



UNOLS, Cruise Planning, Requesting Ship Time and Other Resources

Chief Scientist Training

R/V Blue Heron

June 16, 2019

Brandi Murphy/UNOLS office





What is UNOLS?

University-National Oceanographic Laboratory System (UNOLS)

An organization of academic institutions (universities, National Labs, etc.) involved in oceanographic research joined for the purpose of coordinating oceanographic ships' schedules and research facilities.



Why was UNOLS created?

- Investigators from non-operating institutions were struggling to get access to ship time.
- Federal Agencies were concerned over lack of coordination, increasing costs, differing modes of operations, lack of consistency within the vessels receiving funding from the federal institutions.
- Operators were concerned over higher ship costs and increasing ship numbers
- No centralized ship scheduling or coordination



How was UNOLS formed?

- Stratton Commission Report (1969) recommended forming the National Oceanographic Laboratories (NOLS) to run the Academic Research Fleet.
- Operating Institutions agreed with goals, but opposed excessive federal control
- Worked out another approach with UNOLS
 - University control on community wide ship access
 - Cooperative ship scheduling
 - Standardized ship operations
 - Uniform funding arrangements



How was UNOLS formed (cont.)

- UNOLS Charter officially adopted 1971
- Started with 17 Operating Institutions, 33 Ships with focus on
 - Ship Scheduling & Investigator Placement Procedures
 - Uniform cost accounting, cruise reporting, ship operations, data, safety
- Soon – non-operating institutions were brought in as members
- Responsibilities increased and UNOLS became engaged in
 - Fleet replacement
 - Developing science mission requirements and concept designs for new ships



UNOLS Goals

- Promote broad, coordinated access to oceanographic research facilities
- Support continuous improvement of existing facilities
- Plan for and foster support for the oceanographic facilities of the future



UNOLS Vision Statement

A healthy and vigorous United States research and education program in the ocean sciences with broad access to the best possible mix of modern, capable and well operated research vessels, aircraft, submersibles and other major shared-use facilities.






UNOLS Today

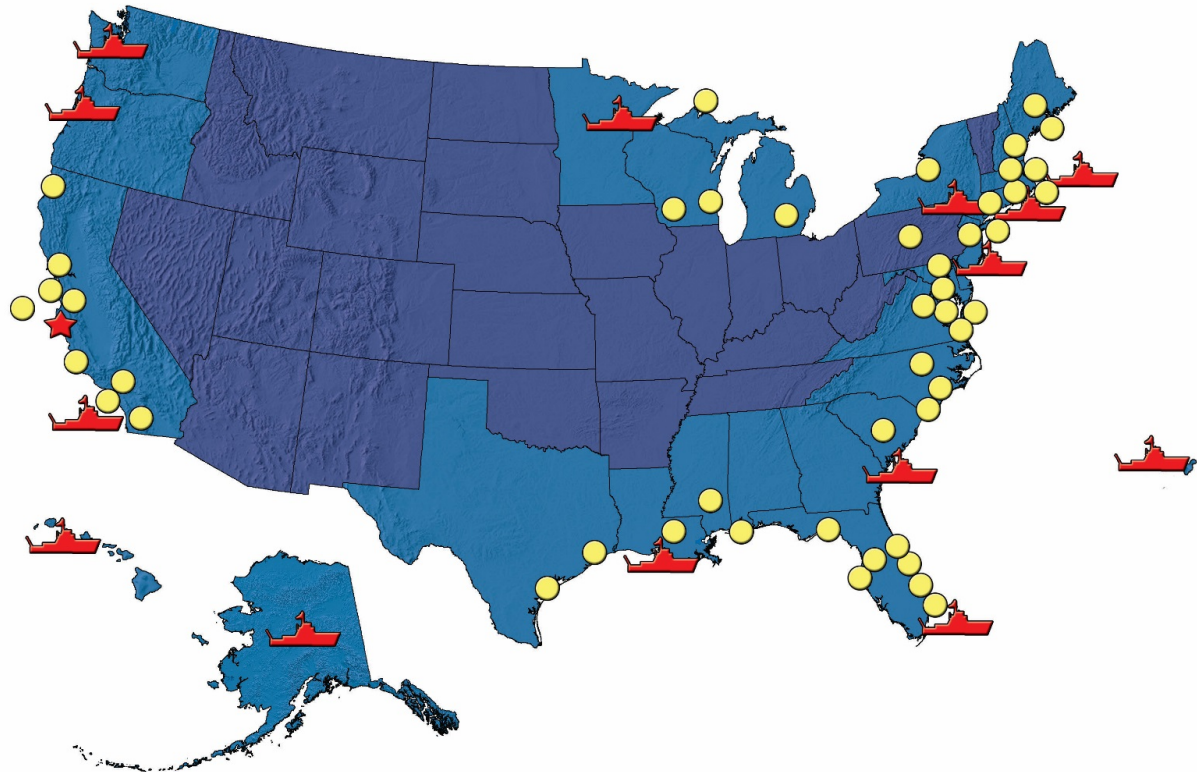
UNOLS today is an consortium of 62 U.S. institutions with ocean science programs

