



UNOLS Report to SCOAR

August 14-15, 2012



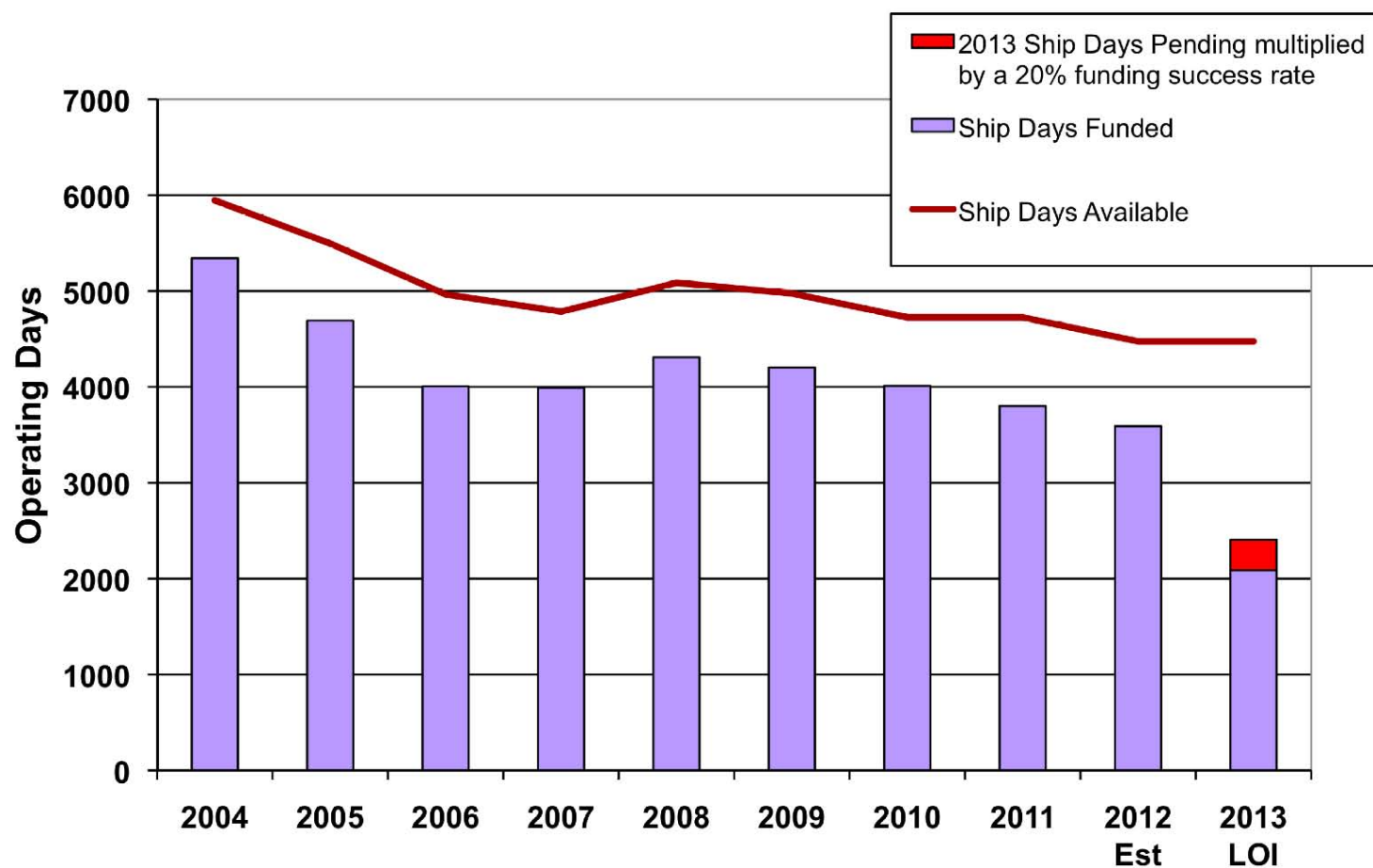


UNOLS Report - Topics

- UNOLS Fleet Operations
- Fleet Modernization Projects
- UNOLS Goals and Initiatives:
 - Polar Research Vessel SMRs
 - Greening the Research Fleet
 - UNOLS Lectureship Program
 - Early Career Initiatives
- UNOLS/SCOAR Website

