

NOAA SHIP FAIRWEATHER (S-220)

Updated January 10th, 2013

Subject to change as the ship is currently getting repairs.

Email: (*Fairweather's* E-mail address is: NOAA.Ship.Fairweather@noaa.gov)

Phone:

- IN PORT
 - USCG Facility, Ketchikan, AK:
 - 907-228-0381, 0382 (Voice)
 - MOC-P Newport, OR
 - (541) 867-8785,8786 (Voice)
- AT SEA
 - Inmarsat B: 1
 - 011-870-336-990-710 (Voice)
 - 011-870-336-990-711 (Fax)
 - Iridium: 3
 - 011-8816-7631-0054 : 3
 - 808-659-0054

Mailing Address:

- NOAA Ship *Fairweather*
1010 Stedman Street
Ketchikan, AK 99901

Design

- Designer: Maritime Administration
- Builder: Aerojet-General Shipyards, Jacksonville, FL
- Launched: March 1967
- Delivered: January 1968
- Commissioned: April 1968
- Hull Number: S 220
- Call Letters: WTEB
- Home Port: Ketchikan, AK
- Length (LOA): 70.4 m (231 ft.)
- Beam: 12.8 m (42 ft.)
- Draft (at LL): 4.7 m (15.5 ft.)
- Hull: Welded steel/ice strengthened
- Displacement: 1,800 tons
- Gross Tonnage: 1,591 tons

Speed & Endurance

- Cruising Speed: 12 knots
- Range: 10,500 nm
- Endurance: 35 days
- Endurance Constraint: Fuel (Stability)

Maneuverability

- Twin Screw (variable pitch)
- Bow Thruster (variable pitch)
- Bridge Wing Controls (Engines & Thrusters) Port & Stbd.

Complement

- Commissioned Officers: 11
- Mate-1
- Licensed Engineers: 4
- Crew: 36
 - 2 Electronic Technicians
 - 13 Deck
 - 7 Unlicensed Engineers
 - 9 Hydrographic Survey Technicians
 - 4 Stewards
- Scientists: 6

Food-Service Seating

- Crew's Mess: 32

Berthing Capacity

- Single staterooms: 25
- Double staterooms: 16
- Total bunks: 57

Medical Facilities

- Emergency and first-aid equipment on board, administered by trained medical personnel.
 - Carry a USPHS officer to some locations

Scientific Laboratory Facilities

- Acquisition/Processing lab 1: 342 sq. ft.
- Computer Processing lab 2: 140 sq. ft.
- Scientific Computer lab/ dry lab 3: 220 sq. ft.
- Wet Oceanographic lab: 240 sq. ft.

Diving Equipment

- Dive Locker: 100 sq. ft.
- Onboard dive air compressor
- 12-18 SCUBA tanks
- NOAA Certified Dive Masters & Working Divers

- PTC Divers Least Depth Gauge
- 2 RJU International Divers Least Depth Gauge

Cranes and Booms

- Telescoping Boom Crane
 - Quantity: 2
 - Manufacturer: Skagit
 - Drive: Electro-hydraulic
 - Location: Foredeck, Port and Starboard
 - Boom length: 25 ft.
 - SWL retracted: 2,500 lbs
 - SWL extended: 1,500 lbs
- Fixed Length Crane
 - Quantity: 1
 - Manufacturer: Skagit
 - Drive: Electro-Hydraulic
 - Location: Aft Mast
 - Boom length: 40 ft.
 - SWL: 5,000 lbs

Winches

- Oceanographic Winch 1
 - Manufacturer: DWS International Inc.
 - Model: 5050 EHI
 - Drive: Electro-hydraulic
 - Location: Fantail, Starboard
 - Drum capacity: 960 m of 0.68” EM cable, 1280 m of 0.545” EO cable
 - Special Features: Remote Control, Drum Monitoring Camera

A-Frame

- Type: Movable
- Quantity: 1
- Drive: Electro-hydraulic
- Location: Fantail, Aft
- Clearance past stern: 9 ft.
- SWL: 8,000 lbs

J-Frame

- Type: Movable
- Quantity: 1
- Drive: Electro-hydraulic
- Location: Main Deck, Strb. Qtr.
- Clearance over side: 4 ft.
- SWL: 4,000 lb

Ground Tackle

- Anchor
 - Quantity: 2
 - Type: Stockless
 - Weight: 3,000 lbs
- Anchor Chain
 - Quantity: 2
 - Size and type: 1 3/8 inch stud link
 - Length: 11 shot, or 165 fathoms

Launches and Small Boats

- Aluminum Survey Launch
 - Quantity: 4
 - Manufacturer: All-American Marine
 - Length (LOA): 28 ft.
 - Personnel Load Capacity: 9 rough, 13 calm
 - Propulsion: Diesel, single screw fixed propeller
 - Weight: 14,000 lbs.
 - Special Features: Power isolation protection for scientific equipment, 120V generators, A-frames, side-scan sonar hull mounting, winch deck mounting
- Ambar 700
 - Quantity: 1
 - Manufacturer: Marine Silverships, Inc.
 - Length (LOA): 23ft.
 - Propulsion: Diesel, Hamilton Water Jet System
 - Personnel Load Capacity: 5 rough, 7 calm
- Fast Rescue Boat
 - Quantity: 1
 - Manufacturer: Zodiac Hurricane
 - Length: 23 ft.
 - Propulsion: Diesel, Hamilton Water Jet System
 - Personnel Load Capacity: 4 rough, 6 calm
- Aluminum Utility Boat
 - Quantity: 1
 - Manufacturer: Gravois Aluminum Boats, LLC
 - Length (LOA): 18 ft.
 - Personnel Load Capacity: 4
 - Weight Capacity: 1600 lbs.
 - Propulsion: Diesel, MerCruiser inboard/outboard