- 14 operating institutions that operate:
 - 18 Research vessels
 - National Deep Submergence Facility
 - National Oceanographic Aircraft Facility
 - National Oceanographic Seismic Facility
- Facilities are either owned by one of the Federal agencies or by individual institutions.
- Elected Council & 8 major committees
- UNOLS Office



UNOLS Members

-  Operator Institution - Note: Multiple ships may operate from a single location.
-  Non-Operator Institution
-  National Oceanographic Aircraft Facility Operator





UNOLS Community

UNOLS Member
Institutions & the
Oceanographic
Community

UNOLS Council

Supporting Federal
Agencies Navy/ONR,
NSF, NOAA, USGS,
BOEM

UNOLS Committees

UNOLS Office

UNOLS Ship & Facility
Operators & Tech Staff
RVs, Aircraft, Submersibles

www.unols.org



UNOLS Committees

Ship Scheduling Committee (**SSC**)

RV Operators' Committee (**RVOC**)

RV Technical Enhancement Committee (**RVTEC**)

Fleet Improvement Committee (**FIC**)

Arctic Icebreaker Coordinating Committee (**AICC**)

Deep Submergence Science Committee (**DESSC**)

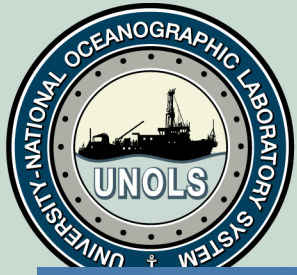
Scientific Committee for Oceanographic
Aircraft Research (**SCOAR**)

Marine Seismic Research
Oversight Committee (**MSROC**)

*U.S. Coast Guard Polar
Icebreakers (Healy, Polar Star)*

*Woods Hole Oceanographic Institution
(WHOI) NDSF – Alvin, Jason, AUV*

*Naval Postgraduate School (NPS)
Twin Otter and Pelican Aircraft*



Global Class



*R/V Marcus G. Langseth /
LDEO*



R/V Atlantis / WHOI



RV Sikuliaq / UAF



R/V Roger Revelle / SIO



*R/V Thomas G.
Thompson / UW*



Ocean/Intermediate Class



R/V Oceanus / OSU



R/V Atlantic Explorer / BIOS



R/V Endeavor / URI



R/V Kilo Moana / UH



R/V Neil Armstrong / WHOI



R/V Sally Ride / SIO

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Regional Class



R/V Hugh R. Sharp / University of Delaware



The RCRVs:

R/V Taani/ Oregon State University

RV Resolution/ East Coast Oceanographic Consortium

RCRV#3 / ??

Coastal/Local Class



R/V Pelican / LUMCON



R/V R.G. Sproul / SIO



*R/V Savannah /
Skidaway Institute of
Oceanography*



*R/V F.G. Walton Smith /
University of Miami*



*R/V Blue Heron /
University of MN, Duluth*



R/V Rachel Carson / UW



Ice Capable Vessels

Not officially part of the Academic Research Fleet but utilized by NSF-OCE and other federal funding agencies in certain occasions.



USCG Icebreaker
Healy



RVIB *Nathaniel B.
Palmer*



National Oceanographic Facilities

UNOLS National Oceanographic Aircraft Facility



Pelican OPV



Altus ST UAV



UV-18a 'Twin Otter'



National Deep Submergence Facility



HOV Alvin



ROV Jason



AUV Sentry



National Oceanographic Seismic Facility

RV Marcus G. Langseth



UNOLS FAQs

- Does UNOLS Fund Science?
- Do I need to add the cost of my ship time and other resources to my science grant?
- Can I join one of the UNOLS committees?
- What if I can't remember all this information?