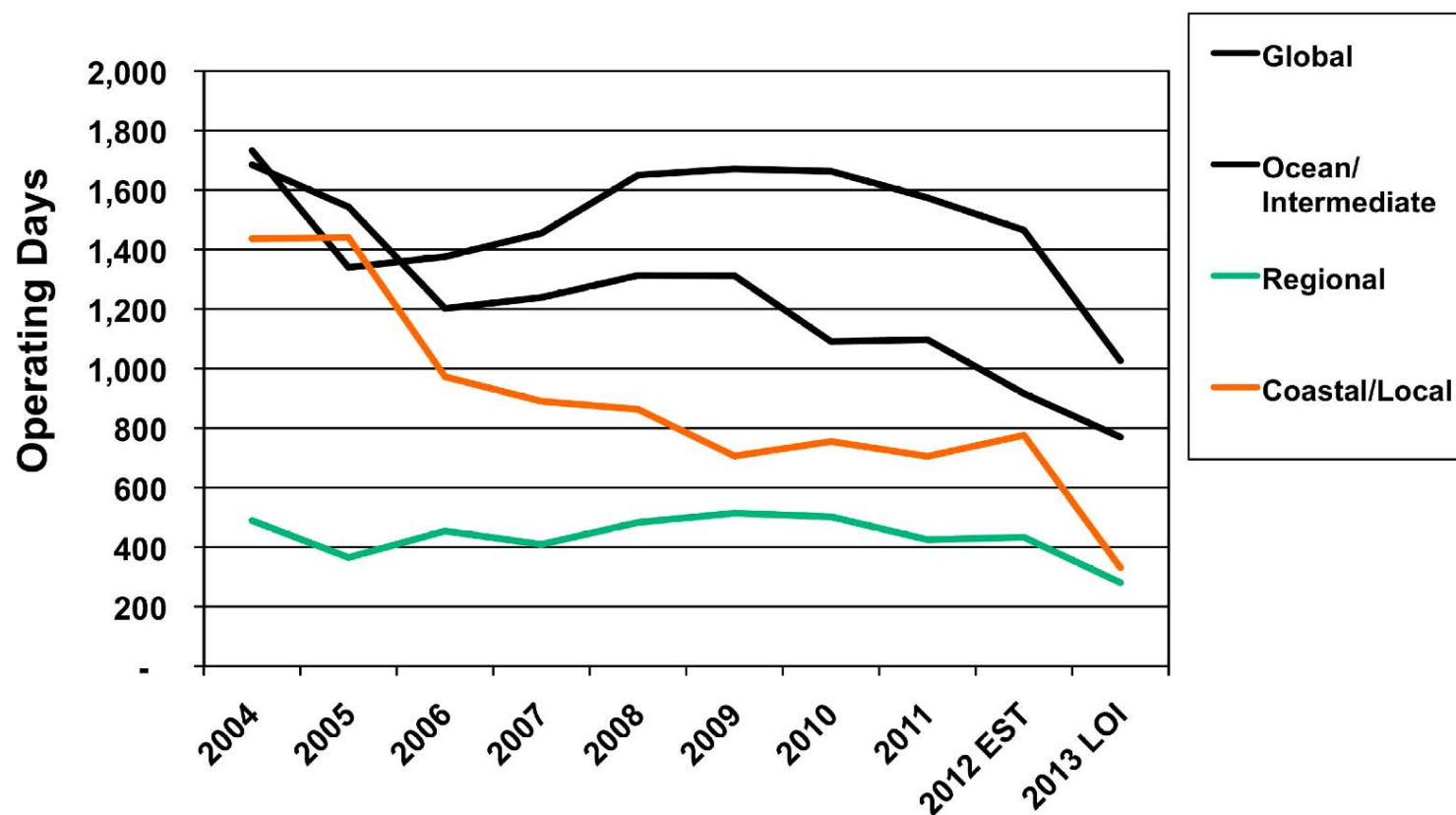


Ship Days Funded/Pending and Days Available





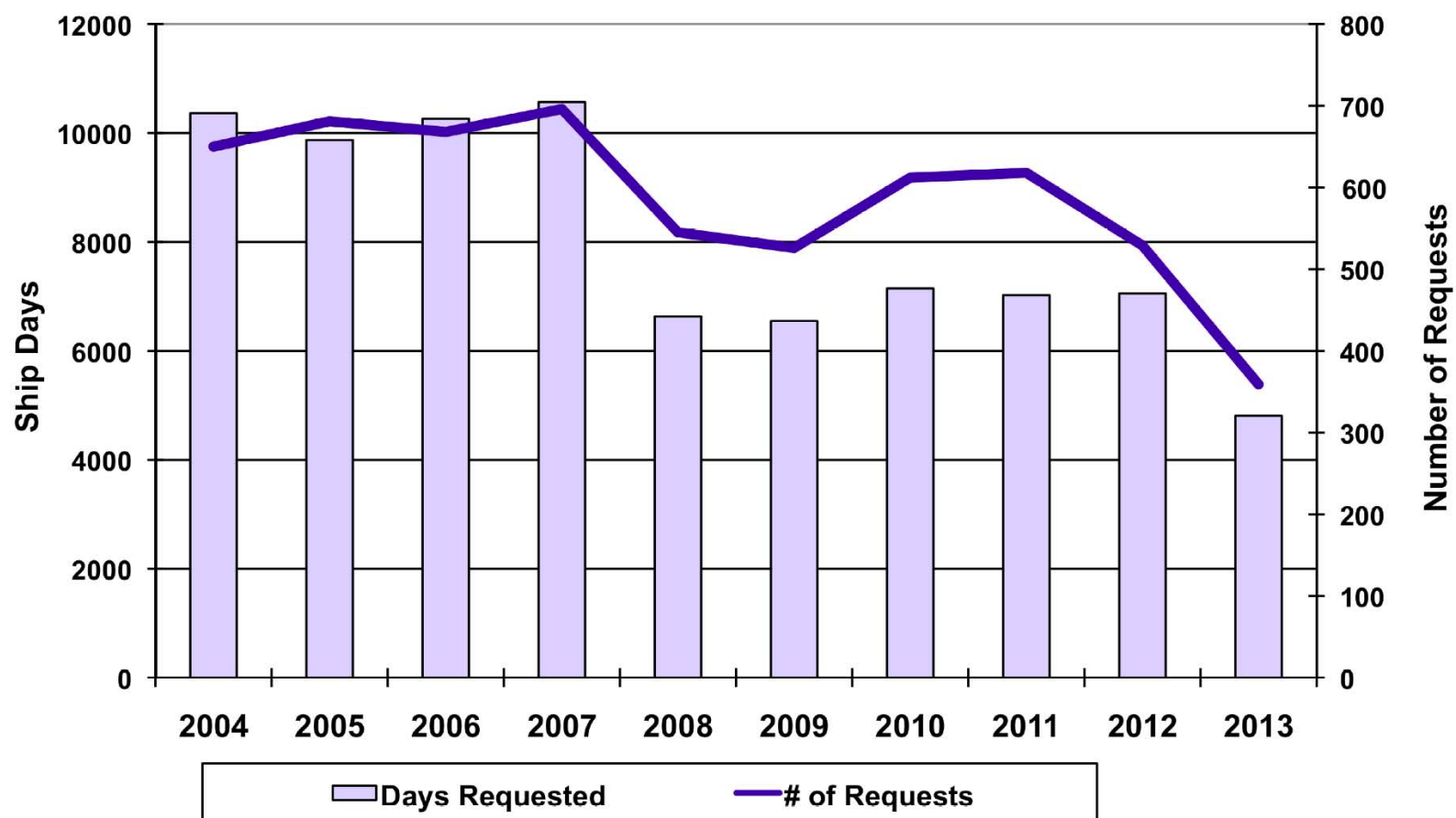
Ship Utilization by Class: 2004 - 2013



(Note: 2013 LOI includes 20% success rate of pending days)



Ship Time Request Demand





Agency Recommendations regarding Fleet Operations

- Agency Recommendations were provided to the UNOLS Council in late May/Early June (posted on the UNOLS Website)
 - *Oceanus* was transferred to OSU and *Wecoma* was removed from service in 2012
 - Retire *Cape Hatteras* in 2013
 - Retire *Point Sur*, *Knorr*, and *Melville* in 2014
 - Midlife refits are under consideration for *Thompson*, *Revelle*, and *Atlantis*
- UNOLS Council Subcommittee is preparing a response to the agency recommendations – Deb Steinberg, Robin Muench, Vernon Asper, and Wilf Gardner



