

Great Lakes Legacy Act

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Great Lakes Legacy Act...a new “tool” in the Great Lakes sediment remediation toolbox

⇒ Goal: Accelerate the pace of sediment remediation at Areas of Concern (AOCs)

⇒ Remediation of contaminated sediments

⇒ 75+ sites identified in the Great Lakes

⇒ Program conducted by the U.S. Environmental Protection Agency Great Lakes National Program Office (GLNPO)

GLLA authorization and Appropriation

- The Great Lakes Legacy Act authorization (FY2004 through FY2008):
 - \$50 M per year for contaminated sediment “projects”
 - \$3 M per year for research on the development of innovative technologies
 - \$1 M for a public information program on contaminated sediment remediation
- \$9.9 M appropriated in FY2004
- \$22.3 M in FY2005
- \$29.6 M in FY2006
- \$30 M In FY2007

GLLA Project Types

Must be in U.S. Areas of Concern (AOCs) and:

- 1) Implement a plan to remediate contaminated sediment (highest priority)
- 2) Monitor or evaluate contaminated sediment
- 3) Prevent further or renewed sediment contamination

Cost-Sharing



- **Non-Federal Cost Share Must be at Least 35% of Total Project Costs and 100% of Operation and Maintenance Costs**

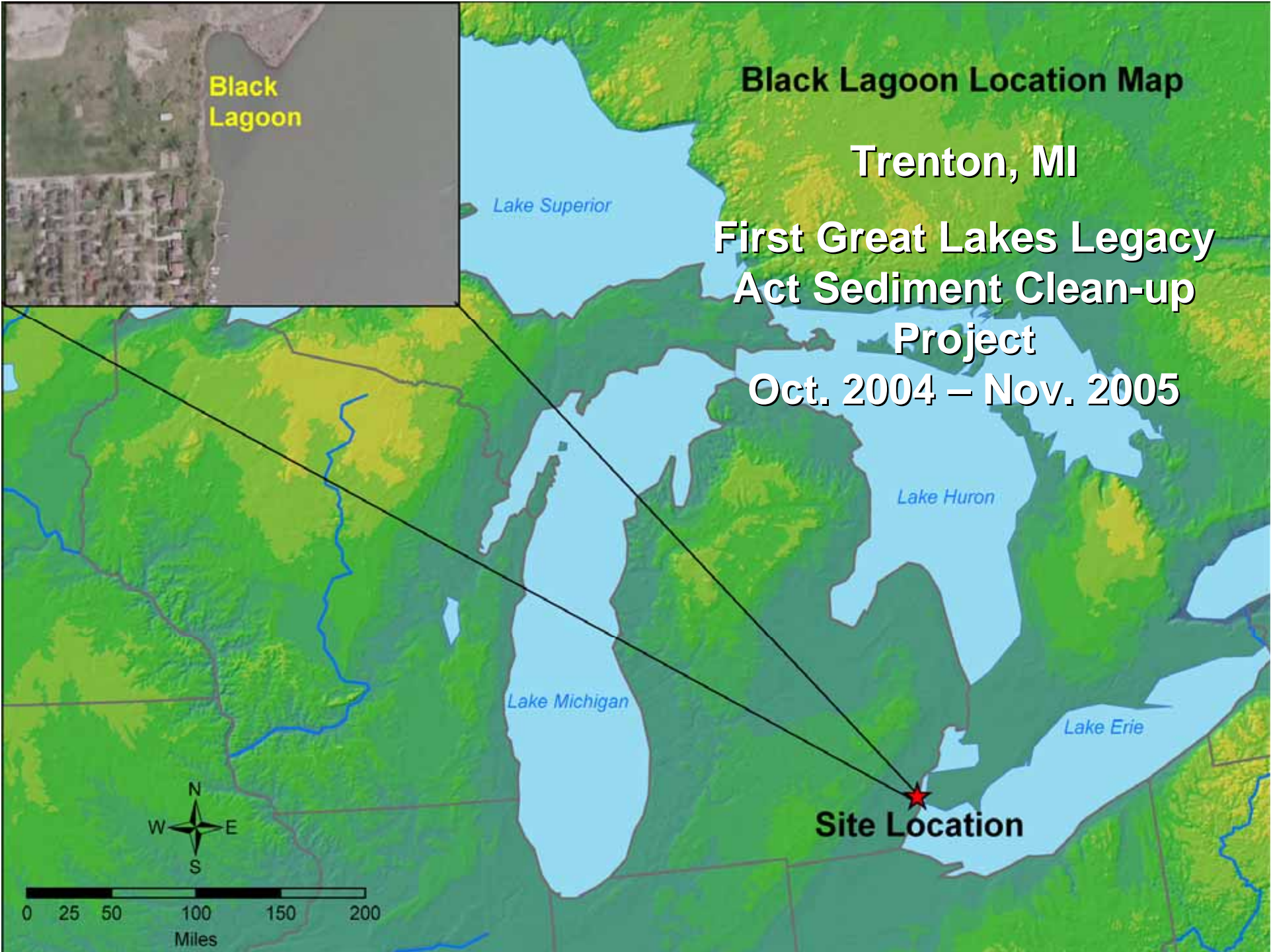
GLLA Projects

Projects Completed

- ✓ Black Lagoon - Trenton MI
- ✓ Hog Island Inlet & Newton Creek - Superior WI
- ✓ Ruddiman Creek & Pond – Muskegon MI
- ✓ Ryerson Creek - Muskegon MI (assessment)

Projects underway

- Ashtabula River - Ashtabula OH
- St. Marys River – Tannery Bay – Sault Ste Marie MI
- Trenton Channel- Riverview Detroit River MI (RI/FS)
- St. Louis River - Superior WI (assessment)
- Buffalo River – Buffalo NY (RI/FS)
- Grand Calumet River – Hammond IN (FRD)



Black Lagoon – Trenton, MI

116,000 cubic yards

– 160 pounds PCBs

– 360 pounds mercury

– 300,000 pounds oil and grease

– 38,000 pounds lead

– 140,000 pounds zinc

05/08/20

Follow up restoration and redevelopment:

