SECTION 2. SMALL BOAT CHARACTERISTICS

**Leading Particulars for the NOAA Research Vessel Shearwater**

**Home Port:** Santa Barbara, CA  
**Builder:** All American Marine  
**Year built:** 2002  
**Vessel type:** Research, public education and outreach platform  
**Hull type:** Aluminum Teknicraft hydrofoil-supported catamaran  
**Call Sign:** WDB2424  
**LOA:** 61’ 7”  
**Beam:** 24’  
**Max. draft:** 6’  
**Height above water:** 35’  
**Hull depth (keel to main deck at mid-length):** ~10’  
**Net tonnage:** 41.3 tons  
**Gross tonnage:** 76 tons  
**Displacement fully loaded:** 41.3 metric tonnes  
**Engines:** (2) Detroit Series 60 (600Hp each), Twin Disc gears and DDEC controls, shafted to 5 blade propellers  
**Total Horsepower:** 1200Hp at 1200rpm  
**Fuel storage:** 1200 gallons (diesel)  
**Cruising range:** 450NM  
**Cruising speed:** 19 knots  
**Endurance:** 5 days, 4 consecutive nights  
**Capacity:** 32 POB (Day trips - 28 passengers, 4 crew/CINMS staff), 9 POB (Overnight trips -6 passengers, 3 crew), 5, 290lbs (MAX load: people and gear)

**Identification**  
NOAA Hull # R6201  
Hull ID # TD62-10AA  
**Visual identification:** Grey, aluminum-hulled catamaran with blue longitudinal stripes, NOAA logo, “Shearwater” decal across transom

**Operator**  
Channel Island National Marine Sanctuary (CINMS), U.S. Department of Commerce/National
Oceanic and Atmospheric Administration (NOAA).

**Sea Keeping**

**Operations**: Sea state up to Beaufort 5, depending on the type of operations and swell period  
**Transits**: Sea state up to Beaufort 6, depending on heading and swell period

**Area of Operations**  
Channel Islands National Marine Sanctuary - Point Purisima, CA to San Diego, CA out to 60NM, including Santa Barbara Island.

**Typical Types of Missions**  
Oceanographic research including CTD deployments, plankton tows, mooring deployment and recovery, ROV and camera sled operations, dive operations, marine mammal observations, outreach and education, emergency response

**Amenities**  
**Berthing**: Bunks for 6 scientists and 3 crew (9 total)  
**Galley**: Range with small oven, fridge/freezer, microwave, coffee maker, toaster, panini press, BBQ grill on upper deck  
Dedicated scientific mini fridge/freezer (in the works)  
250 gallons fresh water storage  
125 gallons optional fresh water storage on top deck  
Head with shower  
400 gallon capacity MSD holding tank (Type III), gravity-driven pump

**Unique Features**  
Bridge, Flying Bridge and aft steering control stations (Large flying bridge, well suited for marine mammal observations)  
Segregated dry lab space for computers and equipment, wet lab space with saltwater sink  
Large swim step and dive ladder  
Flying bridge and back deck tie-down points  
Superior slow speed maneuvering capability  
NOAA Scientific Computer System (SCS) to collect numerous data parameters autonomously

**Deck equipment**:  
Markey COM 7H science winch with ~800 meters of .322" Electro-mechanical cable, 850lbs SWL and 780 meters of Spectra line available to spool on top of the cable.  
1300lbs SWL A-Frame  
Morgan Model 300.3 knuckle boom crane, 1320lbs SWL at full extension  
50kg Bruce Anchor with 140’ 3/8” hot dipped stainless steel chain; 300’ wire-wrapped on foredeck  
Kolstrand hydraulic winch drum

**Launches Carried Aboard**  
13’9” Zodiac MKII GR, 15hp outboard, 6 person capacity

**Communications and Navigation Equipment**  
Simrad ES80 Sounder  
(2) Furuno X-Band Radars  
Furuno FA150 AIS  
Furuno SC30 satellite compass/heading sensor  
Furuno GPS  
ComNav 2001 Autopilot  
Time Zero Primary navigation software  
VHF/DSC Radio; National Park Service Radio  
Iridium Satellite Phone (2)
External camera system for operations monitoring
Wireless Broadband amplifier when operating in wireless range

**Electrical Systems**
12 and 24VDC primary power,
Kohler 20kW (20EOZ), single phase, 60Hz, 120/240 VAC Generator,
Northern Lights 8kW (M753K), single phase, 60Hz 120/240 VAC Generator
Best Power UPS, clean power supply
220/110V 30/40Amp shore power

**Power Available for Scientific Equipment**
220V 50 Amp, single phase
220V 30 Amp, single phase
110V 50 Amp, single phase
110V 30 Amp, single phase
110V 15 Amp, clean three phase

**SCUBA Air Compressor**
8.4CFM Electric Bauer Mariner II
Gas powered Bauer Mariner II as backup

**Safety**
Fixed engine room fire system, portable extinguishers, central fire detection system, SOLAS B
coastal life rafts, SART, EPIRB, portable O2, AED, first-aid kits, backboard

**Principal contact**
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