Fleet Renewal Activities

Ocean Class Acquisition (Navy)

- **Operator Selections made in May 2010**
 - AGOR27 – WHOI
 - AGOR28 – SIO
- **Phase II award (construction) in Fall 2011 - Dakota Creek-Guido Perla**
- **Keel Laying Ceremony – Friday, August 17th at Dakota Creek Shipyard**
- **Ship deliveries in 2014/2015**

Regional Class Research Vessel (RCRV)

- NSF has announced an RFP for the construction of up to three Regional Class ships. Proposals are due in early September. The first ship would enter the Fleet in roughly 2019.



R/V *SIKULIAQ*



- Timeline:
 - Science Planning Workshop #1 – May 10-11, 2011
 - **Science Planning Workshop #2** – Ocean Sciences 2012
 - Begin Science Operations – CY 2014 (Ship Ops Program)
- Science Proposals Requesting *SIKULIAQ*:
 - *SIKULIAQ* listed in UNOLS Scheduling System
 - “Dear Colleague Letter” for submittal of Letters of Intent to OCE (PO, BIO, CO) in August 2011.
 - First full proposals to OPP accepted – December 2011
 - First full proposals to OCE accepted – February 2012



UNOLS Goals and Initiatives



Antarctic Research Vessels and UNOLS

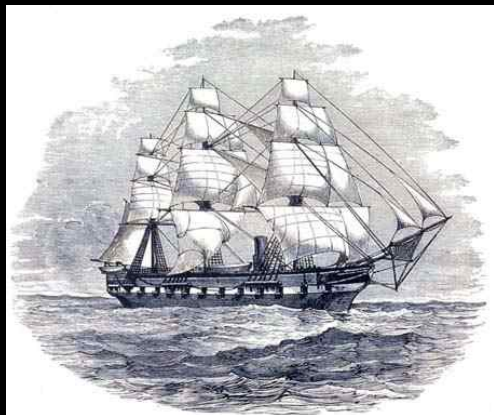
- Review and Update 2006 Polar Research Vessel (PRV) SMRs
- Early 2011 - On-line Survey to poll polar marine research community on science facility needs
- Feb 2011 - Workshop to identify major science drivers.
- Identify any additional SMRs required to ensure that the PRV will meet needs for the next 30 years.
- **Final report to NSF in Early 2012.** (Posted on the UNOLS Webpage)



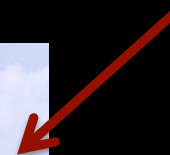
Greening the Research Fleet

January 10-11, 2012

Nicholas School of the Environment



<http://www.geology.19thcenturyscience.org/books/hmsc.jpg>



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Greening the U.S. Academic Fleet: A UNOLS Workshop

Objective: An Assessment of Current Technologies, Designs and Practices for Environmentally Sustainable Research Vessels

Composition: 50 participants, with representation from Council, RVOC, RVTEC, FIC, NSF, Navy, NOAA, architects and naval designers, industry, and marine scientists

Funding: Support of the workshop funded by NSF, ONR, and the Nicholas School of the Environment



Participants

- NSF
- ONR
- NOAA
- UNOLS Office and Members
- Glosten Associates
- Alaris Companies
- ARUP
- Foss Maritime
- Kluber Lubrication North America
- Eurofleet Project
- Royal Caribbean Cruises
- Tara Consortium
- Tactical Marine Solutions
- Harley Marine Services
- Maersk Line, Limited
- Wing Systems
- Seacraft Design
- DRDC Atlantic
- Maritime Reporter Group
- Aspin Kemp and Associates



LONG TERM GOALS:

- Promote environmental sustainability within UNOLS
- Guidelines for construction, operation and recycling of UNOLS Research Vessels
- Promote environmental awareness on UNOLS ships with U.S. ocean scientists (outreach)
- Ocean Class and Regional Class vessel construction



Green Workshop Findings

1. Sail-assist vessels with a small environmental footprint can be used for particular operations.
2. Hybrid power systems and new technologies should be considered as options for future vessels.
3. Vessel energy management consisting of detailed energy audits and on-going monitoring can be carried out with existing vessels.
4. Biofuels and bio-lubricants and an environmental management plan can reduce a vessel's environmental impact and may be appropriate for some vessels.



