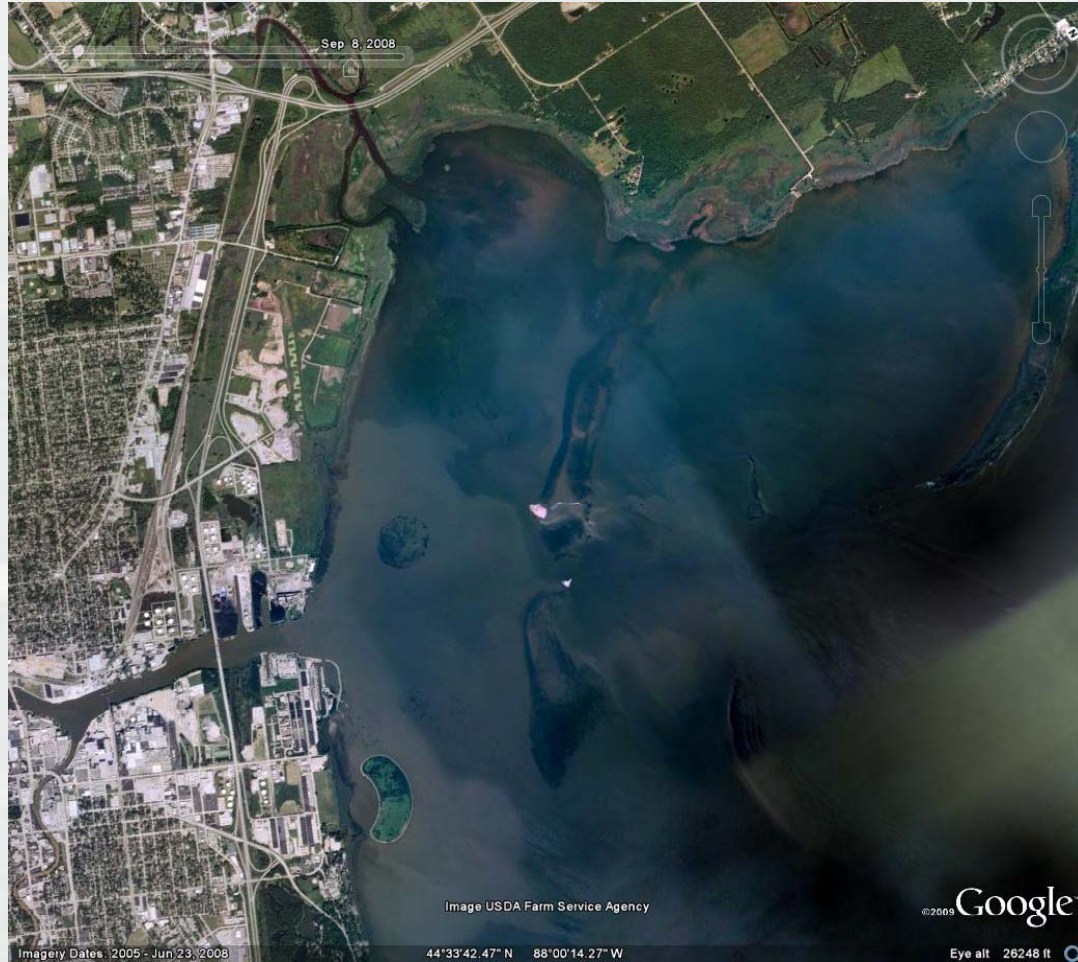


Cat Island Chain - 1965



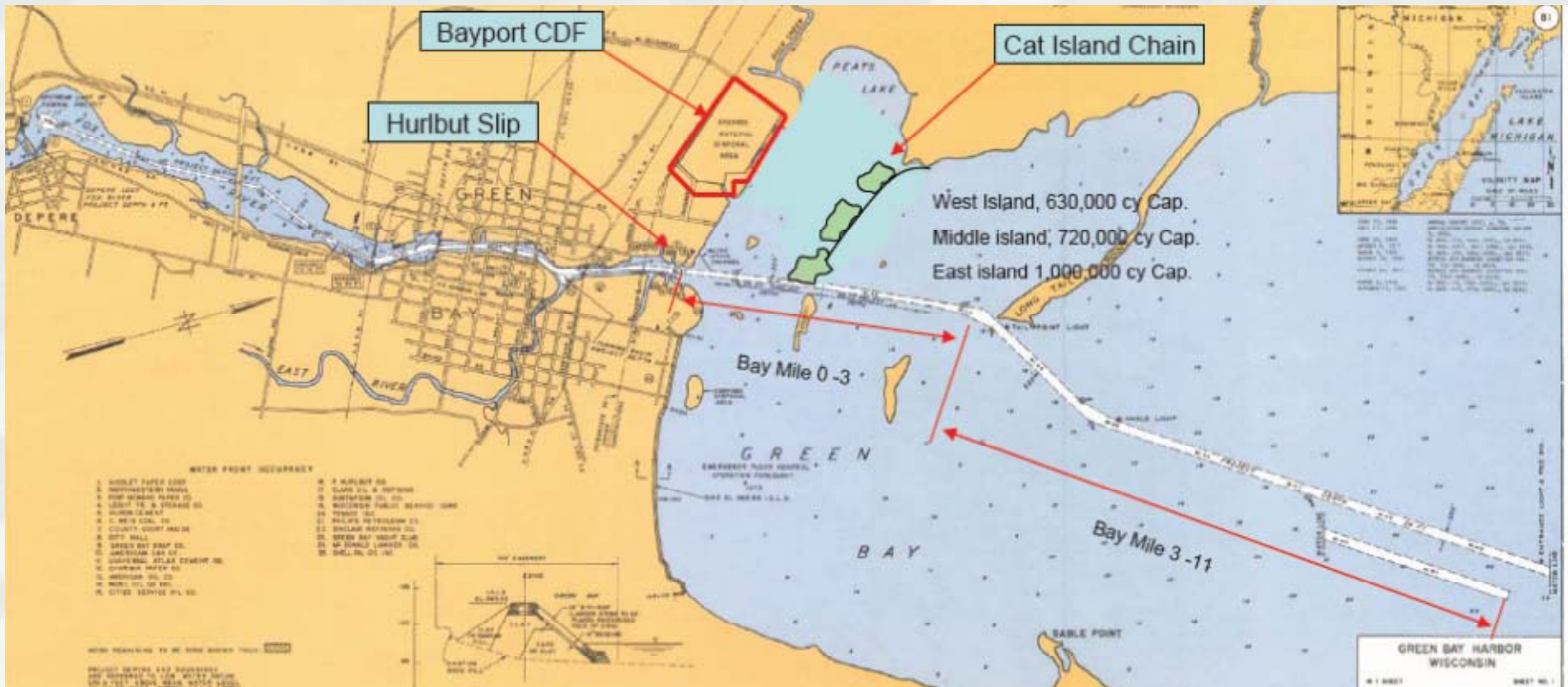
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Lower Green Bay, 2008