Any questions?



Part II:

Access to the Sea: A Roadmap



The Roadmap

Pre-Award

- Proposal Planning
- Submit Proposal & Ship Time Request

Post-Award

- UNOLS Scheduling Process
- Long Lead-time items (EEZ & env. permits)
- Cruise Planning

Expedition

- Carry-out cruise plan (or something like it!)

Post-Expedition

- Post-Cruise Assessment Report (PCAR)
- Other User De-brief (if applicable)
- Final Cruise Report & Data Compliance

Identify essential Equipment and Facilities



Proposal
Planning

SUBMIT
PROPOSAL
And
Ship time
Request
Form

Pre-Award

-4mths prior to
proposal submission

-12-24 mths prior to first
proposed cruise



University-National Oceanographic Laboratory System

[ADMIN](#)[SEARCH PUBLIC RECORDS](#)[USER HOME](#)[FORMS](#)[PROJECT MANAGEMENT](#)[LOG OUT](#)[View Suggestions](#)[View Errors](#)[Suggestions/Request Help](#)[Frequently Asked Questions](#)[< Back](#)

Welcome to the UNOLS Ship Time Request & Scheduling System

Log In for Member Activities

User Name:

Password:

Store my credentials so I don't have to login next time
(unless I logout)

[Forgot Your User Name Or Password?](#)

New Member?

Login or create account for these activities

- [Facility Requests \(ship time requests\)](#)
- [Research Vessel & Facility Scheduling](#)
- [Technical Service Definitions](#)
- [Facility Specifications](#)
- [Reports](#)
- [System Administration](#)

Public Information

Login not required for these activities

- [Research Vessel & Facility Schedules](#)
- [Research Vessel & Facility Specifications](#)
- [UNOLS Equipment Inventory Search](#)
- [Funded Projects](#)
- [Cruise Personnel Manifest Form \(Excel file that will download\)](#)
- [Post Cruise Assessment Form](#)
- [UNOLS Web Site Home Page](#)

<http://strs.unols.org>



The Ship Time Request System (STRS)

<http://strs.unols.org>

- Create an Account
- Create a Project
- Create a Ship Time Request (STR) associated with the Project
 - Multiple ship time requests can be associated with 1 project
- EVERY FIELD in the STR must be completed!

[Duplicate Request](#)[Schedule Request](#)

Oxyhydrocarbons - 2014 - Atlantis

[Edit Request Details](#)[Manage/Edit STR](#)

Project Information

[View STR](#)

Project Title: Collaborative Research: Oxygenation of hydrocarbons in the ocean

Project Status: Submitted

Principal Investigator: [Christopher Reddy, WHOI](#)

Project Institution: [WHOI](#)

Project ID: 103767

Version #: 1

Date Submitted: 2/9/2013 2:57:00 PM

Created By: [David L. Valentine](#)

Date Last Modified: 7/15/2013 5:03:00 PM

URI Serial #: None

Funding Agencies: NSF/OCE/CO - 1333148 - Funded

Summary of Field Work:

- 1) Sampling of hydrocarbon seeps in the Gulf of Mexico using ROV or manned submersible.
- 2) Seep characterization by AUV to guide sampling operations.
- 3) Sampling of surface oil slicks overlying the studied seeps.
- 4) CTD sampling of waters in and around seeps.
- 5) Coring operations (gravity or box) in and around seeps.

Summary of Facility Requirements:

- 1) Oceanographic research vessel capable of hosting AUV/ROV/Submarine.
- 2) AUV (Sentry or Equivalent) capable of high resolution multibeam mapping, 3-dimensional photomosaics, water column chemical mapping.
- 3) ROV or Submarine capable of collecting sediment and oil samples from hydrocarbon seeps.
- 4) Coring apparatus such as box core or gravity core.
- 5) CTD Rosette.
- 6) Shipboard multibeam capable of capturing water column returns (to identify gas bubbles from hydrocarbon seeps).