Green Workshop Findings

5. Development of an environmental classification system, similar to LEED, is underway (Tim Leach, Glosten Assoc.) and will help operators and agencies identify environmental issues and successes in the fleet.
6. Environmental sustainability of UNOLS support facilities and ports should be considered in parallel with vessels.
7. Environmental sustainability can be enhanced by incorporating both technological innovation and attitude changes (green culture) amongst ship operators and users.



Green Workshop Findings

8. Developing collaborations between UNOLS, ship operators, and the private sector will be beneficial to the fleet.

More information on the meeting at:

http://unols.org/meetings/2012/green_workshop/details.html

<http://www.digitalwavepublishing.com/pubs/NWM/marinetechnologyreporter/201203/>



UNOLS SPEAKER SERIES

- * Establish a speaker series to highlight UNOLS ships and oceanographic research and to serve as an outreach activity to non-UNOLS colleges and universities
- * Particular attention to institutions with under-represented minorities in the marine sciences
- * Series to run for three years beginning in fall 2012 and evaluated in 2015.
- * National speaker series with UNOLS institutions



Approach

- * Divide UNOLS membership into 8 regions
- * Identify minority undergraduate programs:
(<http://g.co/maps/wvax5>)
- * Coordinator in each region to recruit speakers and coordinate speaker series
- * Identify REU experiences available for summer
- * Funding for regional travel from UNOLS budget



Operator Institution

Note: Symbol indicates home port location. Multiple ships may operate from a single location.