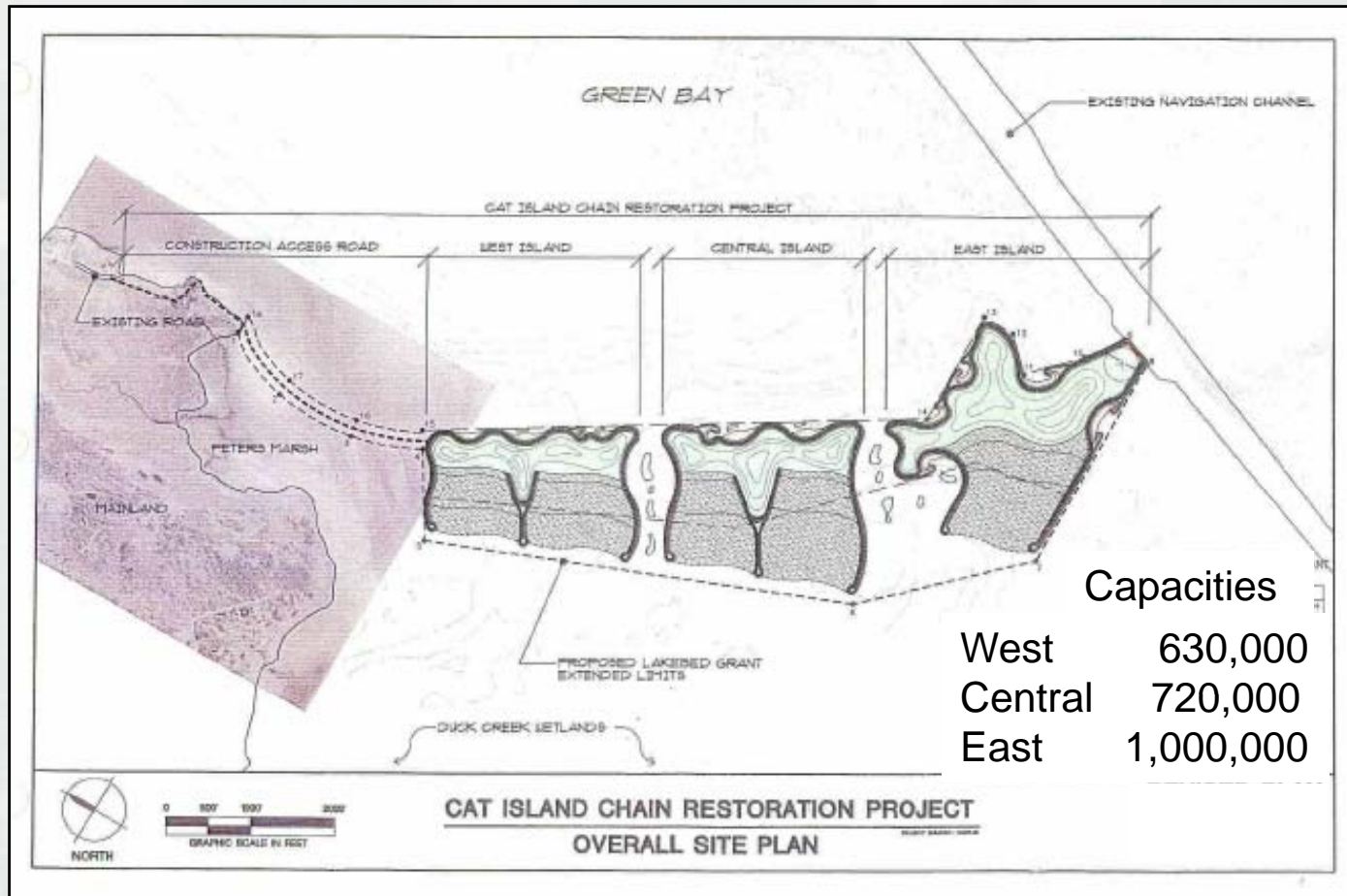
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Project Area in Green Bay



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Cat Island Chain Restoration



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Cat Island Construction – Jan 2013



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Cat Island Construction – Jan 2013



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Cat Island Construction – Jan 2013



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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

