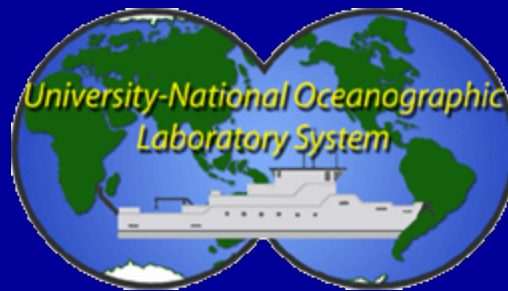


# University-National Oceanographic Laboratory System ~UNOLS~



## UNOLS Report to the Scientific Committee for Oceanographic Aircraft Research

June 4-5, 2014





# UNOLS Highlights

## ~ 2013/2014 ~



- Fleet Renewal Programs Continue
- Fleet Utilization, Service Life, and Plans
- 2013 Pilot Program: Telepresence Capability on UNOLS Vessels
- Increased UNOLS Early Career Scientist Activities.





# Fleet Renewal Activities

- **Global Class Vessels:**

- R/V *Sikuliaq* will enter service in 2014
- *Knorr* and *Melville* are slated to retire in 2014.
- Navy is planning mid-life refits for Global vessels - *Thompson*, *Revelle*, and *Atlantis*



- **Ocean Class Ships :**

- R/Vs *Neil Armstrong* and *Sally Ride* will be delivered in 2014 and 2015.

- **Regional Class Vessels:**

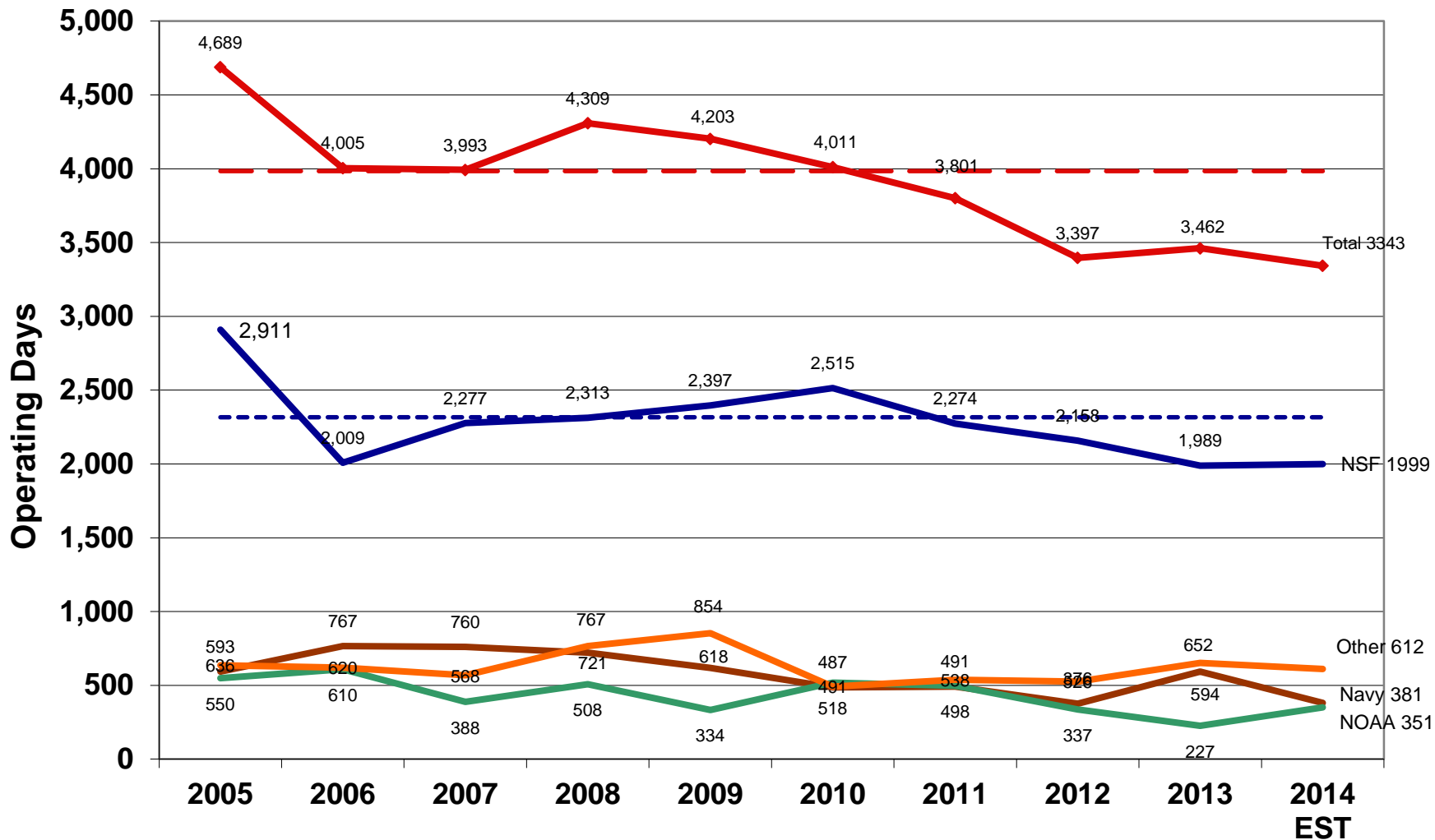
- Concept Design Review – Dec 3-5, 2013.
- Preliminary Design Phase with a review in Aug 2014.
- March of 2015- NSF will make a request to Congress for FY17 MREFC funds.
- Number of vessels will be based on projected science utilization and availability of funds.
- Operator selection is planned for mid-2017.
- R/V *Point Sur* will retire in 2014



