



University-National Oceanographic Laboratory System ~UNOLS~

**Scientific Committee for Oceanographic
Aircraft Research (SCOAR) Meeting**
April 14-15, 2015





UNOLS 2014/2015 Activities and Highlights

- **UNOLS Annual Meeting:** October 21-22, 2014
 - Featured Speaker - Senator Sheldon Whitehouse
- **INMARTECH 2014 Symposium**
 - over 200 marine technicians gather at OSU
- **UNOLS Fleet News:**
 - Three vessels retired from the UNOLS Fleet in 2014: R/V *Knorr*, R/V *Melville*, R/V *Point Sur*
 - *New Horizon* will retire in 2015



Photo credit - WHOI



UNOLS Fleet News - Design and Construction activities



R/V *Sikuliaq* (Global Class Ship) entered service in Fall 2014.



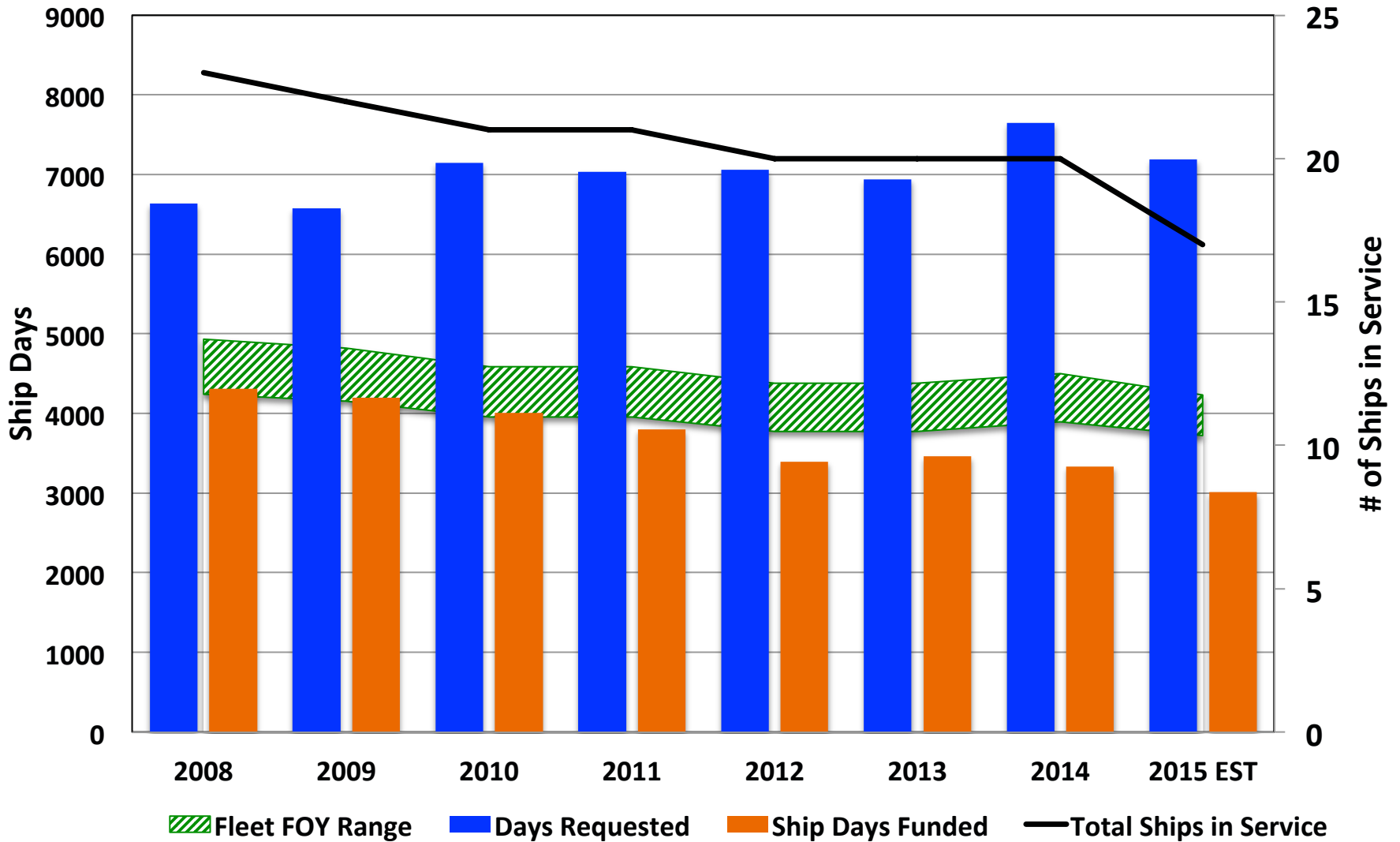
Two new Ocean Class Ships: R/V *Neil Armstrong* (WHOI) and R/V *Sally Ride* (SIO) were christened in 2014 and will enter UNOLS service in 2016



