Research Vessel *Storm*

RV *Storm* (R5002)

Original build: 1992 Munson Boats
Construction: Aluminum
LOA: 50'6"
Beam: 13'5"
Draft: 3'6"
Displacement: 52,000 lbs
Minimum crew: 2
Maximum onboard: 20
Berthing: 4
Propulsion: Twin Detroit 8-92 Diesels, 500 hp each
Fuel: B100 Soy biodiesel
Generator: 23Kw single phase 240 V
Cruise speed: 22 knots
Range: 300 nautical miles

An Historic Journey

The R/V *Storm* is operated by the NOAA Great Lakes Environmental Research Lab (GLERL) and is dedicated to supporting the marine activities of the Thunder Bay National Marine Sanctuary (TBNMS). This interagency partnership has been a model for efficiency and technical innovations. The acquisition and fit-out of the R/V *Storm* is the latest product of that partnership.

Appropriately, the vessel's history is a reflection of the western migration that is prominently depicted in NOAA's Great Lakes Maritime Heritage Center in Alpena, MI. Originally built in 1992 as a United States Coast Guard [USCG] prototype, the *Storm* served in Baltimore, MD and later at the U.S. Merchant Marine Academy in Long Island, NY. NOAA assumed ownership in 2009 and transited the boat westward up the Hudson River, through the Erie Canal and across Lakes Erie, Huron and Michigan following the primary route that opened the American Midwest in the 1800's. Much like the thousands of settlers that found a new life in the upper Midwest, the *Storm* was rebuilt in Muskegon, MI to serve a new mission of exploration and science support.

The original USCG prototype concept was intended to create a high speed, open water, search and rescue platform with live-aboard accommodations. These attributes are well suited for the diversity of projects conducted at TBNMS. In collaboration, NOAA's Great Lakes team of archeologists, divers, technicians and boat operators devoted themselves to building upon this design to create an efficient and flexible platform. Special emphasis was placed on versatility to best support the sanctuary's diverse interests and projects.

- A permanent side scan sonar system and a thru-hull multibeam transducer well assure high quality bottom images.
- A compact crane allows for 2000 pound lifts with an 18 foot reach for mooring buoy deployments and support of remote controlled and autonomous vehicles.
- The interior and deck are configured for dive operations, including equipment intensive mixed gas diving. The drop- down transom provides easy access.
- Outreach and education projects benefit from cabin acoustics, onboard distance learning communications and a data sharing network.
- The extensive use of remote and wireless machine controls add to crew safety and efficiency.

Going Green

The RV *Storm* is another "Green Ship" in NOAA's Great Lakes fleet. The B100 fuel is produced from soy bean oil and reduces emissions by more than 70 percent. The engine oil, lubricants and hydraulic oils are manufactured from a variety of vegetable oils. These bio materials are sustainable and far less toxic than conventional petroleum oils. All ship board systems and practices were engineered for efficiency and minimal environmental impact.

The focal point of the *Storm*'s green attributes is its low rebuild carbon footprint. Through careful engineering and creative use of recycled materials, the 18 year old vessel was rebuilt to add value and extend its useful life. She has proven that innovation and "being green" are not limited to new construction.