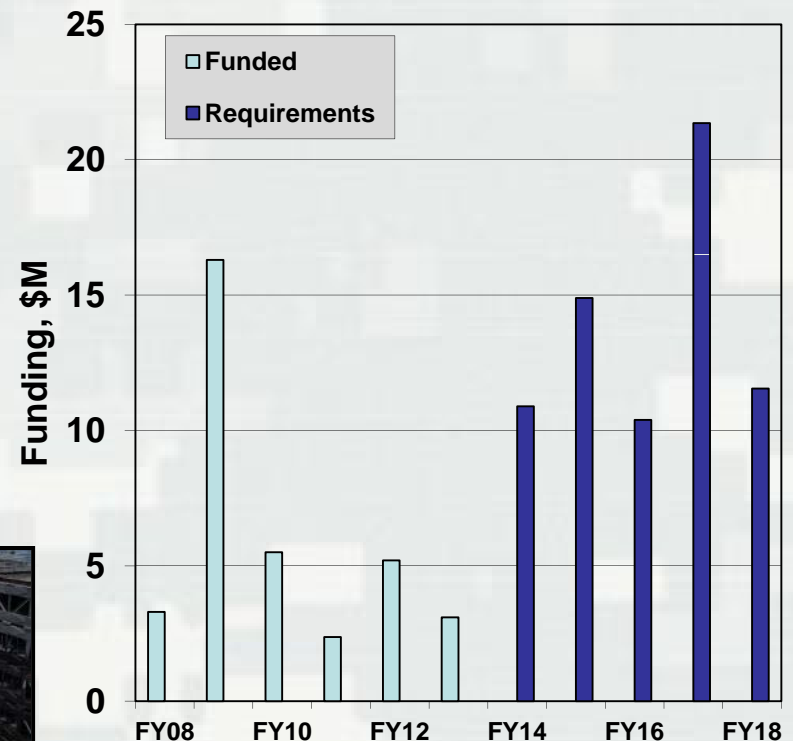
- The economic impact of a 30-day unscheduled closure of the Soo Locks = \$160M
- Two major efforts are underway to improve reliability of the Soo Locks
 1. Maintain existing infrastructure through Asset Renewal Plan
 2. Add redundancy by constructing a new replacement lock with the same dimensions as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



Soo Locks Asset Renewal Long-Term Plan

Asset Renewal Plan will maximize reliability and reduce risk through 2035

- \$35.9M funded to date through FY13
 - 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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Poe Lock Hydraulics