- **Alvin Upgrade** – Alvin is back in the water!



# UNOLS Fleet Utilization (2005 - 2014)

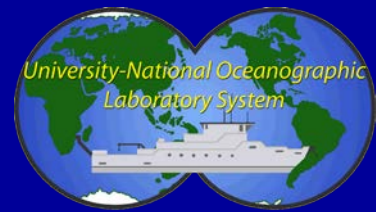






# Fleet Renewal Activities

| Updated: March 2014                        |       |         |            |                | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|-------|---------|------------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SHIP/CLASS                                 | BUILT | Owner   | LOA m (ft) | Science Berths |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <b>Global Class</b>                        |       |         |            |                |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <i>Melville</i>                            | 1969  | NAVY    | 85 (279)   | 38             | ---  | ---  | ---  | ---  | --X  |      |      |      |      |      |      |      |      |
| <i>Knorr</i>                               | 1970  | NAVY    | 85 (279)   | 34             | ---  | ---  | ---  | ---  | --X  |      |      |      |      |      |      |      |      |
| <i>Thomas G. Thompson</i>                  | 1991  | NAVY    | 84 (274)   | 36             | ---  | ---  | ---  | ---  |      | M?   |      |      |      |      |      | --X  | ---  |
| <i>Roger Revelle</i>                       | 1996  | NAVY    | 84 (274)   | 37             | ---  | ---  | ---  | ---  |      |      |      |      |      |      |      |      |      |
| <i>Atlantis</i>                            | 1997  | NAVY    | 84 (274)   | 37             | ---  | ---  | ---  | ---  |      |      |      |      |      |      |      |      |      |
| <i>Marcus G. Langseth</i>                  | 1991  | NSF     | 71 (235)   | 35             | ---  | ---  | ---  | ---  |      |      |      |      |      |      |      |      |      |
| <i>Sikuliaq</i>                            | 2013  | NSF     | 80 (261)   | 26             |      |      |      |      |      | >    |      |      |      |      |      |      |      |
| <b>Ocean/Intermediate Class</b>            |       |         |            |                |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <i>Kilo Moana</i>                          | 2002  | NAVY    | 57 (186)   | 29             | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  |
| <i>Wecoma</i>                              | 1976  | NSF     | 56 (185)   | 18             | ---  | --X  |      |      |      |      |      |      |      |      |      |      |      |
| <i>Endeavor</i>                            | 1976  | NSF     | 56 (184)   | 18             | ---  | ---  | ---  | ---  |      |      |      |      |      |      |      | --X  |      |
| <i>Oceanus</i>                             | 1976  | NSF     | 56 (184)   | 19             | ---  | ---  | ---  | ---  |      |      |      |      |      |      |      | --X  |      |
| <i>Atlantic Explorer</i>                   | 1982  | BIOS    | 51 (168)   | 20             | ---  | ---  | ---  | ---  |      |      |      |      |      |      |      |      |      |
| <i>New Horizon</i>                         | 1978  | SIO     | 52 (170)   | 19             | ---  | ---  | ---  | ---  |      |      |      |      | --X  |      |      |      |      |
| <i>Neil Armstrong</i>                      | 2014  | NAVY    | 73 (238)   | 24             |      |      |      |      |      | >    |      |      |      |      |      |      |      |
| <i>Sally Ride</i>                          | 2014  | NAVY    | 73 (238)   | 24             |      |      |      |      |      | >    |      |      |      |      |      |      |      |
| <b>Regional Class</b>                      |       |         |            |                |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <i>Point Sur</i>                           | 1981  | NSF     | 41 (135)   | 12             | ---  | ---  | ---  | ---  | --X  |      |      |      |      |      |      |      |      |