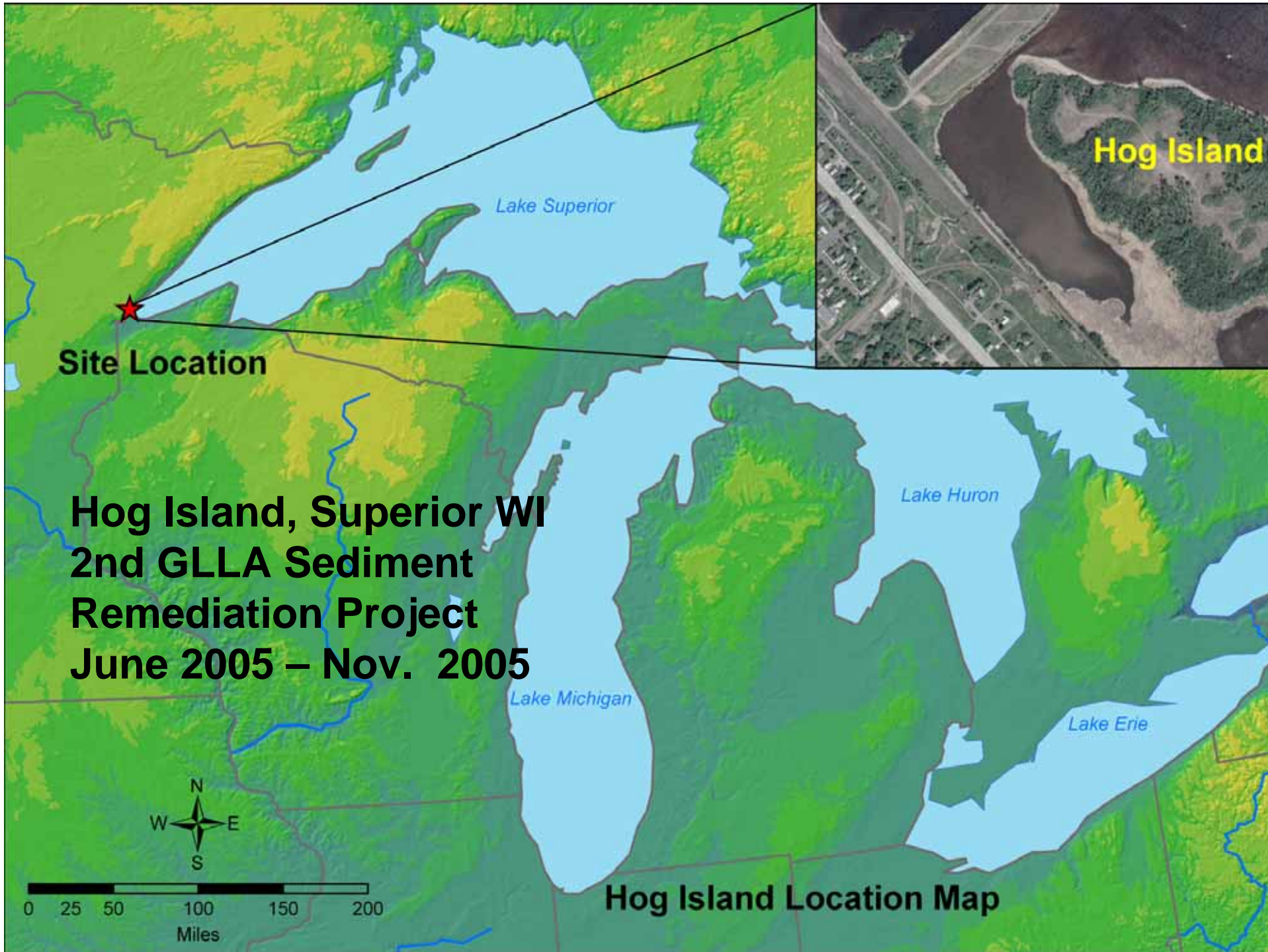
- City of Trenton received \$113K for restoration
- Brownfields adjacent have been bought up
- \$582K from USFWS for marina/boat docks



Cost : \$9.3 million

Partner: MI Dept. of Environmental Quality (35%)
from Clean Michigan Initiative funds

The Clean Michigan Initiative is a \$675 million bond to clean up, protect and enhance Michigan's environmental quality and natural resources.