New Cylinder at Gate 2N



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December 2012

MacArthur Lock Dewatering

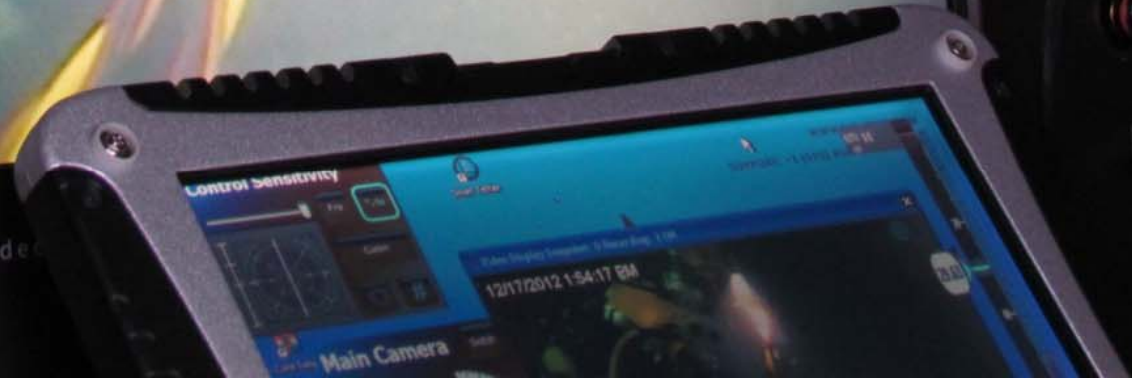


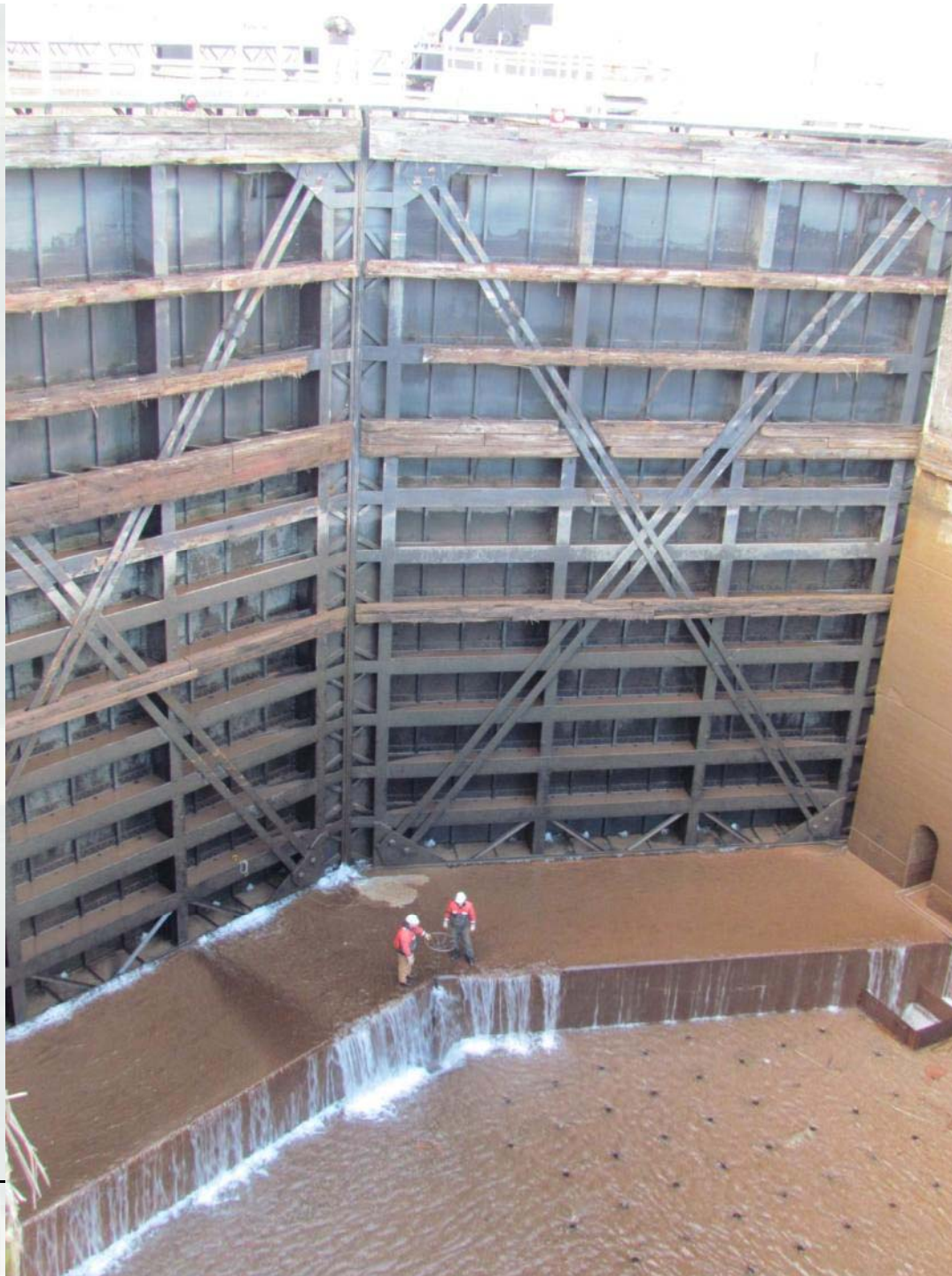
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VideoRay