Summary of other requirements and comments:



Requested Ship, Operating Days and Dates

YEAR: 2014

SHIP/FACILITY: Atlantis

OPTIMUM START DATE: 9/15/2014

Dates to Avoid: The slick sampling requires calm surface conditions (typical for summer and early fall). Undergraduate participation (one of our broader impacts) will greatly benefit from having the cruise scheduled outside of the regular course term. 2015 could also work, but is a bit late for the course of the project.

Earliest Start Date: 9/1/2014

Multi-Ship Op: No

Latest Start Date: 10/15/2014

Other Ship(s):

Operating Days Needed:	Science Days	Mob Days	De-Mob Days	Estimated Transit Days	Total Days
	8	2	2	4	16
Repeating Cruise? (within same year) No	Interval:		# of Cruises:		

Description of Repeating cruise requirements:

Justification/Explanation for ship choice, dates, conflicts, number of days & multi-ship operations: The Atlantis would be the ideal vessel for these operations, with either HOV Alvin or ROV Jason. If we use Jason, then another vessel capable of hosting Jason and Sentry (sufficient size with Dynamic Positioning) is acceptable.

There is some flexibility in the requested dates. Collecting surface slicks is an important complement to our deep ocean efforts, and requires calm conditions to find and sample the slicks (performed by RHIB using the coast guard method).

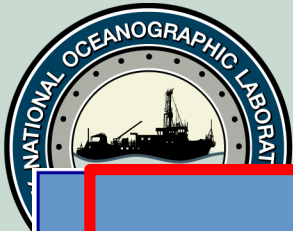
Work Area for Cruise

Short Description of Op Area for use in schedules: Gulf of Mexico

Description of Op Area: Operations will take place in the Gulf of Mexico, at a number of hydrocarbon seeps located at water depths of 700 to 3500m. We have several targets identified, ranging from the Louisiana slope to the Texas slope, within 250 nm of 26N91W. The operations area will be refined during the scheduling process, depending on the port chosen.

Op Area Size/Dia.: 250

	Lat/Long	Marsden Grid	Navy Op Area
Beginning	26° N / 91° W map	82 map	NA09 map
Ending	26° N / 91° W map	82 map	NA09 map
	Show Degrees Minutes		



Foreign Clearance and Permitting Requirements

Foreign Clearance Required? No

? Important Info on Foreign: <http://www.marineregions.org/eez.php>

Are you or any member in your science party bringing in any science equipment items which are regulated for export by the International Traffic in Arms Regulations (ITAR) and/or the Export Administration Regulations (EAR)?

? Questions about ITAR/EAR regulations?

Comments about foreign clearance requirements or description of any other special permitting requirements (e.g., MMPA, ESA, IHA, Marine Sanctuaries, etc.)

Coastal States:

If yes, have you a through your exp

!!!If you click "No" for Foreign Clearance, you MUST choose either "US" or "None" for Coastal State.

Port Calls

Requested Start Port

[Gulfport, MS, USA](#)

Intermediate Port(s)

None

Requested End Port

[Gulfport, MS, USA](#)

Explanation/justification for requested ports and dates of intermediate stops or to list additional port stops

? Important Info on Working in Foreign Ports

Science Party

Chief Scientist: [Christopher Reddy, WHOI](#)

in Science Party 20

of different science teams 3

Marine Technicians to be provided by ship operator: (include in science party total) 2

Explanation of Science Party Requirements and Technician Requirements Teams from WHOI, UCSB and the College of William and Mary will participate, including a large number of undergraduate students. 24 hour operations are planned. Wet chemistry will be performed on sampled material. -80 degree C storage is needed.



Instrumentation Requirements That Impact Scheduling Decisions

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> Dynamic Positioning | <input type="checkbox"/> ADCP | <input checked="" type="checkbox"/> Multibeam | <input type="checkbox"/> Seismic |
| <input checked="" type="checkbox"/> Dredging/Coring/Large Dia. Trawl Wire | <input type="checkbox"/> Fiber Optic (.681) | <input type="checkbox"/> 0.680 Coax Wire | <input type="checkbox"/> Diving |
| <input checked="" type="checkbox"/> Radioisotope use - briefly describe | <input type="checkbox"/> NO Radioisotope use/Natural level work | <input type="checkbox"/> Other Operator Provided Inst. - Describe | <input type="checkbox"/> PI-Provided Vans - briefly describe |
| <input type="checkbox"/> MOCNESS | | | |

Explain Instrumentation or Capability requirements that could affect choice of ship in scheduling.