Engineering

- General
 - Cruising Speed: 12 knots
 - Range: 10,500 nm
 - Power: 2,400 hp
 - Fuel Capacity: 110,000 gal.
 - Fuel Consumption Underway: 1,800-2,300 gal/day

- Fuel Type: #2 diesel
- Endurance: 35 days
- Endurance Constraint: Stability

Propulsion Plant

- Main Propulsion
 - Type: Geared Diesel
 - Quantity: 2
 - Manufacturer: General Motors EMD 645, 12 cylinder
 - Rated power (each): 1,200 hp
- Propellers
 - Type: Controllable Pitch
 - Quantity: 2
 - Diameter: 8.5 ft.
 - Blades: 3
- Auxiliary Propulsion
 - Type: Through Hull Bow Thruster
 - Quantity: 1
 - Manufacturer: Detroit Diesel/Bird Johnson
 - Rated Power: 200 hp
 - Thrust: 5,000 lbs
- Propeller
 - Type: Controllable Pitch
 - Quantity: 1
 - Diameter: 47 in.
 - Blades: 4

Freshwater System

- Storage capacity: 16,800 gal.
- Normal consumption: 2,800 gal/day
- Evaporators
 - Quantity: 2
 - Type: Waste Heat/Evaporative Distillers
 - Manufacturer: Alpha Level
 - Maximum Production: $15 \text{ (m}^3\text{)}/(24\text{hrs}) \approx 3,963 \text{ gal/day/evap}$

Pollution Control

- Sewage Waste Control
 - Type: Electrocatalytic
 - Manufacturer: Sigma Chapman Inc.
 - Holding Capacity: 8,000 gal
- Oily Waste Control
 - Type: Oily-water separator
 - Manufacturer: SRS
 - Holding Capacity: 1,700 gal

Electrical System

- Ship Service Generator
 - Quantity: 2
 - Manufacturer: Detroit Diesel/GE
 - Output Voltage: 450 VAC, 60 Hz, 3Ø
 - Power Rating: 300 kW
- Emergency Generator
 - Quantity: 1
 - Manufacturer: Detroit Diesel/GE
 - Output Voltage: 450 VAC, 60 Hz, 3Ø
 - Power Rating: 75 kW
- Electrical Service
 - 450 VAC, 3Ø
 - 120 VAC, 3Ø
 - 120 VAC, 1Ø
 - 120 VAC, 1Ø uninterruptible power for scientific equipment.

Communications

- VHF-FM Marine Band Transceivers
- MF/HF Marine Band Transceivers
- HF Alarm Watch Radio Receiver (2182 kHz)
- Radio Teletype Capability
- NAVTEX Receiver
- Cellular Telephone
- Portable VHF-FM transceivers
- INMARSAT Standard B Radio Transceiver
- INMARSAT Standard C Radio Transceiver
- Emergency Position Indicator Radio Beacons
- Search and Rescue Transponders (X-Band Radar Frequency)

Navigation

- X&S- Band Radar with an ARPA display
- Differential Global Positioning System (DGPS) Receivers
- Electronic Chart Navigation System (ECS)
- Gyrocompass

Scientific Equipment

- Sea-Bird Electronics, Inc. SBE 19, SBE 19 Plus, SEACAT CTD Profilers
- Shipboard Environmental *Data* Acquisition System (SEAS)
- Air and Seawater Temperature Sensors
- Pentium 4 PC's with Windows XP operating systems
- Power isolation protection for scientific equipment.
- ODIM MVP30 Moving Vessel Profiler Sound Velocimeter

Survey Equipment

- CSi MBX-2 Radio Beacon Receiver
- RESON 8101, RESON 7111, & RESON 7125 Multibeam Sonar Systems
- TSS/Applanix Position and Orientation System POS/MV
- Monitor Repeaters for coxswains
- Digital Cameras
- Sutron 8210 Nitrogen Bubbler Tide Gauges
- Zeiss Ni-2 Optical Levels
- Leica Optical Level
- Trimble Net R9 GPS Receivers and Dual-frequency GPS Antennae
- Trimble Net R5 GPS Receiver and Dual-frequency GPS Antenna
- Ashtech Z-Xtreme GPS Receiver, Data Logger, and Dual-frequency GPS Antenna
- PTC Divers Least Depth Gauge
 - 2 RJU International Divers Least Depth Gauge
 - Lead Lines

Software

- Acquisition Software
 - HYPACK and HYSWEEP Survey Data Acquisition Program
 - POS/MV Controller for positioning
 - SonarPro for side scan acquisition
- Processing Software
 - CARIS HIPS & SIPS for data processing and analysis
 - MapInfo for data plotting and analysis
 - CARIS Notebook for survey planning, shoreline acquisition, and feature management.
 - Pydro for feature management and report generation
 - Fledermaus for data visualization
- Horizontal Control Software
 - POSpac Mobile Mapping Suite
 - Trimble Mission Planning
 - Ashtech WinPrism and Mission Planner
- Vertical Control Software
 - Sound Velocity VelocWin
 - MS DOS SeaCat Profiler