Regional Class Research Vessels

- Project Management - OSU.
- March 2015- NSF request to Congress for FY17 MREFC funds.
- Up to 3 vessels will be built based on projected science demand and availability of funds.
- Operator selection is planned for mid-2017.
- First ship enters service in 2021

UNOLS Fleet Utilization and Ship Demand





Sea Change: 2015-2025 Decadal Survey of Ocean Sciences (2015)

- NRC *Sea Change* Report released in early 2015.
- UNOLS Council provides NSF with a response to the *Sea Change* report recommendations – April 2, 2015





UNOLS Early Career Activities

Chief Scientist Training Cruises:

- 2011 through 2013:
 - Pilot Program lead by Clare Reimers.
 - Four cruises: *2011 - Wecoma (2), 2012 - New Horizon, 2013 – Endeavor*
 - *57 Total participants over 3 years*





UNOLS Early Career Activities

Chief Scientist Training Cruises: 2014

- *Atlantic Explorer*:
 - Maureen Conte as PI
 - June Transit Cruise
- *Blue Heron* –
July 30 – 6 August
- *Point Sur*: -
 - September 29 thru October 18.
 - Three cruises: 2 days in Moss Landing and 3 to 4 days at sea





UNOLS Early Career Activities

Chief Scientist Training Cruises: Tracking the Participants:

- 31 STRS Projects submitted as PI, 4 Projects funded:
 - Bailey (2), Bernard (1), Brooks (1), Buck (3), Close (1), **Drushka** (1), **Haag** (1), **Hansel** (2), Hardy (1), Maas (1), McClain (4), **McDonnell** (2), McKay (1), Netburn (1), Null (1), Rykaczewski (1), Santoro (2), Szuts (1) Thrash (1), Vlahos (2), Voet (1)



“New” UNOLS Cruise Opportunity Program

- High demand for Volunteer bunks on cruises, but lack of candidate screening made Chief Scientists and Principal Investigators wary of bringing these students on board
- With assistance from the UNOLS Office, D. Smith will now screen graduate student candidates after they fill out a comprehensive application which requires references and a letter from their advisor.
- Current Status: Email Sent to 10 Principal Investigators on March 13, 2015. **No Replies Yet.** 😞

Process

Debbie Smith identifies PIs with cruises from current year that might be a good fit for the Cruise Opportunity Program

UNOLS Emails these PIs to request their participation.

UNOLS Posts Cruise Descriptions to the Cruise Opportunity Webpage and notifies network of early career scientists

Interested Oceanography Graduate Students submit online application through UNOLS Website

Dr. Smith and UNOLS Office review candidate applications and forward appropriate candidates to the cruise's PI.

After cruise, students submit a summary report to be posted on UNOLS Website



Cruise Opportunity Webpage and Application

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UNOLS CRUISE OPPORTUNITY PROGRAM

UNOLS CRUISE OPPORTUNITY PROGRAM

HOME / UNOLS CRUISE OPPORTUNITY PROGRAM



photo by Uriel Zajackovsky, UCSD

FEATURED INFORMATION

The UNOLS Cruise Opportunity Program matches volunteer graduate students with research cruises aboard UNOLS vessels.

Welcome to the UNOLS Cruise Opportunity Program Webpage!

The primary goal of the UNOLS Cruise Opportunity Program is to provide graduate students currently completing a degree in a field of oceanographic research with the opportunity to participate in a research cruise. The participant will be a member of the scientific party and be involved in data collection and all other activities at sea. It is envisioned that the graduate student will be familiar with the science to be conducted at sea, and thus, form new collaborations and potentially develop new research directions. To be eligible to participate in this program, the graduate student must currently be studying at a U.S.-based institution and have either a U.S. Passport or a U.S. Work Visa.

To apply, please review the opportunities listed below and if you would like to apply for one, fill out an application form by the deadline listed.

We are sorry, but there are currently no cruise opportunities at this time, please check back soon!

<https://www.unols.org/unols-cruise-opportunity-program>

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UNOLS CRUISE OPPORTUNITY APPLICATION

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To apply for the UNOLS Cruise Opportunity Program, please follow the instructions below. It is important that you refer to the UNOLS Cruise Opportunity Page before applying to determine which (if any) of the cruises are aligned with your field of study. At this time we cannot cover the cost of traveling to and from the ship, but there will be no other costs associated with participating on the cruise.

- Complete and submit the following **application form**.
- Submit a .pdf of your **Curriculum Vitae** with this application form. An applicant's C.V. should include educational history (degrees and dates awarded), employment experience (including any internships), and any authored or co-authored journal articles, abstracts, or other publications related to the research objectives of the cruise.
- Submit a .pdf copy of a **Faculty Advisor Recommendation**. Applicants must include a letter from their primary advisor. The letter should document the student's scientific experience and detail how participation on the cruise would fit into their graduate degree program.

