REGIONAL CLASS RESEARCH VESSELS

THE NEXT GENERATION OF SHIPS FOR COASTAL SCIENCE

NSF

Oregon State University
The Regional Class Research Vessel (RCRV) project is a major research facilities construction project funded by the National Science Foundation (NSF) and led by Oregon State University (OSU). The RCRVs will be constructed between 2018 and 2022 to serve as the next generation of monohull, diesel-electric, research ship, capable of general purpose, interdisciplinary, oceanographic operations in areas from shallow coastal bays and estuaries to and beyond the continental rise. Each RCRV will be well equipped for essential coastal ocean research and shall be operated within the U.S. Academic Fleet as part of the University-National Oceanographic Laboratory System (UNOLS).

From 2013-2018 the RCRV Project advanced through phases of design-refresh and shipyard selection in preparation for the start of vessel construction. The design matured to incorporate revised requirements for a large aft working deck space, a hull form optimized to reduce both power needs and bubble sweep-down across hull-mounted transducers, twin azimuthing Z-drives, two bow thrusters, variable speed generators, a waste heat recovery system, low underwater noise, and a U-tube anti-roll tank, amongst many features to enhance capabilities and make the vessels as “sea friendly” as possible.

Science systems include a suite of advanced over-the-side handling equipment, acoustic multibeam bottom mapping and other SONAR systems, interfaces for specialized laboratory vans, a unique piston coring launch and recovery apparatus, and onboard telecommunications and networking instrumentation to create a “datapresence” capability allowing the collection, processing and sharing of a multitude of environmental data with shore-based researchers and educators in real-time.

After satisfying a Preliminary Design Review, OSU developed and issued a two-stage Request for Proposals for a shipyard to support the building of the RCRVs, finally selecting Gulf Island Shipyards LLC, Houma, LA, to build the new class of vessels. A Final Design Review was also completed that included full development of a project execution plan and a cost estimate for vessel construction, transition to operations, and risk-based budget contingency. In 2017 the NSF awarded OSU a grant of $121.88 million to launch the construction of the first vessel, and in 2018 another $88 million was awarded to oversee the construction of a second RCRV. An award for Hull 3 is anticipated in 2019.
After competitive proposal processes the NSF chose OSU to operate the first RCRV and an East Coast Oceanographic Consortium, led by the University of Rhode Island’s Graduate School of Oceanography, to operate the second. An operator from the Gulf Coast is expected to be announced for the third vessel after full funding is appropriated. Regional differences between vessels will be few.

The Oregon State University-bound research ship will be called *Taani*, a Siletz language word meaning “offshore.”

RCRV Particulars and Principal Equipment:
- Length overall ..........199 ft
- Beam ................... 41 ft
- Draft @ amidships .....12.5 ft
- Regulatory Tonnage .1549 GT
- Cruise speed ...............11 kt
- Max speed .................13 kt
- Range ......6600 nm @ 12 kts
- Endurance ........21 days min.
- Ice Class ..................ABS C0
- Dynamic Positioning...ABS DP-1
- Science/Tech Berths .......16
- Crew Berths ................13
- Retractable Centerboard (drop keel)
- A-frame dimensions ..25’H x 20’W
- Multibeam SONAR..EM304, 2040
- Number winches ............3
Green Technologies

- EPA tier 4 engines
- A non-chemical marine sanitation device
- Waste heat recovery system
- Low underwater radiated noise
- Variable frequency drives

Industry Partners

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