What Are National Marine Sanctuaries?

"America’s Ocean Treasures"
The Great Lakes

• The largest fresh surface water system on Earth.
• Cover 94,000 square miles
• Contain 1/5 of the world’s fresh surface water.
Alpena in 1880

Separated by Land, Connected by Water
Thunder Bay’s Collection of Shipwrecks:

• Represents diversity of vessels that sailed the Great Lakes
• Reflects transitions in ship architecture and construction
• Includes examples of unusual vessel types
• Retains unparalleled preservation
• Houses a great number of ships in a relatively small area
What is Underwater Archaeology?

Why do we do it?
Cornelia B. Windiate
Sank 1875
The *Alvin Clark*
Built: 1846
Discovered: 1967
Raised: 1969
Field Research 2004
Monohansett Survey
East Carolina University Field School
• Supplement earlier ROV footage with diver obtained measurements
• Produce photomosaics
• Create detailed site plans
• Use all of the above for site assessment, management and interpretation
EB ALLEN DOCUMENTATION

Series Location Center

Front PAUL POST 9.0
Center WINCH 11.10
Front COMPANIONWAY 12.10
Back COMPANIONWAY 15.4

Front #1 HATCH 21.7
Back #1 HATCH 24.0

Center FOREST 27.1

Front DECK SECTION 35.5

Front #2 HATCH 41.3
Back #2 HATCH 48.9

Front #3 HATCH 64.6
Back #3 HATCH 69.3
CTR CENTERED WINCH 11.7
Fall Post 29.9
Center MAIN MAST 49.3

Last of DECK BEAMS (front 14") 92.10"

136.10" - Tension Head (Center)

Transom Timber 135"
Creating a Mosaic of the

E. B. Allen

Step One…
Step 2…

“Capture” still images from the video
Step 3…

Orient and align single images
E.B. Allen
Wooden Schooner Built 1864, Sank 1871
Thunder Bay National Marine Sanctuary and Underwater Preserve
Alpena, Michigan
Mosaic by Tane Casserley
NOAA's Maritime Archaeology Center
July 7, 2004
Mooring Buoys
Mooring Buoys

- Easy to find site
- Safe point of ascent/descent
- Prevents inadvertent anchor damage from dive boats
What if I don’t dive?
Education and Outreach

at Thunder Bay National Marine Sanctuary

and Underwater Preserve

Exhibits

School Partnerships and Programs

Tall Ship Events

Maritime Festival
Thunder Bay Research Collection

Housed at the Alpena County George N. Fletcher Public Library
Community Partnerships

Regional Emergency Drills

Educational Service District Events

Cool City Award Winner

Preserve America City
Annual Thunder Bay Maritime Festival, 4th of July
Boat Building Program &
Family Boat Building Weekend
Educational Sails on the *SSV Denis Sullivan*

July, 2004
Teacher Training Workshop
Public sails and deck tours
Lake Watch Programs on the Great Lakes
Schooner *SSV Denis Sullivan*
September 20-25, 2004 – Sponsored by TBNMS&UP

Over 500 students participated in this program in 2004

- Lake ecology/Lake health
- Maritime history/shipboard traditions
- Shipwrecks/underwater archaeology
MATE ROV competition

- 2 TBNMS sponsored teams to the MATE national competition in June 2005.
- ROV building workshop for teachers in fall 2005
Ship To Shore Video Link
“Telepresence”
Ship To Shore Video
“Live Dive”
Next dive – May 2005

A Live Webcast from the Montana
Thunder Bay National Marine Sanctuary & Preserve
The Big News…
The Thunder Bay National Marine Sanctuary & Underwater Preserve

Great Lakes Maritime Heritage Center

- Interactive Exhibits
- Education Facilities
- Theater
- Telepresence
- Staff Offices
- Artifact Conservation
- Research Facility
- Docking for Research vessels
Breaking ground

Ballot decision reversed

[News article text]

[Image: Event venue with a banner reading "Making History" and "Great Lakes Maritime Heritage Center" with a crowd of people gathered.]