**46,000 cy
contaminated
sediment
removed**

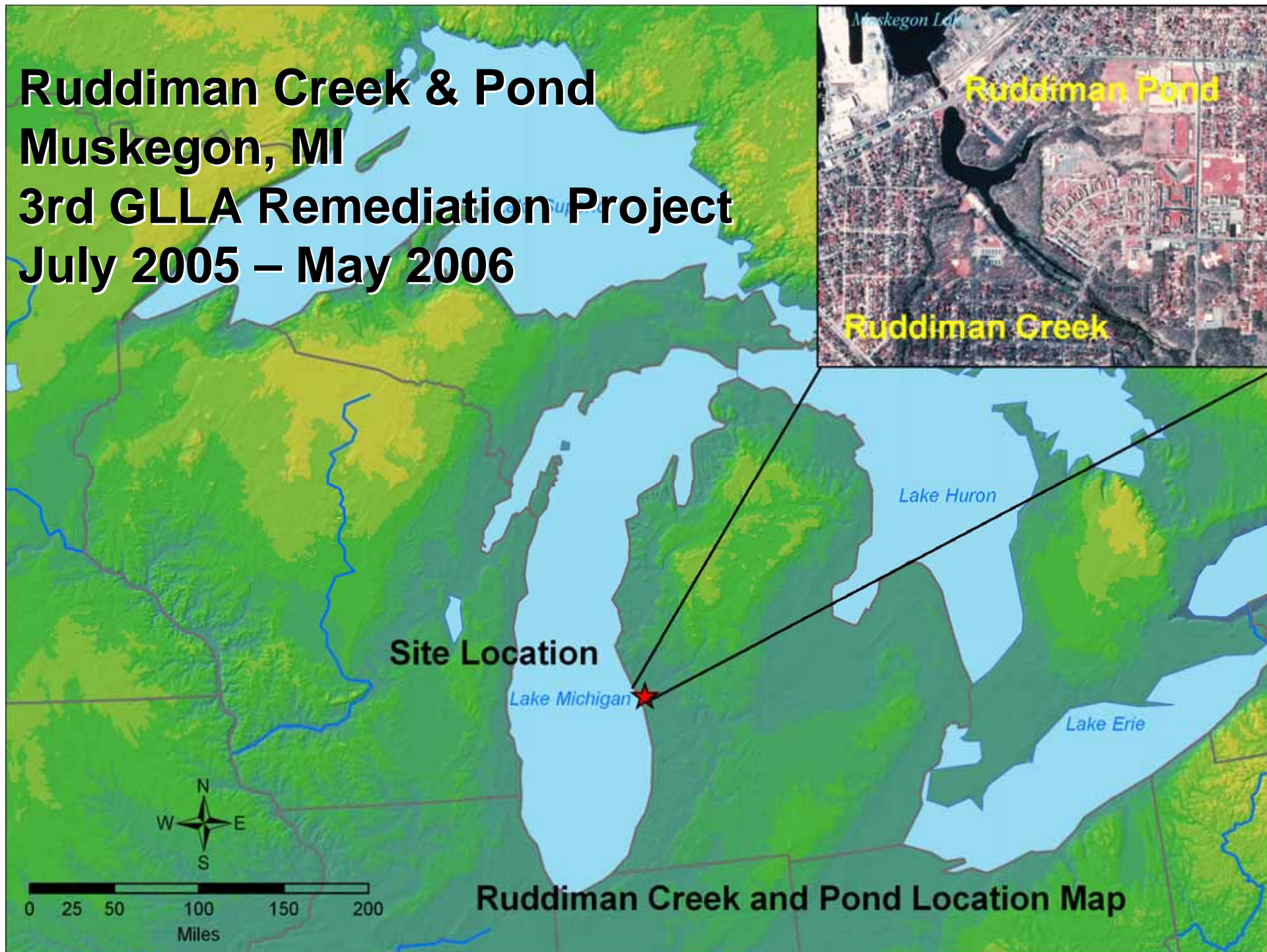


**Mass Removal
500 lb PAHs
7,000 lb lead**

Hog Island, Superior Wisconsin

- Project Partners and Cost Sharing:
 - \$4.1 million of the funds from the Great Lakes Legacy Act.
 - \$2.2 million from Wisconsin Department of Natural Resources (35%)
- Site is important and rare coastal habitat – restoration follow up is underway

Ruddiman Creek & Pond Muskegon, MI 3rd GLLA Remediation Project July 2005 – May 2006



Ruddiman Creek and Pond Location Map

Ruddiman Creek - Muskegon, MI

90,000 cubic yards

CONTAMINANT	MASS (lbs)
PCBs	320
Cadmium	2,800
Chromium	204,000
Lead	126,000
Benzo(a)pyrene	260



