UNOLS East Coast Winch Pool

Woods Hole Oceanographic Institution
Who is the ECWP?

Jamie Haley

Maintenance, logistics, testing and shop operations
Who is the ECWP?

Josh Eaton

Engineering, upgrades, modifications,
Appendix A & B compliance
User Training
Who is the ECWP?

Brian Guest

Management, maintenance, supplies
and records
Who is the ECWP?

There are many others that are involved with ECWP operations.

Al Suchy and Dutch Wegman – Wire spooler scheduling for UNOLS vessels

Matt Heintz – Rapp Hydema (Jason) scheduling and maintenance.

Doug Handy – Crane work and wire spooling

Christopher Griner – Wire Spooling and lubrication

Faith Hampshire – Administrative support

Dave Fisichella – Management and supervision
Our Mission

- Established in 2009 as a single point of contact for overboarding systems.
- Act as a center of expertise in winch use, maintenance and engineering support.
- To provide portable winch systems in support of oceanographic research
- Provide expertise in tension member spooling for both portable and shipboard winches.
ECWP Winch Assets

- 2 ea. MacArtney MASH2K (one with MRU)
- 2 ea MacArtney MASH4K
- 2 ea Dynacon 10030 Light duty winches
- 1 ea Hawboldt Medium duty
- 1 ea Dynacon Medium duty (GEOTRACES)
- 1 ea Rapp Hydema Heavy duty (Jason)
- 1 ea TSE mooring spooler
- 1 ea Sea-Mac 1300 lb SWT
Non Winch Assets

- Three tensioning systems
- Turntable mounting systems (designed by Haley and Eaton)
- Metering and non metering blocks
- Standard and fiber optic slip rings
- Winch baseplates
- Assorted tension members
- Dynamometers
- 208 to 480 VAC step-up transformer
Non Winch Assets

MASH2K mounted on a turntable
WHOI Facilities

Access to a wide range of shop services and resources that are available at WHOI.

- Complete machine shop
- Welding and fabrication shop
- Electricians
- Carpenter Shop
- Shipping Department
- Warehouse
Handling Heavy Equipment

Transporting assets is handled with a wide range of equipment at our disposal. All are maintained at WHOI’s expense.

- Hyster 20,000 lb forklift
- Hyster 34,000 lb forklift
- Kalmar 28,000 lb forklift
- Multiple 6000 lb forklifts
- Crane 20 ton
- Crane 10 ton
- Flatbed trailer
Winch Pool Shop

The shop was designed specifically for the winch pool with the purpose of maintaining, testing and storing winch systems.
Winch Pool Shop

- We have the ability to handle large winch systems
- Two 20 ft side opening containers for storage
- Large outside area will accommodate spooling and loading of trucks.
- Three pallet racks for inside storage
- Enough square footage to accommodate up to 10 winches for inside storage and repair.
- Carpenter shop, warehouse, stockroom and shipping department within 100 yards
Winch Pool Shop

Features include 5 Ton overhead hoist
Winch Pool Shop

Two foot on center bolt down pad allows us to secure winches while spooling tension members and conducting pull test.
Winch Pool Shop

- 4 Ton deadman for static testing
- Wired for 480 VAC power
- Light machine tools
- 12 ft high rollaway door for ease of access
- Hydraulic press for custom hydraulic hose fabrication
- Ample space for spare parts, paints and other supplies
Web Site

In 2012 the ECWP established a web site, thanks in a large part to the efforts of Josh Eaton, to allow users to request equipment for their work, provide information about our equipment and to improve asset management. This has proven to be a real asset to the ECWP.
About us
The UNOLS East Coast Winch Pool was developed to facilitate the science based use of winches. The East Coast Winch Pool is part of the UNOLS Equipment Pool Program. We maintain, prepare, and repair portable winches used in the field. The majority of our funding comes from the National Science Foundation.

Types of Winches
Heavy Duty
These winches are large and are for large diameter cables. They are multiple pieces.

Medium Duty
These winches are relatively large and are best suited for larger diameter cables or very long lengths of smaller cable. They are capable of holding 3000 meters of 0.3 inch cable. They can be used with a motion reference unit and have active heave compensation. They are also capable of operating with manual and remote control.

Light Duty
These multipurpose winches are best suited to small diameter cables. They can handle any diameter cable and are suitable for most applications. For example, they are capable of holding 1000 meters of 0.322 inch cable. They can be used with a motion reference unit and have active heave compensation. They are also capable of operating with remote and remote control modes.

Ultra-light Duty
These winches are the smallest, least powerful winches available. They are used for light loads.

Mooring Spooler
These winches are used in mooring operations.

Base Plate
The East Coast Winch Pool has standard base plates and turntables for the winches.

Wire Spooler
Wire spoolers are used to spool cable onto winches. Contact the WHOI Port Office for scheduling.

Sheaves
Sheaves in the pool are available to users.

How to Schedule
Use the schedule request form or call the winch pool.

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Web Site

Request Form

[Image of a request form for UNOLS East Coast Winch Pool]
Web Site

Request Information
## Web Site

### Review of Request

![Winch Pool Requests](image)

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<th>Request ID</th>
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<th>Ship</th>
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Web Site

Scheduling

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Clicking on the schedule provides us with specific information about the winch and scheduled task. All information is retained in an archive.
Current Activities

- Working to improve communication with WCWP.
- Establish standardized testing and practices with WCWP.
- Working with vendors to improve systems
- Establish a more complete formal testing procedure specific to each winch.
- Development of a new winch design using internal WHOI grant (Josh Eaton and Jamie Haley).
- Development of training protocols for users.
- Establish a post cruise assessment report for assets.
Wish List

In order to meet the necessary testing requirements a system for dynamic testing is desirable.
Due to the high demand for mooring spoolers, we would like to add one or more TSE spoolers and/or a Lebus traction head style winch (a favorite of one of our mooring groups at WHOI). Another possibility will be the Eaton/Haley designed winch once available. OOI has monopolized our TSE in 2015 and other request (all non NSF) were referred to the WHOI Rigging Shop and URI.
Wish List

A few additional items that would allow us to respond to request more efficiently and limit the amount of work sent to the shops or time spent looking for equipment to borrow.

- Add to our shop tools with things like a drill press, sand blaster and additional hand tools.
- Increase our inventory of spare parts on hand. Some parts have very long lead times.
Overall, utilizing the various resources at WHOI, we are able to provide the scientific community and UNOLS vessels with overboard handling systems in excellent condition, expert wire winding, engineering support, training and advice as well as the logistics to get these systems delivered anywhere in the world that they are needed.