Major Ancillary Facilities (that require coordination of schedules with ship schedule)

Aircraft

- | | | |
|--|-------------------------------------|--|
| <input type="checkbox"/> Helicopter Ops (USCG) | <input type="checkbox"/> Twin Otter | <input type="checkbox"/> Unmanned Aerial Systems (UAS) |
|--|-------------------------------------|--|

Autonomous Underwater Vehicle (AUV)

- | | |
|------------------------------------|--|
| <input type="checkbox"/> Other AUV | <input checked="" type="checkbox"/> Sentry |
|------------------------------------|--|

Coring Facility

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Jumbo Piston Coring | <input checked="" type="checkbox"/> Large Gravity Core | <input type="checkbox"/> MC800 multicorer w/ MISO camera/telemetry | <input type="checkbox"/> OSU Coring Facility (MARSSAM) |
| <input type="checkbox"/> Other Large Coring Facility | <input type="checkbox"/> WHOI Long Core | | |

Human Occupied Vehicle (HOV)

- | | | | |
|---|--|--|------------------------------------|
| <input checked="" type="checkbox"/> Alvin | <input type="checkbox"/> Clelia (HBOI) | <input type="checkbox"/> JSL I & II (HBOI) | <input type="checkbox"/> Other HOV |
|---|--|--|------------------------------------|

Other Facility

- | | | |
|---|---|--|
| <input type="checkbox"/> MISO Facility - deep-sea imaging | <input type="checkbox"/> Other Facility | <input type="checkbox"/> Potential Fields Pool Equipment |
|---|---|--|

Remotely Operated Vehicle (ROV)

- | | |
|--------------------------------|------------------------------------|
| <input type="checkbox"/> Jason | <input type="checkbox"/> Other ROV |
|--------------------------------|------------------------------------|

Seismic Facility

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> Ocean Bottom Seismograph Instrument Center (OBSIC) | <input type="checkbox"/> Ocean Bottom Seismograph Instrument Pool (OBSIP) | <input type="checkbox"/> Ocean-Bottom Seismometer Program (UTIG) | <input type="checkbox"/> Other Seismic/OBS Facility |
| <input type="checkbox"/> PASSCAL | <input type="checkbox"/> Portable MCS group | <input type="checkbox"/> Portable MCS/SCS group | <input type="checkbox"/> U.S. Geological Survey Ocean Bottom Seismometer Facility (USGS at WHOI) |

Towed Underwater Vehicle

- | | | | |
|---------------------------------------|---|---------------------------------------|--|
| <input type="checkbox"/> ARGO II | <input type="checkbox"/> Hawaii MR1 (HMRG) | <input type="checkbox"/> IMI12 (HMRG) | <input type="checkbox"/> IMI120 (HMRG - formerly DSL 120A) |
| <input type="checkbox"/> IMI30 (HMRG) | <input type="checkbox"/> Other Towed Underwater Vehicle | <input type="checkbox"/> Towfish | |

UNOLS Van Pool

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> AUV Lab Van #1 | <input type="checkbox"/> Clean Lab Van | <input checked="" type="checkbox"/> Cold Lab Van | <input type="checkbox"/> General Purpose Lab Van |
| <input checked="" type="checkbox"/> Radioisotope Lab Van | <input type="checkbox"/> Wet Lab Van | | |

UNOLS Winch Pool

- | | | |
|--|---|-------------------------------------|
| <input type="checkbox"/> Mooring Spooler | <input type="checkbox"/> Portable Winch | <input type="checkbox"/> Turn Table |
|--|---|-------------------------------------|

Explain Major Ancillary Facilities Either ROV Jason or HOV Alvin are needed for guided sampling within hydrocarbon seep environments. AUV Sentry will be used for mapping and imaging dive targets and for dive planning. Multibeam will be used to image study areas and to identify gas plumes in the water column. **Requirements and list description and provider for "other" systems.** Sediment will be collected by gravity coring (or equivalent). We expect to have collaborators using radioisotopes, and include the van request

