NEWS

Project to map what lies beneath Long Island Sound (photos, video)

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NEW LONDON — Right now, scientists know more about the surface of the moon than they do about what's at the bottom of Long Island Sound.

But over the next year and a half, researchers from the federal and state governments working with academics from Connecticut, New York and beyond will engage in a comprehensive effort to map what's beneath the Sound, including its animal habitats, to guide future decisions regarding its uses.

ot National Oceanic and Atmospheric
tration research ship, the Thomas Jefferson,
is working on a 1,300-square-mile survey of the hydrography of Long Island Sound — the nautical equivalent of geography.

Work employing three different types of sonar is taking place both in more commonly-mapped deep water areas and in much more labor-intensive shallow areas.

PHOTOS: NOAA, Universities Collaborate on Mapping Long Island Sound Sea Floor

“This area has never been mapped like this before,” said Douglas Wood, a NOAA senior hydrographic survey technician, one of 36 researchers onboard the vessel. “The only problem is, it takes a lot of time,” Wood said as he showed one of several groups touring the vessel the detail of what the mapping survey can do — right down to individual rocks on the Sound floor.

The project involves “getting data on every spot of that sea floor,” which is relatively expensive, said Timothy Battista, a biological oceanographer based at NOAA’s Silver Spring, Md., headquarters. It also involves producing maps from that data that others can use. Currently, in the absence of detailed data, when projects come up, “they make best guesses,” Battista said.

“We’re increasing their ability to make good decisions,” he said.

The Thomas Jefferson is sharing information with researchers from the state Department of Energy & Environmental Protection and several academic groups. Built in 1994 and based in Virginia, it was was joined Friday at Fort Trumbull State Park’s Pier 7 by UConn’s R/V Connecticut, a 76-foot research vessel associated with the university’s Northeast Underwater Research Technology & Education Center.

The $6 million pilot project will begin by mapping an area that includes Stratford Shoal in the middle area of the Sound. On the Connecticut side, it stretches roughly from Ft. Trumbull Beach in Milford through Stratford and the eastern end of Bridgeport to an area near Fayerweather Island at the edge of Black Rock Harbor.

On the Long Island side, it includes an area centered on Port Jefferson, roughly from Crane Neck Point on the eastern lip of Smithtown Bay to Herod Point in Wading River, N.Y.

The project is a partnership that includes NOAA and the U.S. Environmental Protection Agency, the DEEP, New York’s Department of Environmental Conservation, the U.S. Geological Survey, Connecticut and New York Sea Grant and academic groups led by the University of Connecticut and Columbia University’s Lamont-Doherty Earth Observatory.

Among the educational institutions involved are University of New Haven, Wesleyan University, City University of New York, University of Rhode Island, Stony Brook University and University of Minnesota.

NOAA’s Battista said the level of collaboration between federal, state and academic agencies taking place as part of the mapping project “really does not occur,” for the most part. “We’re looking to use this as a model” for future work, he said.

“Long Island Sound is an incredibly important and productive natural resource for literally millions of people who live within its watershed and use it for recreation or their livelihood,” said Curt Spalding,

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regional administrator for the EPA's New England office.

"In order to make the right, smart decisions for the Sound, we need high-quality scientific data," Spalding said. He credited Gov. Dannel P. Malloy and DEEP Commissioner Daniel Esty for their leadership, saying Esty "has really put Connecticut in another place," with regard to learning about and protecting its environment.

Esty did not attend Friday's tour — but was represented by several other DEEP officials. He said in a press release that the project "will help us better understand the Sound's resources and how we can best protect them" and "is critical to both the environmental and economic future of Connecticut.

"Wise policy decision about any proposed future uses of the seafloor of the Sound for the projects such such as new pipelines or cables must be based on the type of sound science and data that this mapping project will provide," Esty said.

Among those who turned out for the tour were U.S. Sen. Richard Blumenthal, D-Conn.; state Sen. Ed Meyer, D-Guilford, co-chairman of the legislative Environment Committee; state Rep. Lonnie Reed, D-Branford, co-chairwoman of the new Long Island Sound Caucus; state Rep. James Albis, D-East Haven, chairman of the Speaker's Task Force on Shoreline Preservation; and L.I. Sound Caucus member state Rep. Patricia Widlitz, D-Guilford.

"This is a good one — we've been working on this for a number of years," said Brian Thompson, director of the DEEP's Office of Long Island Sound Programs. The results of the research "will be very useful on future projects" such as any gas pipelines that might be proposed in the future, he said.

UConn professor of marine sciences Jim O'Donnell and University of New Haven biology and environmental science professor Roman Zajac, who heads UNH's graduate program in environmental science, both were excited to see the work begin.

"What we hope to come of this is a comprehensive mapping of the habitats," said Zajac.

Ivar Babb, director of UConn's Northeast Underwater Research Technology & Education Center, said equipment that will be used in the effort includes USGS digital and still cameras and a dynamic positioning system that allows the M/V Connecticut to remain in one precise spot even as currents change.

"Our charge is to develop products out of all of this, and those products are going to be maps" that will include multiple overlays of everything from types of sediments to what lives in the mud at the bottom of the Sound, Babb said.

Reed also was excited to see the mapping project go forward. "This is what we're going to use as one of our building blocks for policy decisions" in the future, she said.

The project is funded by $6 million from a June 2004 settlement between Connecticut, New York, Long Island Power Authority, Northeast Utilities and the Cross Sound Cable Co., concerning the adverse impacts to Long Island Sound from non-compliance with permits for a number of energy-related Sound infrastructure projects.

Widlitz said she was excited to learn that the research is being funded by the settlement, which she and other legislators were involved in approving.

NOAA Corps Cmdr. Lawrence Krepp, who commands the Thomas Jefferson, said ocean floors "are amazingly dynamic" and it's necessary "to chart those changes to provide precise and accurate navigational data for today's maritime economy."

He said his "whole purpose in life" is to make sure that no big ship in Long Island Sound ever hits something because the people piloting it didn't know what was there.

Krepp showed visitors the room behind the ship's bridge where digital data from smaller launches and the torpedo-like sonar "fish" the ship uses for data collection is collected, viewed on seven computer screens and stored on massive servers in another room a couple of decks below.

Six survey technicians in the ship's survey plot room, where the servers are located, then process the data to ensure it's up to a certain standard, he said.

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