

University of Michigan



Engineering for the

Marine Environment

Marine Hydrodynamics Laboratories

Celebrating our 1st 100 years

Large
Cavitation
Channel

Ocean
Engineering
Laboratory

Virtual
Reality
Laboratory

Drag
Reduction
Facility

Low
Turbulence
Water Tunnel

Physical
Modeling
Basin

Gravity/Capillary
Wind Wave
Facility

Professional Staff



Student Interns - 17

Total Staff - 27

Large Scale Initiatives

- NOAA - Alliance for Coastal Technologies - \$ 300K per year
- SeaLandAire DARPA Award for Persistent Ocean Surveillance Buoy
 - Phase I \$ 420K
 - Phase II \$402K
- Michigan Aerospace - Littoral Combat Ship - \$185K



A NOAA funded partnership of research institutions, state and regional resource managers, and private sector companies interested in developing and applying sensor technologies for monitoring coastal environments.

NOAA - Alliance for Coastal Technologies





Exploiting the Environment for Station-Keeping



Right information... Right place... Right time



WavePlane



OPT PowerBuoy™



**Rockwell Scientific
Wave Energy Harvester**



Solar Powered UUV



Wind and Ocean Swell Power



Pelamis Wave Energy Converter



Underwater Glider

Approved for Public Release, Distribution Unlimited

Diversity and Breadth

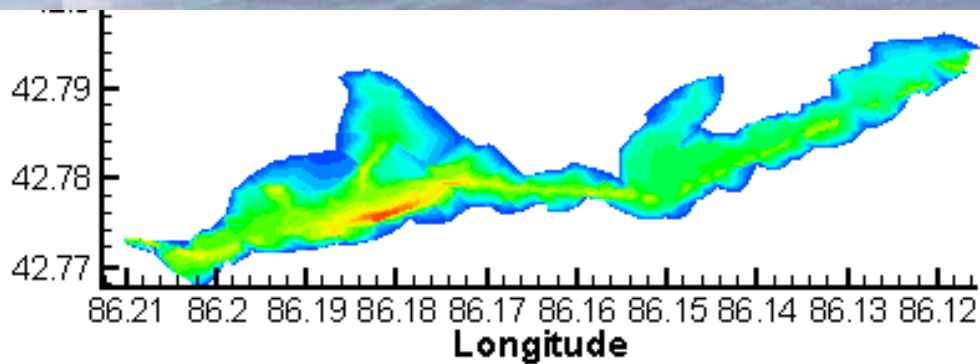
- **USCG – United States Coast Guard
Rigid Inflatable Boat Testing**
- **Honda R&D Co., Ltd. (Japan)**
- **Israeli Navy & Baja Marine, Inc. –
Planing Hull Testing**
- **Michigan Department of Environmental
Quality**
 - **19 years of Precision Coastal Hydrographic
Surveying and Analysis**
 - **Ship Wake Impact on Structures and
Habitats**

USCG – Rigid Inflatable Boat Testing



Precision Coastal Surveying

- Three-dimensional precision hydrographic survey
- Mini-ROV
- Regional Wave Dynamics Model – BOUSS2D



Ship Wake Impact on Structures and Habitats