Identify essential Equipment and Facilities



Proposal
Planning

SUBMIT
PROPOSAL
And
Ship time
Request
Form

Peer &
Program
Review
NSF
Navy (ONR)
USGS
NOAA
Other

Award
Notification

Pre-Award

-4mths prior to
proposal submission

-12-24 mths prior to first
proposed cruise

-5-6mths after
proposal
submission



**UNOLS
Scheduling
Process**



Post-Award

8-12mths
prior to
cruise
calendar
year



Ship Scheduling



Ship maintenance

Multi-ship requirements

OBS Schedules

Port concerns

Environmental Permits

Ship Capabilities

Funding decisions

Personnel schedules

Foreign Clearances

RAPID Response to global events

USCG Restricted regions

Facility Availability

Export control laws (ITAR, EAR, OFAC)

Weather considerations

Ship breakdowns

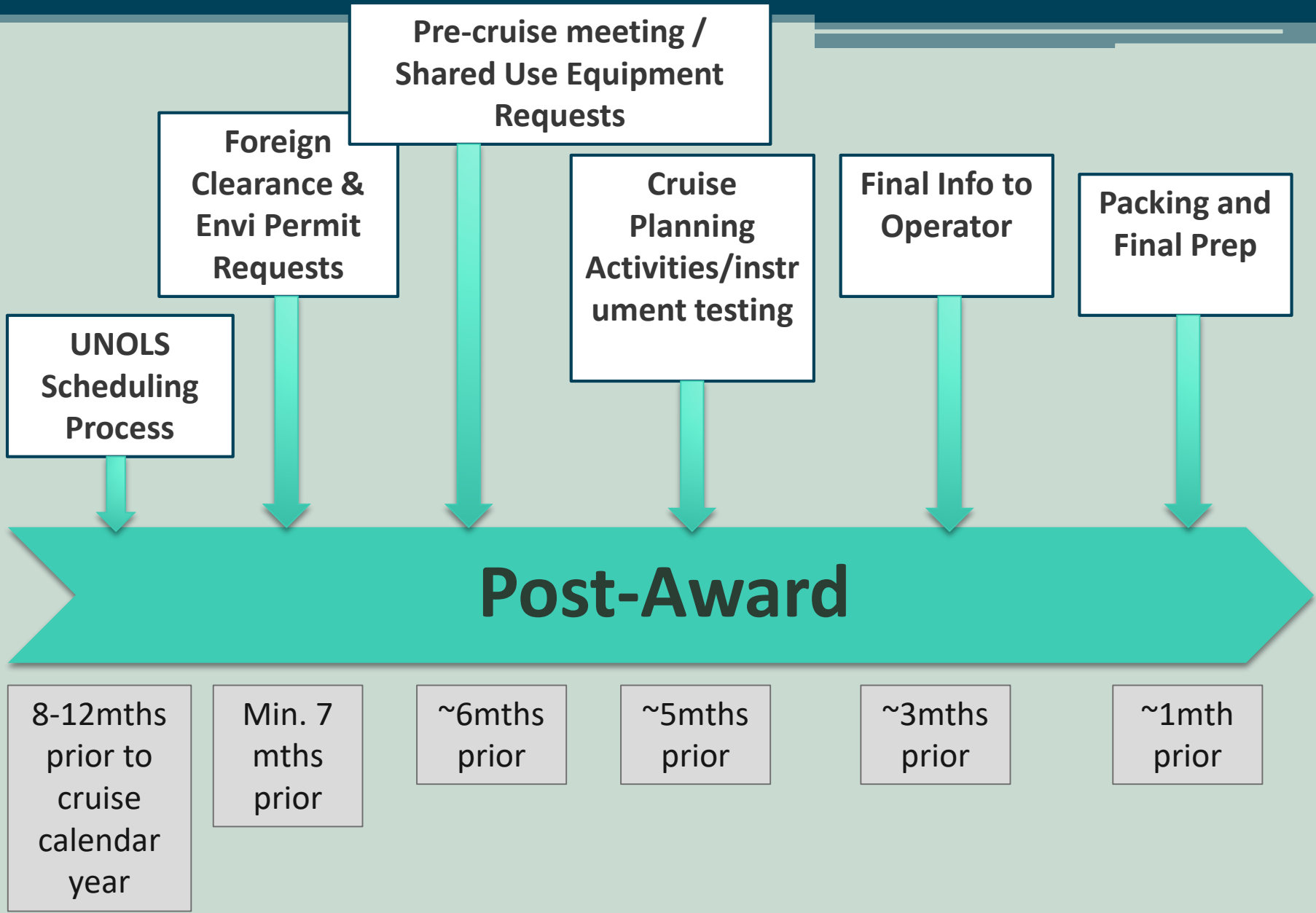
Date Restrictions

Ship Capabilities

Congestion Concerns

Clean vessel

Political unrest





Expedition

**Post-Cruise
Assessment
Report**

1mth after
cruise

**NDSF user
debrief or AICC
debrief (where
applicable)**

~2mths
after
cruise

**Final Cruise
Report Due
&
Data
Management
Compliance**

~2 yrs after
cruise
Data due per
agency
guidelines

Post-Expedition



Any questions?



