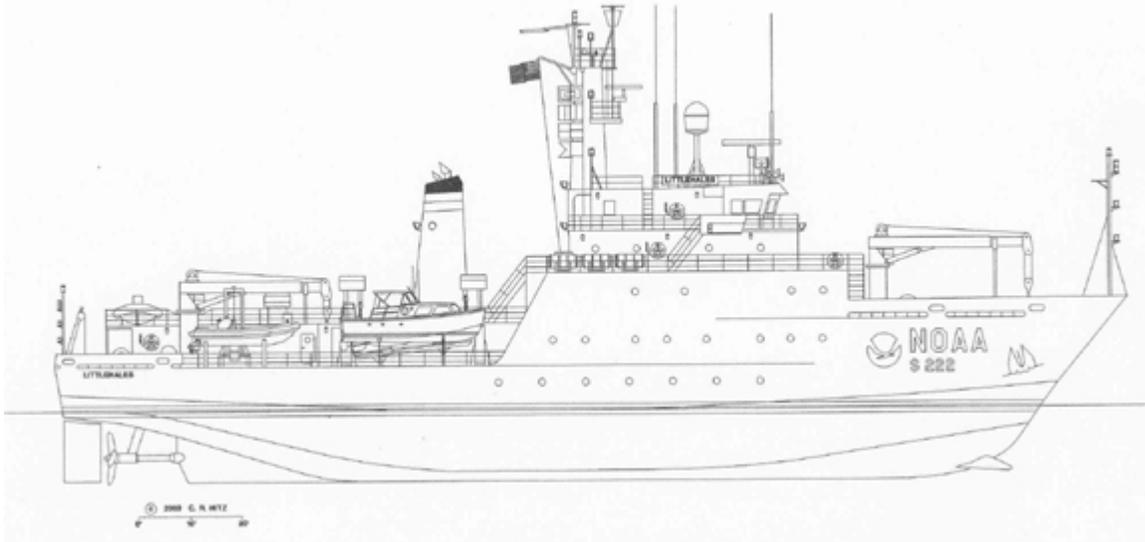


## THOMAS JEFFERSON

**THOMAS JEFFERSON** is one of a fleet of research and survey vessels used by NOAA to improve our understanding of the marine environment. The ship is home ported in Norfolk, Virginia, and primarily operates along the Atlantic and Gulf coasts, including Puerto Rico and the U.S. Virgin Islands. The primary mission of **THOMAS JEFFERSON** is to conduct hydrographic surveys for updating NOAA's nautical charts. **THOMAS JEFFERSON** will continue the work of its predecessor, **WHITING**.

Hydrographic surveys used for nautical charting include thousands of systematic depth measurements, as well as positions of wrecks or obstructions in navigable waters. This data is acquired by **THOMAS JEFFERSON** and its two survey launches equipped with specialized echo sounders, multibeam sonars, and side-scan sonars. Data acquisition and processing relies heavily on state-of-the-art computers, specialized software, and highly skilled ship personnel. Commercial shipping relies on accurate nautical charts for the safe transportation of goods such as petroleum, coal, steel, automobiles, grain, and containerized cargo.



Line Drawing by Bob Hitz

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### Design

- Designer: Halter Marine, Inc., Moss Point, Mississippi
- Builder: Halter Marine, Inc., Moss Point, Mississippi
- Delivered to MSC: January 10, 1992
- Transferred to NOAA: March 3, 2003
- Commissioned: July 8, 2003
- Hull Number: S222
- Call Letters: WTEA
- Home Port: Norfolk, Virginia
- Length (LOA): 208 ft. (63.4 m)
- Breadth (moulded): 45 ft. (13.7 m)
- Hull: Welded Steel
- Draft, Maximum: 14 ft. (4.3 m)
- Loaded Displacement: 2000 tons
- Gross Tonnage: 1466 tons
- Net Tonnage: 966 tons

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### Speed & Endurance

- Cruising Speed: 12 knots
  - Range: 19,200 nmi
  - Endurance: 45 days
  - Endurance Constraint: Food
-

## Complement

- Commissioned officers: 8
  - Crew: 19
  - Licensed engineers: 4
  - Scientists: Up to 11
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## Food Service Seating Capacity

- General Mess: 16; It has two scheduled lunch and dinner times.

## Berthing Capacity

- Single Staterooms: 9
- Double Staterooms: 13
- Total Bunks: 35

## Medical Facilities

- Emergency and first aid equipment aboard, administered by trained vessel personnel.
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## Scientific Laboratory Facilities

- Lab Space: 700 sq. ft.
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## Crane

- Telescoping Crane
    - Quantity: 2
    - Manufacturer: Utility Steel Fabrication, Inc.
    - Drive: Electrohydraulic
    - Location: Fantail and Foredeck
    - Boom Length: 30 ft. (50 ft. extended)
    - Lifting Capacity:
      - 6,000 lbs. max,
      - 3,800 lbs. boom extended
- 

## Winches

- Oceanographic Winch
    - Quantity: 1
    - Manufacturer: DT Marine
    - Drive: Electrohydraulic
    - Location: Main Deck, Port Side
    - Line Speed: 0-300 ft./min.
    - Maximum Pull: 500 lbs.
    - Drum Capacity: 15,000 ft. of 3/16-in wire rope
  - Oceanographic Winch
    - Quantity: 1
    - Manufacturer: SEAMAC
    - Drive: Electrohydraulic
    - Location: Main Deck, Starboard Side aft
    - Line Speed: 0-120 ft./min.
    - Maximum Pull: 800 lbs.
    - Drum Capacity: 16,800 ft. of 3/16-in wire rope
-

## C-Frame

- C-Frame
  - Type: Movable
  - Quantity: 1
  - Drive: Electrohydraulic
  - Location: Main Deck, Stern
  - Clearance over side: 4-5 ft.