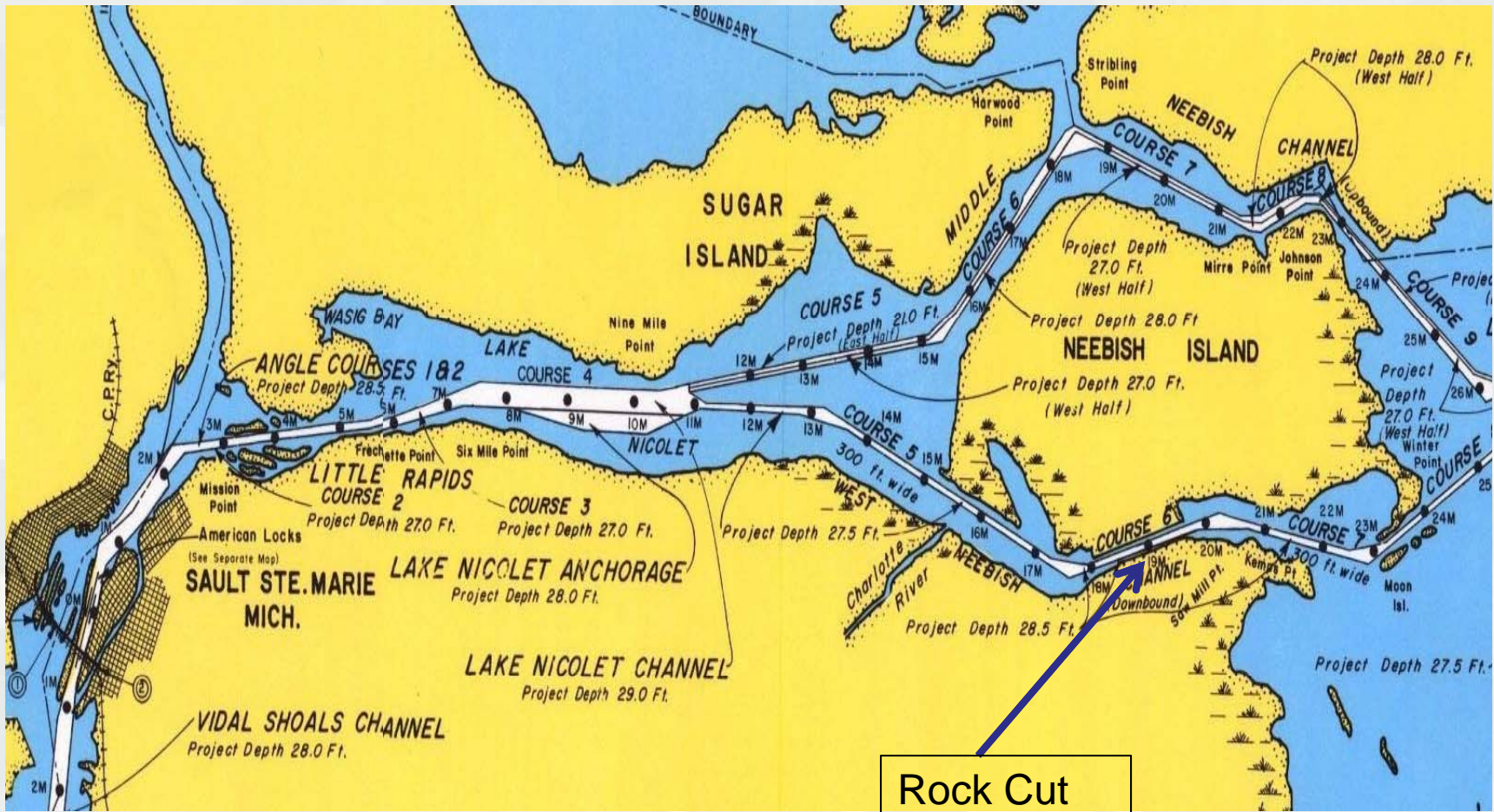
www.video





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West Neebish Island Rock Cut