Part III: Available Resources



The UNOLS website

unols.org

Not so easy to find items:



UNOLS

Online Equipment Inventory and Facilities

Links to the Online Equipment Inventory as well as all of the the Pooled Equipment Facilities are available from the UNOLS homepage:

UNOLS
UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

Home Contact Email Signup Search

ABOUT SHIPS/FACILITIES SCHEDULES COMMITTEES MEETINGS FORMS & DOCUMENTS JOBS & EARLY CAREER

UNOLS VESSELS
SMALL RESEARCH VESSEL INVENTORY
UNOLS DESIGNATED FACILITIES
UNOLS EQUIPMENT INVENTORY
OTHER FACILITIES
GREENING THE FLEET INITIATIVE

UPCOMING EVENTS

2019 RV KILO MOANA Chief Scientist Training Workshop
06/13/2019 Honolulu, HI

2019 RV Blue Heron Chief Scientist Training Workshop
06/16/2019 Duluth, MN

2019 RVTEC Meeting
10/22/2019 Fairbanks, AK

2019 Fall FIC Meeting
11/20/2019 Alexandria, VA

[VIEW EVENTS CALENDAR](#)

PLANNING A RESEARCH CRUISE?
UNOLS HAS CREATED A NEW CRUISE PLANNING RESOURCE PAGE!

Welcome to UNOLS

University-National Oceanographic Laboratory System (UNOLS) is an organization of 59 academic institutions and National Laboratories involved in oceanographic research and joined for the purpose of coordinating oceanographic ships' schedules and research facilities.



UNOLS

Online Equipment Inventory

- Lists equipment available on the UNOLS vessels as well as pooled equipment.
- Depending on schedule, portable equipment may be able to be moved to another vessel.
- Requests can be made to the institution who oversees the equipment either through the PI or the operating institution.



UNOLS Online Equipment Inventory

http://strs.unols.org/Public/Search/diu_equipment.aspx

UNOLS Equipment Inventory Search

Institution:

Vessel/Facility:

Group:

Device Type:

Manufacturer:

Filter

Clear Filter

[Export Current Page](#) | [Export All](#) | Page Size:

	Institution	Vessel/Facility	Group	Device type	Manufacturer	Model	Description	Number	Component of
View/Edit	URI_GSO	Portable	nets & trawls	mocness	BESS	MOC-1		1	
View/Edit	RSMAS	Portable	nets & trawls	mocness	BESS	MOC-1		1	
View/Edit	RSMAS	Portable	nets & trawls	mocness	BESS	MOC-1 double		1	
View/Edit	RSMAS	Portable	nets & trawls	mocness	BESS	MOC-10		1	
View/Edit	OSU_COAS	Portable	nets & trawls	mocness	BESS	MOC-1	1m2	1	
View/Edit	OSU_COAS	Portable	nets & trawls	mocness	BESS	MOC-0.25	0.25m2	1	
View/Edit	SIO	Portable	nets & trawls	mocness	BESS	MOC-1		1	
View/Edit	SIO	Portable	nets & trawls	mocness	BESS	MOC-1 double		1	
View/Edit	SIO	Portable	nets & trawls	mocness	BESS	MOC-10		1	
View/Edit	UH_SOEST	Kilo Moana	nets & trawls	MOCNESS	BESS	MOC-1		1	
View/Edit	UAF	SIKULIAQ	nets & trawls	mocness	BESS	MOC-1			mocness



UNOLS

Pooled Equipment/Services

<https://www.unols.org/ships-facilities/research-vessel-equipment>



Portable Lab (Van) Pools



- Operated by: UDelaware (East Coast) and OSU (West Coast)
- Portable labs including dry lab, isotope lab, cold lab, clean labs, AUV van
- Requested early in the planning phase
- NOTE: Some institutions have their own lab vans so consult with the host institution prior to requesting a van