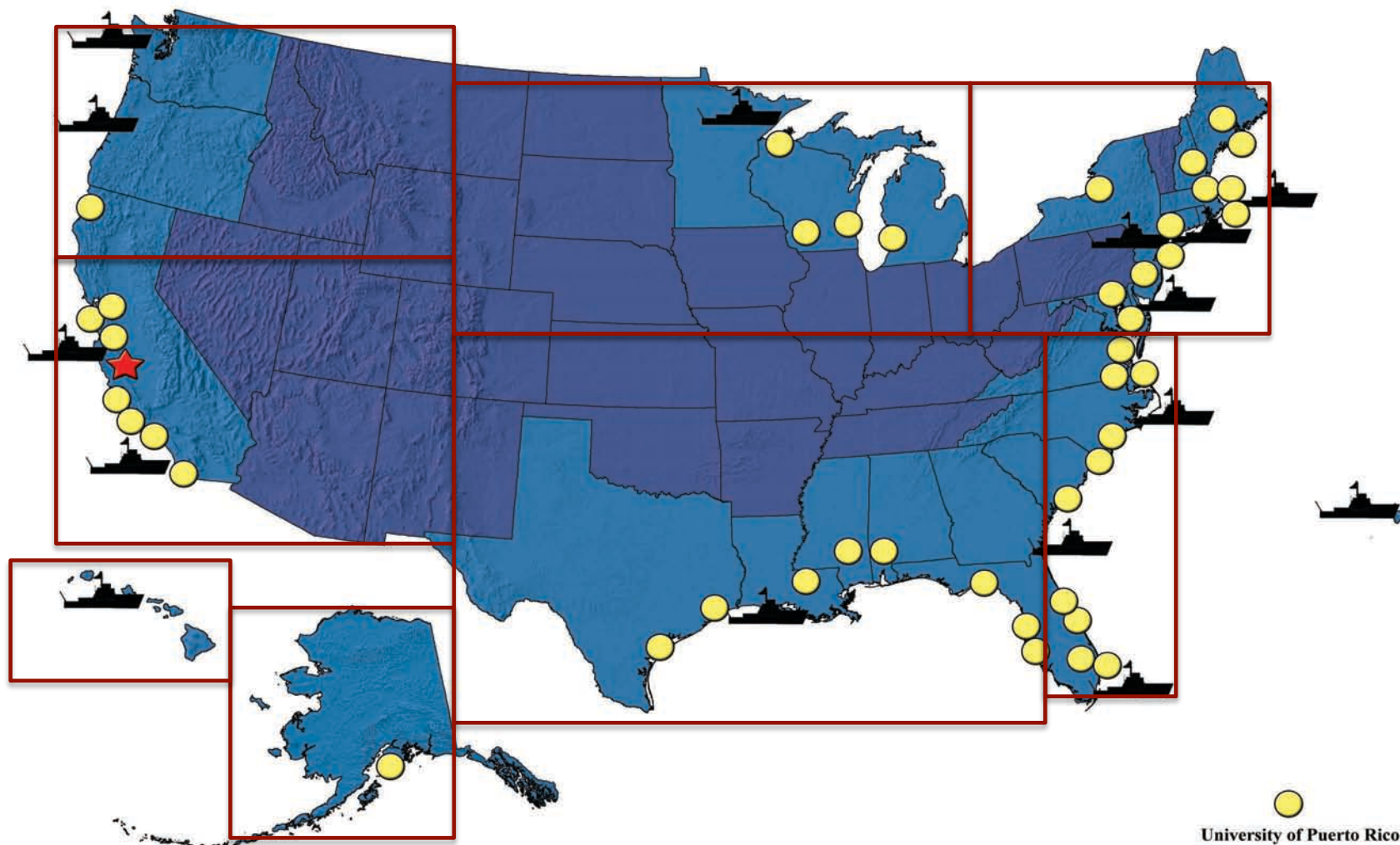


Non-Operator Institution



National Oceanographic Aircraft Facility Operator

UNOLS MEMBERSHIP



Smithsonian Tropical Research Institute - Panama



University of Puerto Rico



Regional Coordinators:

Great Lakes: Doug Ricketts (Univ. of Minn.)

Northwest: Bob Collier (OSU)

Southwest: Bruce Applegate (SIO)

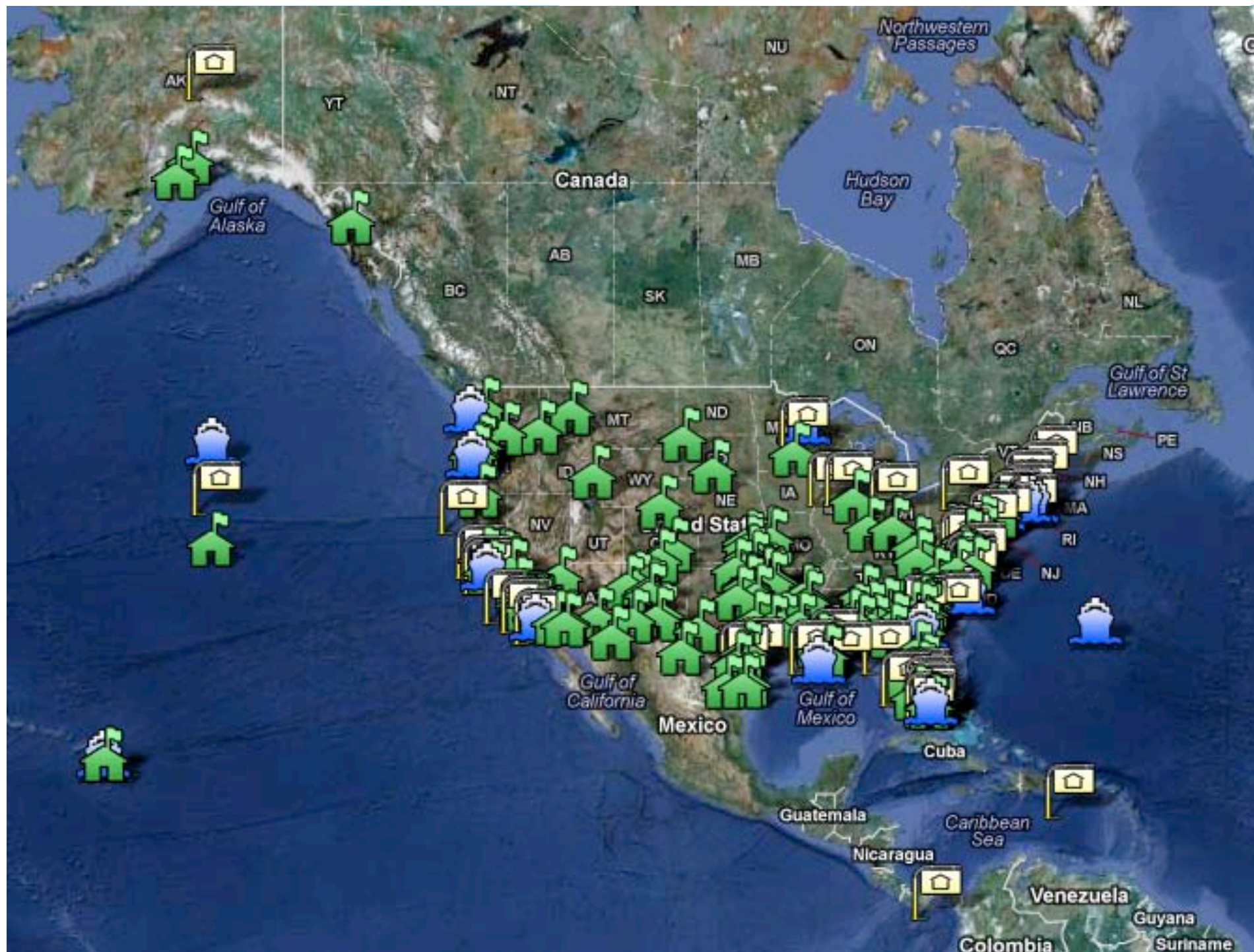
Northeast: Mary Jane Perry (Univ. of Maine)

