

NOAA Unveils 2022 Hydrographic Survey Season Plans



NOAA hydrographic survey ships and contractors are preparing for the 2022 hydrographic survey season in U.S. coastal waters and beyond. The ships collect bathymetric data (i.e. map the seafloor) to support nautical charting, modelling and research, but also collect other environmental data to support a variety of



ecosystem sciences.

NOAA considers hydrographic survey requests from stakeholders such as marine pilots, local port authorities, the U.S. Coast Guard and the boating community, and also considers other hydrographic and NOAA science priorities in determining where to survey and when. It is worth visiting NOAA's 'living' [story map](#) to find out more about the mapping projects and whether a hydrographic vessel will be in your area this year.

Great Lakes

Western Lake Michigan – This project is located in Western Lake Michigan, within the [Wisconsin Shipwreck Coast National Marine Sanctuary](#). Previous charting efforts within the proposed 680 square nautical mile project extent were of lead line and single beam echosounders from the mid-twentieth century. The area has never before been surveyed using multibeam echosounder systems.

Detroit River, Michigan – This project includes the entire 28-mile river area between Lake St. Clair and Lake Erie. This river is a critical transport route connecting various ports along the Great Lakes, handling approximately 1,500 transits or 80 million tons of cargo annually.

Cleveland, Ohio – This project will provide modern bathymetric data for the Cleveland area as well as the vicinity of South Bass Island and Presque Isle. Conducting a modern bathymetric survey in this area will identify hazards and changes to the lake floor, provide critical data for updating NOAA's nautical charting products, and improve safety.

Atlantic Coast

Onslow Bay, North Carolina – The Onslow Bay project off the North Carolina coast covers approximately 488 square nautical miles. The project area includes Cape Lookout Shoals, routes to the North Carolina ports of Morehead City and Beaufort, and heavily trafficked shipping routes for the Atlantic seaboard.

Approaches to Chesapeake Bay – This project covers 154 square nautical miles approaching the Chesapeake Bay, home to two of the top 20 container ports in the U.S. – the [Port of Baltimore](#), Maryland and the [Port of Virginia](#) (Richmond, Norfolk, Portsmouth). This survey is part of an ongoing, multi-year hydrographic project to support the safety of waterborne commerce to the Chesapeake Bay and transit along the eastern seaboard.

Approaches to Newport, Rhode Island – This project covers 160 square nautical miles in an area that connects Long Island Sound with Buzzards Bay and Vineyard Sound. The bathymetric data of the survey area were mostly a century old, with the latest survey having been acquired in the 1930s. The modern bathymetric data will be used to update NOAA's nautical charting

products that improve maritime safety as well as support [The Nippon Foundation-GEBCO Seabed 2030 Project](#) global mapping initiative.

South-eastern Virginia rivers – The Potomac, Rappahannock, York and James Rivers are major tributaries of the Chesapeake Bay. The communities along these rivers are among the oldest in the United States and host a population of over nine million people. Large portions of these rivers have not been surveyed to modern standards, with the average age of the last survey in many areas exceeding 50 years. This project will provide modern bathymetric data for safety of navigation and water inundation modelling efforts, from which informed decisions may be made to protect the communities along these rivers.

Gulf of Mexico

Approaches to Calcasieu, Louisiana – Since 2020, the Louisiana coast has been hit by six hurricanes and two named tropical storms, several of which caused serious damage to the [Port of Lake Charles](#). The port is ranked in the top 15 U.S. ports based on annual cargo tonnage. The proposed survey area was identified as an area of significant need by NOAA and through correspondence with the Lake Charles Pilots Association, which revealed a critical need for updated hydrographic data and charting products in the approaches and anchorages to the port.

Northern Gulf of Mexico – This survey covers an area of over 770 square nautical miles, identified as an injured area of mesophotic and deep benthic habitat surrounding the wellhead of the 2010 Deepwater Horizon oil spill. The data collected will be foundational for exploring these habitats of the marine ecosystem and will provide accurate high-resolution bathymetric and habitat data needed to guide restoration. The data will also be used to update nautical charting products.

□ UNH student Natalie Cook with NOAA survey ship Thomas Jefferson in the back. (Courtesy: University of New Hampshire)

Alaska

Pribilof Islands, Alaska – This survey covers the area surrounding the principal islands of Saint Paul and Saint George. The majority of the area was last surveyed in the 1950s. This project will provide modern bathymetric data for updating NOAA's nautical charting products to improve maritime safety and support the [Seabed 2030 Project](#) global mapping initiative.

Nunivak Island, Alaska – The 1,500 square nautical miles of targeted area surrounding Nunivak Island are used by regional traffic, supply tankers and the U.S. Coast Guard to seek protection from weather. The survey vintage in this area is between 1902 and 1953. Old and sparse data elevate the potential risk for groundings. The survey will provide updated bathymetric and feature data that will be used to create highly detailed nautical charts for the area, reducing the risk to navigation for transiting vessels.

Newenham, Alaska – The project area includes the waters north of Cape Newenham, including Kuskokwim Bay and Goodnews Bay, and the approaches to Hagermeister Strait south of Cape Pierce. Most of the project area has not been surveyed since the early 1900s, and is relatively shallow, with depths averaging 1 to 20 metres. This survey will provide contemporary data to update NOAA's nautical charting products and services, improving the safety of maritime traffic and services available to these communities by reducing the current risk due to unknown bathymetry.

Nushagak Peninsula, Alaska – The Nushagak Peninsula project will provide contemporary surveys to update nautical charting products and services. The surveys will provide modern bathymetry to update historic charted data, map uncharted waters and address concerns of navigational risk due to the numerous shifting shoal formations off Cape Constantine, at the south end of the Nushagak Peninsula.

South Pacific

Commonwealth of the Northern Mariana Islands – A multidisciplinary NOAA team will conduct an extensive hydrographic survey to map bathymetry and habitat around the islands, pinnacles and reefs in support of nautical charting and habitat mapping.

NOAA's four hydrographic survey ships – [Thomas Jefferson](#), [Ferdinand Hassler](#), [Rainier](#) and [Fairweather](#) – are operated and maintained by the [Office of Marine and Aviation Operations](#), with hydrographic survey projects managed by the [Office of Coast Survey](#).

For more information on NOAA's hydrographic survey ships and the way they collect bathymetric data, please see [here](#) and [here](#).

Source: NOAA.

□ NOAA's Fairweather survey ship. (Courtesy: NOAA)