Applicant Name *

Current Position *

e.g. (graduate student)

Institution *

Department *

Address Line 1 *

Address Line 2 *

City *

<https://www.unols.org/form/unols-cruise-opportunity-application>



Backup Slides



UNOLS Council response to the 2015-2025 Decadal Survey of Ocean Sciences *Sea Change* report

General Comment - We reiterate our support for the *Sea Change* report and its goal of restoring the balance between the cost of operating and maintaining research infrastructure and core science funding. Restoring and maintaining an appropriate balance is absolutely essential.





UNOLS Council response to the *Sea Change* report

- **Recommendation 1:** In order to sustain a robust ocean science community, holistic fiscal planning is necessary to maintain a balance of investments between core research programs and infrastructure. To maintain a resolute focus on sustaining core research programs during flat or declining budgets, infrastructure expenses should not be allowed to escalate at the expense of core research programs.

UNOLS - We agree with the recommendation.

- **Recommendation 2:** OCE should strive to reduce the O&M costs of its major infrastructure (OOI, IODP, and the academic research fleet) and restore funding to core science and OTIC within the next five years. If budgets remain flat or have only inflationary increases, OCE should adjust its major infrastructure programs to comprise no more than 40-50% of the total annual program budget.

UNOLS - We agree with the sentiment and the targets of this recommendation.



UNOLS Council response to the *Sea Change* report

- **Recommendation 3:** To implement Recommendation 2, OCE should initiate an immediate 10% reduction in major infrastructure costs in their next budget, followed by an additional 10-20% decrease over the following five years. Cost savings should be applied directly to strengthening the core science programs, investing in technology development, and funding substantive partnerships to address the decadal science priorities, with the ultimate goal of achieving a rebalancing of major infrastructure costs to core science funding within the next five years.

UNOLS - Two ships have been or are planned to be withdrawn from the UNOLS fleet to consolidate west coast work (*Point Sur*, *New Horizon*), and the *Cape Hatteras* was previously withdrawn to consolidate east coast work.



UNOLS Council response to the *Sea Change* report

- **Recommendation 4:** The immediate initial 10% cost reduction in major infrastructure should be distributed, with the greatest reduction applied to OOI, a moderate reduction to IODP (2013-2018), and the smallest reduction to the academic research fleet.

UNOLS— We agree that the academic fleet has the largest connection to the decadal science targets. UNOLS endorses its OOSC committee report with regard to OOI and those recommendations are being provided directly to NSF. We offer no comments regarding IODP.



UNOLS Council response to the *Sea Change* report

- **Recommendation 5:** NSF should reconsider whether the current RCRV design is aligned with scientific needs and is cost-effective in terms of long-term O&M, and should plan to build no more than two RCRVs.

UNOLS - We believe the current RCRV design is appropriate and will meet the future needs of seagoing coastal and nearshore scientists. We believe that NSF should continue to plan to build three RCRVs with the third being a "Gulf" vessel. We also believe that an "off-ramp" to permit delaying or canceling construction of the third vessel should be part of a longer term plan in case fiscal projections or scientific demand do not meet expectations



UNOLS Council response to the *Sea Change* report

- **Recommendation 6:** Program reviews for OOI, IODP, the academic research fleet, and NDSF should occur periodically (nominally every three to five years, with a 10-year outlook) and should be considered within the context of the broader OCE budget environment, rather than independently. OCE should consider exit strategies for major acquisitions if funding is insufficient. OCE should seek periodic community input to help ensure infrastructure investments align with the science priorities.

UNOLS - We strongly support the concept of three to five year holistic reviews of the entire OCE infrastructure investment.



UNOLS Council response to the *Sea Change* report

- **Recommendation 7:** OCE should initiate a high-level standing infrastructure oversight committee to evaluate the entire portfolio of OCE-supported infrastructure and facilities and to recommend proposed changes. The outlook should be for at least 10 years and should include discussion of the entire lifecycle of construction, operations and maintenance, decommissioning, and recapitalization. Committee membership should include professionals experienced in long-range budgeting and strategic planning.

UNOLS - UNOLS strongly agrees with this recommendation especially the need for experts in long range planning and budgeting for large infrastructure systems. UNOLS and its sub-committees of community experts look forward to partnering with OCE in this long range planning process.



UNOLS Council response to the *Sea Change* report

- **Recommendation 8:** The committee encourages OCE to expand its partnership capabilities with other federal agencies, international programs, and other sectors. Such partnerships can maximize the value of both research and infrastructure investments and may help spread the costs of major ocean research infrastructure beyond OCE.

UNOLS - We agree and suggest that developing collaborative ties with NOAA, BOEM and Gulf States to operate a third RCRV vessel in the Gulf could significantly reduce the O&M costs of operating this ship to the NSF budget.