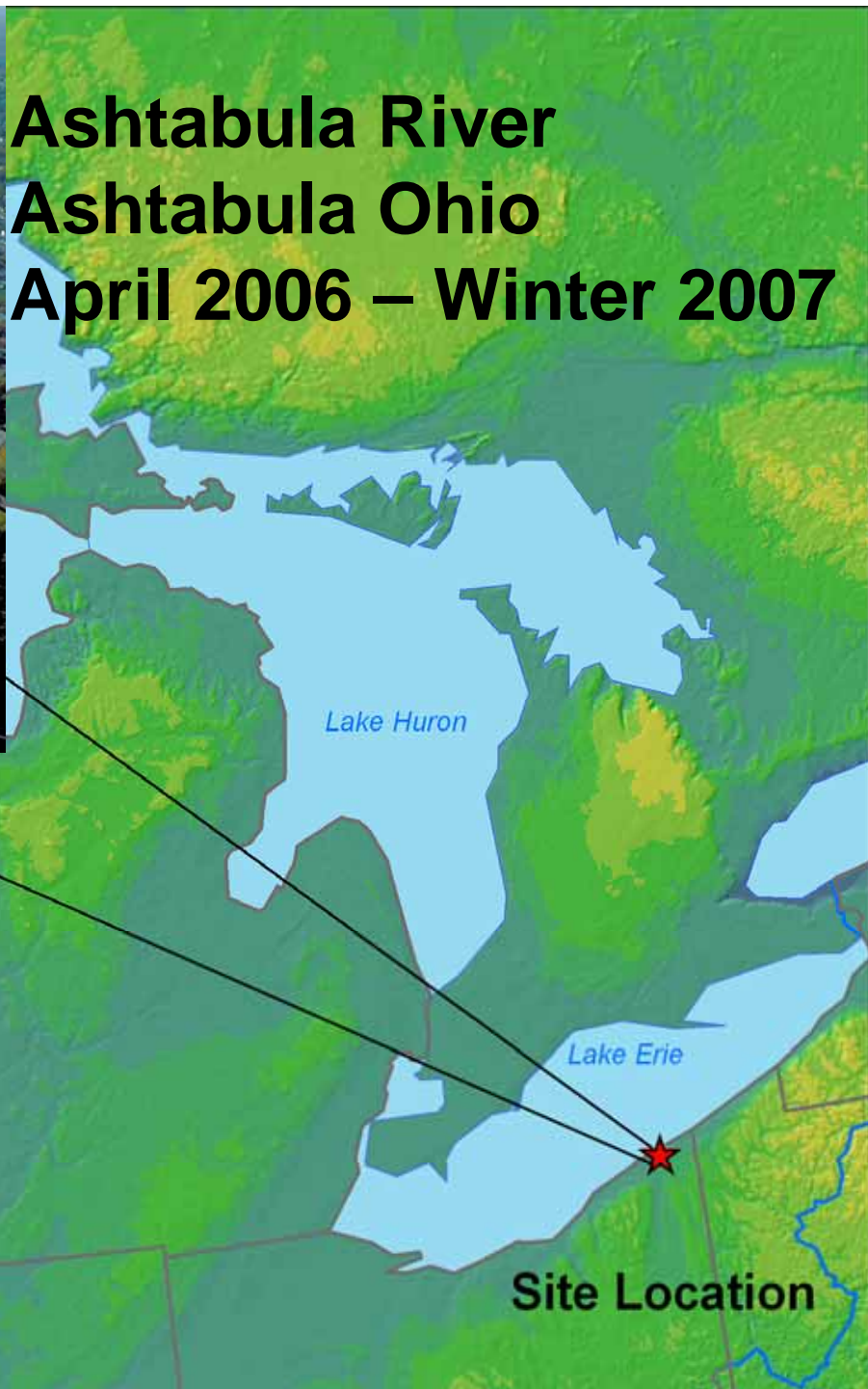
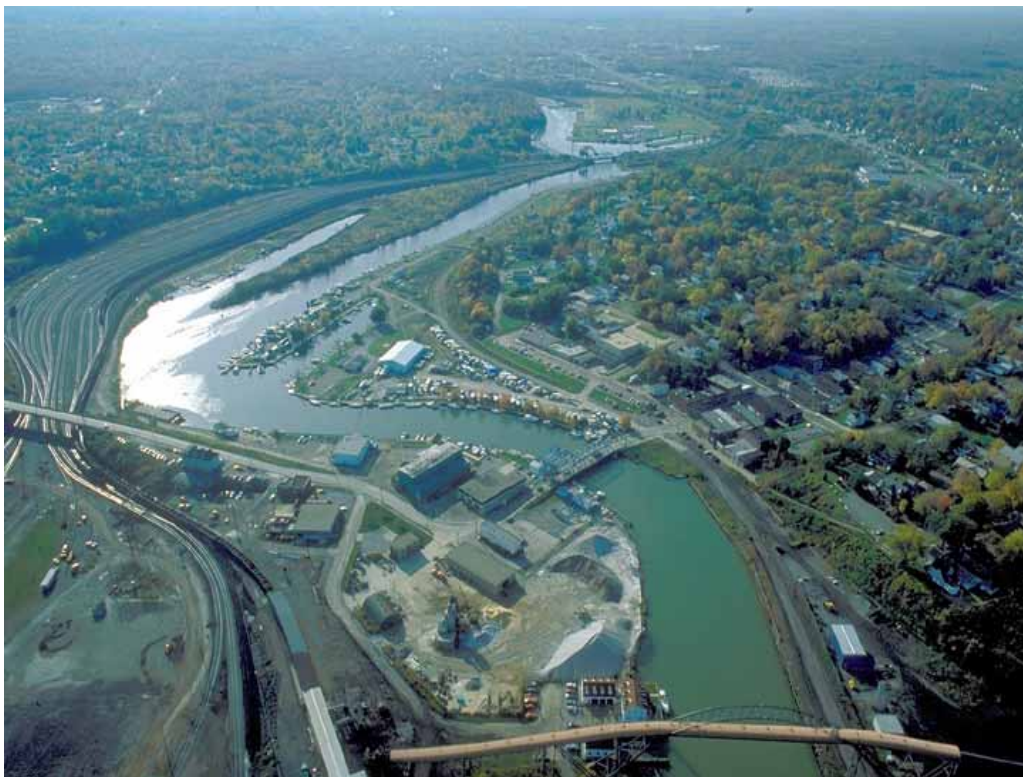
•Project was driven by a very active community who are partners in all aspects of the project including restoration plans