Southeast: Peter Ortner (RSMAS)

Gulf Coast: Vernon Asper (Univ. of Southern Miss.)

Hawaii: Marcie Grabowski (Univ. of Hawaii)

Alaska: Terry Whitley ? (Univ. of Alaska)





UNOLS Outreach and Early Career Activities

- Chief Scientist Training Cruises:
 - 2011: Clare Reimers – Rapid Award
 - On-line Application Process
 - 2 Wecoma cruise opportunities – July and Sept
 - 14 students on each cruise
 - Cruise Blog
 - 2012: November cruise on New Horizon
- DESSC Early Career Workshops
- 2011 UNOLS Goal – Explore Lectureship Program



UNOLS/SCOAR Website

- Aircraft Request Form:
- Naval Postgraduate School
CIRPAS Twin Otter Request Form
- http://www.unols.org/committees/scoar/_cirpasrequest.asp

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

Autonomous Underwater Vehicle (AUV)

- ☐ Other AUV ⓘ ☐ Sentry ⓘ

Coring Facility

- ☐ Jumbo Piston Coring ⓘ ☐ Large Gravity Core ⓘ ☐ OSU Coring Facility ⓘ ☐ Other Large Coring Facility ⓘ
- ☐ WHOI Long Core ⓘ

Helicopter Facility

- ☐ Helicopter Ops (USCG) ⓘ

Human Occupied Vehicle (HOV)

- ☐ Alvin ⓘ ☐ Other HOV ⓘ

Other Facility

- ☐ Other Facility ⓘ

Remotely Operated Vehicle (ROV)

- ☐ Jason ⓘ ☐ Other ROV ⓘ

Seismic Facility

- ☐ Ocean Bottom Seismograph Instrument Pool (OBSIP) ⓘ ☐ Ocean-Bottom Seismometer Program (UTIG) ⓘ ☐ Other Seismic Facility ⓘ ☐ PASSCAL ⓘ
- ☐ Portable MCS/SCS group ⓘ ☐ U.S. Geological Survey Ocean Bottom Seismometer Facility (USGS at WHOI) ⓘ

Towed Underwater Vehicle

- ☐ ARGO II ⓘ ☐ DSL 120A (HMRG) ⓘ ☐ Hawaii MR1 (HMRG) ⓘ ☐ IMI12 (HMRG) ⓘ
- ☐ IMI30 (HMRG) ⓘ ☐ Other Towed Underwater Vehicle ⓘ

Unmanned Aerial Vehicle (UAV)

- ☐ Altus ⓘ ☐ Other UAV ⓘ

Explain Major Ancillary Facilities Requirements and list description and provider for "other" systems.

Remaining Characters: 1000



2012 Annual Meeting

Date – October 23-24, 2012

Keynote Speaker – TBD



Thank you!

Please be our friend!