Winch Pool

- East Coast – WHOI
- West Coast - SIO
- Heavy, Medium, Light and Ultra-light duty, mooring winches available
- Requested early in the planning phase
- NOTE: Institutions have their own installed and portable winches so consult with the host institution prior to requesting a winch



Photo from whoi.edu



MarSSAM

- Operated by: OSU
- Jumbo Piston Core (JPC), Multi core, box core, gravity core, Kasten core
- Also supply the technical support and supplies for these operations.





MISO & PFPE

- Operated by: WHOI
- PFPE: Magnetometers and gravimeters
- MISO: Towcam, MC-800 w/ RT HD camera, Deep-Sea cameras, strobes, High-Temperature Loggers, Acoustic Transponders and more!





Operation SWAB

- 3rd party testing for low levels of ^3H and ^{14}C contamination of ships and associated laboratory vans
- Operated by the UMiami Tritium Lab (UMTL)
- Visit ships at least 1x per year, sometimes more often
- Can be requested (through the ship operator) prior to natural abundance cruises
- SWAB results are posted online through UNOLS website's Document Search.



Ship/Shore Communications

- Generally 2 systems available, HiSeasNet & FBB
- HiSeasNet
 - Primary System.
 - Always on.
 - Fixed rate paid through day-rate (\$300/\$400).
- FBB/Fleet Express
 - Back-up to HiSeasNet
 - Pay as you go system
- Anything beyond basic communications (e.g. video outreach) must be discussed approved by the funding agencies. Discuss with the host institution EARLY.
- If you are not sure whether your needs are “normal”, ask.



Multibeam Advisory Committee

- Operated by L-DEO and UNH
- Support for the multibeam systems to help ensure consistent high-quality multibeam data
- More Info:
<http://mac.unols.org/>



- Operated by UH/Eric Firing & Julia Hummons
- Developed a suite of collection & processing software for ADCP data
- Provides near real-time data monitoring to participating institution



Chemistry Services

ODF

- Operated by SIO
- Reference Quality Hydrographic Support
- CTD data acquisition and processing to WOCE standards
- More Info: <http://odf.ucsd.edu/>



Other

- Data Collection and/or sample analysis services may be available from a lab at the host institution
- Ask your cruise Technical Support POC to find out what might be available
- If the host institution cannot help, ask around for other possibilities



Tech Pool and Tech Sharing

- Each ship supplies a baseline level of technical support
- Baseline level of support varies a bit from ship to ship so be sure to discuss your tech support needs early
- If necessary, additional tech support may be available through the Tech Pool or through Tech Exchanges -



Planning for use



- Equipment/Services should be requested EARLY in the planning process. Discuss with the cruise Technical POC.
- Do your research and understand what equipment you need. Don't be afraid to ask questions.
- Last minute requests can be frustrating for all parties. Sometimes they are unavoidable but try to make them the exception and not the norm



Use



- Pooled Resources are for the *entire* community
- They should be treated as if it is your own so they will be available for others in the future:
 - Understand the equipment and its limitations prior to the cruise. Ask questions.
 - Read any literature that arrives with the pooled equipment. It is there for a reason!
 - Return it in as good or better shape than when it arrived.
 - Don't abuse it!



UNOLS

Rad Awareness Program

<http://www.unols.org/unols-radioisotope-awareness-program>

Outlines the problem and provides tools (bottom of page) that include:

- Presentations to make folks aware of the issues and how to avoid them.
- Links to Radioisotope Use Logs for each ship.
 - Who has used radioisotopes.
 - SWAB test results.
- Checklists to help everyone understand the roles and responsibilities onboard.

This is a great way to help new users understand rad use on ships in general and especially on multi-purpose ships.



Working in Foreign Waters & Ports

- White Paper & Appendix
 - [UNOLS Document Search / Foreign Waters](#)
- Roles & Responsibilities
- Timelines
- Key aspects of working in foreign ports and waters



UNOLS Office & Social Media



@UNOLS

Contact media@unols.org for comments & questions or to share your news stories, accounts, pictures and hashtags.



@UNOLS

We want to hear what's new with you!



@UNOLS_org





Any questions?