Cost of Cleanup

- Total cost: \$13.5 million
- \$8.8 M Legacy Act funds (65%)
- \$4.7 M Clean Michigan Initiative funds (35%)

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**Ashtabula River
Ashtabula Ohio
April 2006 – Winter 2007**



Ashtabula Location Map



Dredging Operations



**550,000 cubic yards of
PCB-contaminated
sediment**

Cost: \$50 million



Water Treatment Plant

Pump to Water Treatment Plant



Pipeline from Ashtabula River runs through Fields Brook to Landfill and directly into Geotubes

Geotubes in Operation



Ashtabula River GLLA Project



Cost Sharing

- GLLA (50%)
- Ashtabula City Port Authority (50%)
 - Ashtabula River Cooperation Group II, a group of private companies
 - The state of Ohio \$7 M
- Other organizations, including USACE play important roles

St. Marys River - Tannery Bay

Sault Ste. Marie, MI

September 2006 to Fall 2007



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Pointer 46°29'36.82" N 84°23'16.99" W elev 602 ft Str



phelps
dodge



DEQ
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

United States Environmental Protection Agency
Great Lakes National Program Office

Tannery Bay / St. Marys River Sediment Cleanup Project

jointly funded by U.S. EPA Great Lakes Legacy Act,
Phelps Dodge Corp., and Michigan DEQ
through the Clean Michigan Initiative

Engineers:

WESTERN
ENGINEERING

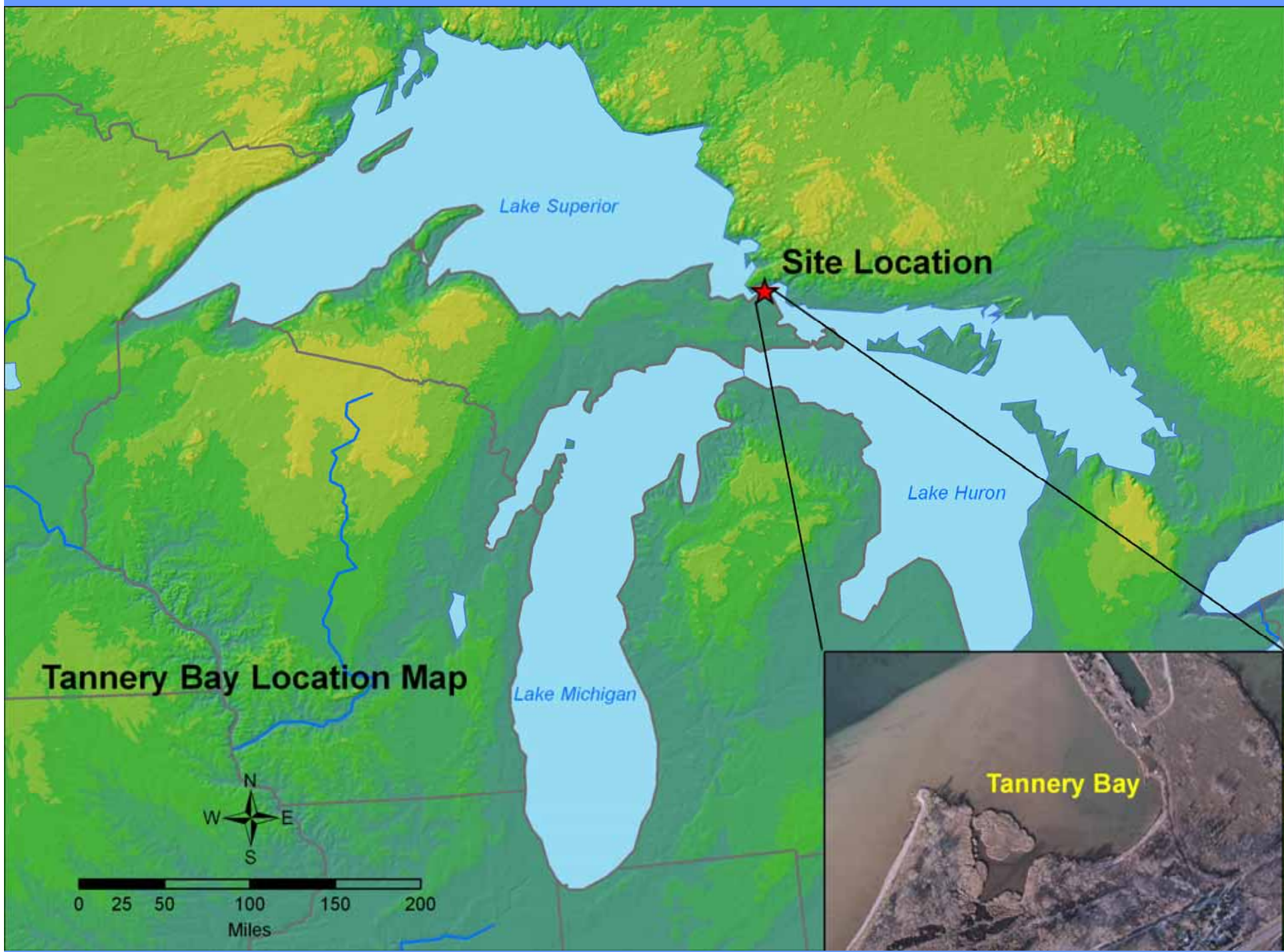


Contractors:

MEM
ENGINEERING

ENVIROCOM

Norris



Tannery Bay, Sault Ste. Marie, MI

Estimated total cost: \$8M

- Project Partners and Cost Sharing
 - GLLA (60%)
 - Non Federal
 - Phelps Dodge Corp.
 - Michigan DEQ (\$600,000 - CMI funds)

40,000 cubic yards

Mercury

Chromium



Great Lakes Legacy Act

- New mechanism to remediate contaminated sites
- Sediment remediated to date: ~490,000 cubic yards
- GLLA has funded \$50 M in cleanup projects and leveraged \$39M in non-federal funding
- GLLA cost sharing has created new partnerships and strong collaborations that result in better projects