West Neebish Island Rock Cut



West Neebish Island Rock Cut



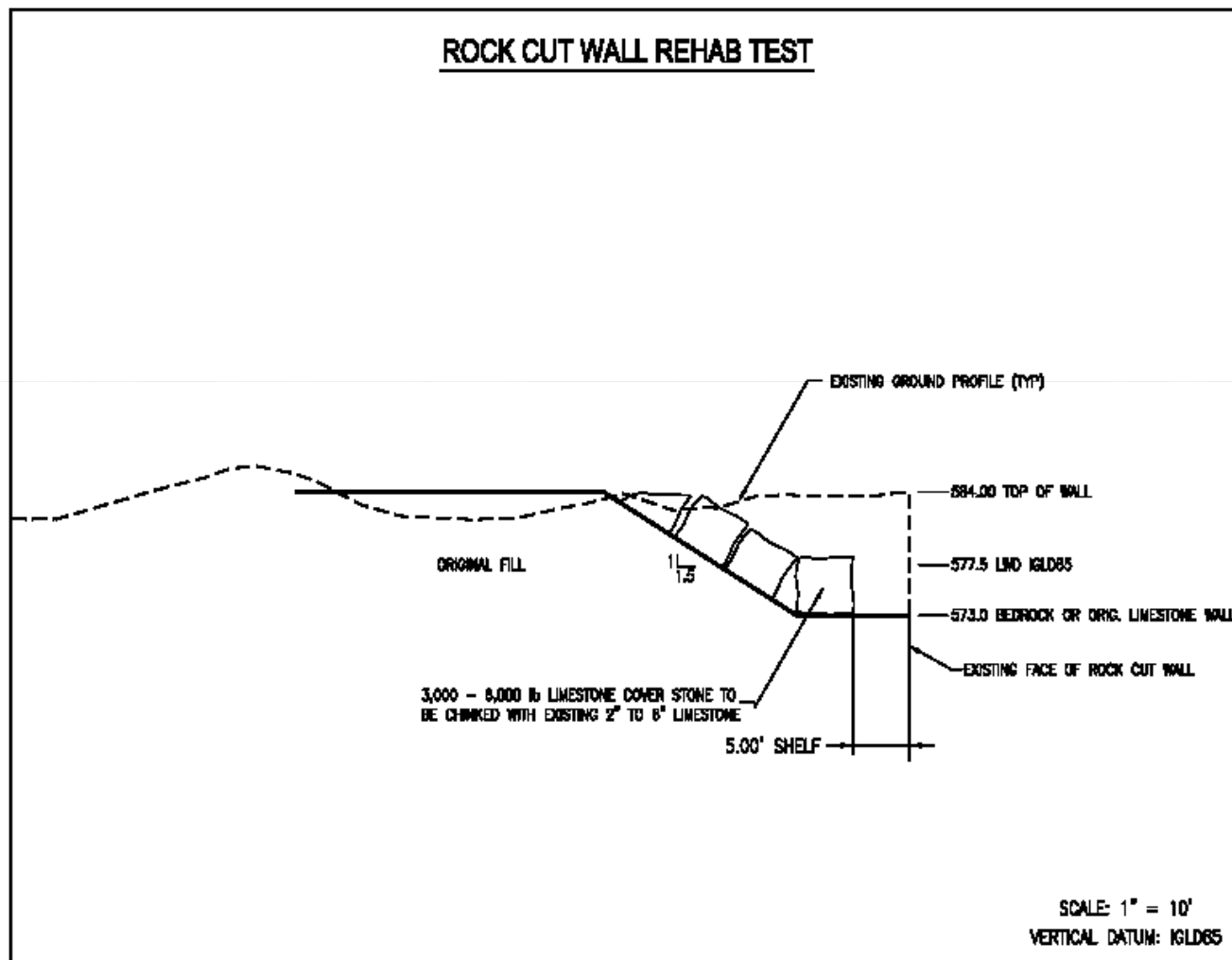
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West Neebish Island Rock Cut



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