

US Navy welcomes two ships into research fleet

Construction on 73-metre vessels set to begin later this year.

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US oceanographers this week received a welcome boost when the US Navy announced it had finalized contracts for the construction of two 73-metre research vessels. Set to launch in 2014 and 2015, the two vessels, costing around \$145 million, will replace members of the existing fleet. But despite the good news, many researchers are concerned that other ageing vessels in the fleet won't get replaced.

Owned by the Navy, the two new ships will be run by the Woods Hole Oceanographic Institution in Massachusetts and the Scripps Institution of Oceanography in San Diego, California. Both vessels will be available for use by researchers from other institutions through the University-National Oceanographic Laboratory System (UNOLS) based in Narragansett, Rhode Island.

"We're very excited about having the kind of access to the sea that oceanographers have to have if we're going to answer some of the most important societal questions of our time," says Bruce Appelgate, associate director of ship operations at Scripps, which will receive the second of the two vessels in 2015.

It has taken more than ten years of planning and negotiating to reach the construction phase for the ships. The Navy was originally going to build four vessels, but budget cuts in 2009 reduced that number to two: AGOR 27 and AGOR 28, as they will be known until they are given proper names.

The pair will replace Woods Hole's R/V *Knorr* and Scripps's R/V *Melville*, two 85-metre vessels that were launched in 1968.

Although the new ships are smaller, they are intended to accomplish the same basic goals more efficiently. "It's an optimization between performance and cost," says Robert Munier, vice-president of marine operations and facilities at Woods Hole.

AGOR 27 and 28 will have much of the same equipment and research capabilities as their predecessors, but will offer substantial improvements in other areas. "The real magic is what you don't see," says Appelgate.

Lab spaces will be structured to allow easy reconfiguration, technicians will be able to integrate new tools into the computer systems readily, and the hulls will minimize noise and bubbles, which can interfere with equipment such as the sonar used for high-resolution sea-floor mapping.

The more efficient engines on the new ships are especially important because rising fuel costs, combined with relatively flat research funding, have significantly cut the number of days researchers are able to go to sea each year. "There is a lot more science that needs to be done" than there is ship time available to do it, says Appelgate.

The funding problems extend to securing new vessels for the research fleet. Researchers began pushing in 1973 for a global-range UNOLS ship with a hull that can withstand ice so that they could do polar operations. But it took the 2009 stimulus funding introduced by President Barack Obama to make the money available for the National Science Foundation's 80-metre R/V *Sikuliaq*, which is scheduled to hit the water this summer. The launch will extend opportunities for researchers beyond those offered by the three US polar research vessels that are not part of UNOLS.

Funding difficulties have also led to plans to decommission ships sooner than planned, and keep others in port (see [US academic fleet cuts operations as budget bites](#)), and the National Science Foundation has delayed plans to build three regional-class vessels in the



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The new research vessels should be completed in 2014 and 2015.

45-metre range.

Beyond these three potential vessels, there are no plans for additional new ships in UNOLS, says Clare Reimers, a chemical oceanographer at Oregon State University in Corvallis and chairwoman of the UNOLS Fleet Improvement Committee, who is concerned about the long-term implications as it can take more than a decade to plan, fund and build a ship. “When we reach, say, 2025 or 2030, we’re certainly going to have lost capacity that we have no plans to replace,” she says. Plans are in the works to replace one non-UNOLS polar vessel, however.

Despite these worries, oceanographers welcome the latest additions. “More than any one thing, it’s the peace of mind that comes from knowing our access to the sea is going to be extended by the lifetime of a ship,” Appelgate says. “You can’t collect water with a satellite. We’ve got to have ships to get out there.”

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Corrections

Corrected: This story originally implied that US researchers had access to fewer polar research vessels than is the case. In sections of the text where we were specifically referring to UNOLS vessels, we have amended the text to make that clear.