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## Ground Tackle

- Bower Anchor
  - Quantity: 2
  - Type: Stockless
  - Weight: 3,500 lbs.
- Anchor Chain
  - Quantity: 2
  - Size and Type: 1 3/8-in Stud Link
  - Length:
    - Strb 8 Shots (120 Fathoms)
    - Port 7 Shots (105 Fathoms)

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## Small Craft

- Aluminum Survey Launch
  - Quantity: 2
  - Manufacturer: The Boatyard (Jensen)
  - Length: 29 ft.
  - Propulsion: Diesel
  - Special Features: Power isolation protection for scientific equipment.
- Rigid Haul Inflatable Boat (RHIB)
  - Quantity: 1
  - Manufacturer: Zodiac
  - Length: 23 ft 9 in.
  - Propulsion: Volvo Penta Diesel Inboard/Outboard

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## Diving Equipment

- Onboard dive air compressor
- 10 SCUBA tanks
- 6 NOAA certified divers

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## Engineering

### General

- Cruising Speed: 12 knots
  - Range: 19,200 nmi.
  - Power: 2,550 BHP at 900 RPM
  - Fuel Capacity: 198,000 gal.
  - Fuel Consumption: 2,000 gal/day
  - Fuel Type: #2 Diesel
  - Endurance: 45 Days
  - Endurance Constraint: Food
-

## Propulsion Plant

- Main Engine
    - Type: 645 cu. In. V12 Diesel
    - Manufacturer: Electro Motive Diesel
    - Rated Power:
      - Full: 2,550 BHP at 900 RPM
      - Continuous: 2,305 BHP at 800 RPM
  - Propellers
    - Type: Fix Pitch Blade
    - Quantity: 1
    - Diameter: 106 In.
    - Blades: 5
- 

## Freshwater System

- Storage Capacity: 21,568 gallons.
  - Normal Consumption: 1,200 gallons per day
  - Watermaker:
    - Quantity: 2
    - Type: Reverse Osmosis (RO)
    - Manufacturer: Lifestream
    - Rated Capacity (each): 2.8 gal./min.
- 

## Pollution Control

- Sewage Waste Control
    - Type: MSD System
    - Manufacturer: OMNIPURE
    - Holding Capacity: 2,012 gallons.
  - Oily Waste Control
    - Type: Oil Water Separator (OWS)
    - Manufacturer: Parmatic Pollution Control Corporation.
    - Holding Capacity: 4,193 gallons
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## Electrical System

- Ship Service Generators
    - Quantity: 3
    - Type: V8 Turbo charged Diesel
    - Manufacturer: Detroit Diesel
    - Rated Power (each): 469 HP
    - Output Voltage: 350 KW
  - Emergency Generator
    - Manufacturer: Detroit Diesel
    - Rated Power: 230 BHP at 1,800 RPM
    - Output Voltage: 150 KW
  - Electrical Service
    - Ship Service
      - 450 VAC, 60 Hz, 3Ø
      - 220 VAC, 60 Hz, 1Ø
      - 120 VAC, 60 Hz, 1Ø
    - Uninterruptible Power for Computer and Scientific Equipment
      - 120 VAC, 60 Hz, 1Ø
-

## Communications

- VHF-FM Marine Band Transceivers with Digital Selective Calling
- MF/HF Marine Band Transceivers with Digital Selective Calling
- Radio Teletype Capability
- NAVTEX Receiver
- Cellular Telephone
- Portable VHF-FM transceivers
- INMARSAT Standard B Radio Transceiver
- INMARSAT Standard C Radio Transceiver
- GPS Emergency Position Indicator Radio Beacons (Class 1 and Mini-B)
- Search and Rescue Transponders (X-Band Radar Frequency)
- E-mail (Ship's email address is: [Noaa.Ship.Thomas.Jefferson@noaa.gov](mailto:Noaa.Ship.Thomas.Jefferson@noaa.gov))

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## Navigation

- X-Band and S-Band Radar with an ARPA display.
- 2-Differential Global Positioning System (DGPS) Receivers
- Electronic Chart Navigation System (ECS) with Radar Interface
- Gyrocompass
- Abyss IES-10 Echo Sounder
- Tides and Currents Prediction Software
- Doppler Speed Log

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## Scientific Equipment

- CSi MBX-2 Radio Beacon Receiver
  - Simrad EM-1002 Multibeam Sonar
  - RESON 8101 Multibeam Sonar
  - RESON 8125 Multibeam Sonar
  - Klein 5000 Side Scan Sonar
  - Odom Echotrac DF3200 MKII
  - Trimble DSM212L
  - TSS Position and Orientation System POS/MV
  - TSS Motion Sensor Type 335B SeaBird Electronics SBE 19 SEACAT CTD Profilers
  - Shipboard Environmental Data Acquisition System (SEAS)
  - Air and Seawater Temperature Sensors
  - Anemometer
  - Barometers and Barographs
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