



NSF/UNOLS EAST COAST WINCH POOL

The NSF/UNOLS East Coast Winch Pool (ECWP) at the Woods Hole Oceanographic Institution (WHOI) provides research vessels in the U.S. Academic Research Fleet and the broader ocean science community with the overboard handling systems, wire spooling services, and engineering expertise needed to conduct advanced scientific research at sea.

Equipment

The pool's inventory spans several capacity classes—from ultra-light and light-duty winches for finer cables and lighter loads, to heavy-duty systems built for the most demanding deep-sea operations. Supporting hardware supplied by the ECWP includes mooring spoolers, blocks, slip rings, dynamometers, sheaves, hydrostatic wire cutters, and motion reference units. Vessel operators can browse the full inventory and submit scheduling requests online.

Services

The ECWP does more than lend equipment. Staff assemble, inspect, and deliver complete, ready-to-use systems, including spooling wire, connecting

slip rings, supplying spare parts and documentation, and coordinating shipping to meet each vessel's mobilization port and date. The ECWP also provides 24-hour support while equipment is deployed at sea, as well as engineering consultation on overboard handling systems, on-site tension testing to meet safety certification requirements, and wire spooling and lubrication services.

Impact

By pooling high-value assets and specialized expertise in one place, the ECWP eliminates the need for individual institutions to purchase, maintain, and manage their own winch systems. In the past year, the ECWP supported 33 equipment requests across 12 ships, enabling 500 days of oceanographic operations spanning mooring work, hydrography, trace metal sampling, towed systems, and fisheries research. The ECWP coordinates closely with the NSF Wire Pool, also housed at WHOI, and the West Coast Winch Pool at the Scripps Institution of Oceanography to serve the full breadth of fleet needs.



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NSF WIRE POOL

The National Science Foundation Wire Pool manages a shared inventory of wire ropes, hydrographic cables, and synthetic ropes used by the U.S. Academic Research Fleet and the broader oceanographic research community. It is a centralized lending and logistics hub for specialized cables—known as tension members—that research vessels rely on to deploy instruments, trawls, moorings, and other deep-sea equipment.

Facilities and Equipment

The Wire Pool office is located at the Woods Hole Oceanographic Institution (WHOI), which is also home to the NSF/UNOLS East Coast Winch Pool and where it shares space with the WHOI Mooring Lab. The shared facility houses two 40-foot horizontal tensile testing machines, each capable of applying up to 150,000 pounds of force. The Wire Pool stores cables at two locations: on WHOI's Quissett North Campus (shared with the ROV *Jason* Group), and at the Scripps Institution of Oceanography's Nimitz Marine Facility, home of the West Coast Winch Pool.

Services

All new wire entering the inventory is tested to failure under controlled conditions to verify its strength. The Wire Pool also performs break tests on cables already in circulation across the U.S. Academic Research Fleet, fulfilling requirements set out in the *Research Vessel Safety Standard*. Vessel operators can use the Wire Pool's interactive, web-based database to track their cables—logging break test results, maintenance records, usage history, damage reports, and safe working loads—and to request new cables or register tension members that came from outside the Wire Pool.

Impact

The Wire Pool maintains an inventory of over 30 oceanographic tension members of various diameters and capabilities. Each year, the Wire Pool tests more than 60 cables from 20 different vessels, providing recommendations based on performance and conditions and ensuring efficient procurement processes to enable timely delivery and distribution, helping vessels meet their scientific objectives and eliminating down time.



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