| <i>Cape Hatteras</i>                       | 1981  | NSF     | 41 (135)   | 14             | ---  | ---  | ---  | X    |      |      |      |      |      |      |      |      |      |
| <i>Hugh R. Sharp</i>                       | 2005  | UD      | 44 (146)   | 14             | ---  | ---  | ---  | ---  |      |      |      |      |      |      |      | --M  | ---  |
| <i>RCRV1</i>                               | 2019  | NSF     | 58 (191)   | 18             |      |      |      |      |      |      |      |      |      |      | >    | ---  | ---  |
| <i>RCRV2</i>                               | 2020  | NSF     | 58 (191)   | 18             |      |      |      |      |      |      |      |      |      |      | >    | ---  | ---  |
| <i>RCRV3</i>                               | 2021  | NSF     | 58 (191)   | 18             |      |      |      |      |      |      |      |      |      |      |      | >    | ---  |
| <b>Coastal/Local Class</b>                 |       |         |            |                |      |      |      |      |      |      |      |      |      |      |      |      |      |
| <i>Robert Gordon Sproul</i>                | 1981  | SIO     | 38 (125)   | 12             | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | --X  |      |      |      |      |
| <i>Pelican</i>                             | 1985  | LUMCON  | 32 (105)   | 14             | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  |      | --X  |      |      |
| <i>Walton Smith</i>                        | 2000  | Miami   | 30 (96)    | 16             | ---  | ---  | ---  | ---  | ---  | ---  | -M   | ---  | ---  | ---  | ---  | ---  | ---  |
| <i>Savannah</i>                            | 2001  | SKID/UG | 28 (92)    | 19             | ---  | ---  | ---  | ---  | ---  | ---  | ---  | -M   | ---  | ---  | ---  | ---  | ---  |
| <i>Blue Heron</i>                          | 1985  | UMINN   | 26 (86)    | 6              | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  |
| <i>Clifford Barnes</i>                     | 1966  | NSF     | 20 (66)    | 6              | ---  | ---  | ---  | ---  | ---  | ---  | --X  |      |      |      |      |      |      |
| <i>Barnes Replacement</i>                  | 2016  | UW      | 20 (66)    | 6              |      |      |      |      |      |      |      | >    | ---  | ---  | ---  | ---  | ---  |
| Total Number of Vessels in Fleet           |       |         |            |                | 21   | 21   | 20   | 20   | 20   | 19   | 19   | 19   | 19   | 17   | 19   | 17   | 17   |
| X= Current projected Service Life End Date |       |         |            |                |      |      |      |      |      |      |      |      |      |      |      |      |      |
| M= Mid-life Refit                          |       |         |            |                |      |      |      |      |      |      |      |      |      |      |      |      |      |



# Optimizing and expanding the reach of the UNOLS Fleet

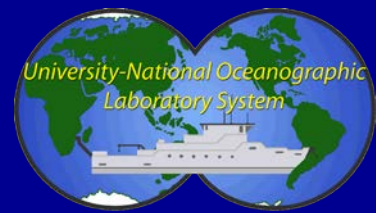
- Telepresence technology
  - UNOLS Pilot Program in 2013
  - New UNOLS vessels are being equipped to accommodate telepresence
- UNOLS Subcommittee on ship to shore communications
- Unmanned aircraft systems.
- Increased emphasis on early career scientist engagement and training





# UNOLS Fleet Planning

- Fleet Improvement Plan
  - The Fleet Improvement Committee is currently drafting an updated Fleet Improvement Plan
  - The new Plan will be a “living” Document
  - **Tasking** – Draft a section on UAS capabilities and projected use.
- NSF Letter Regarding the Number of RCRVs
  - Letter from Bob Houtman to UNOLS requesting feedback regarding the number of RCRVs that should be built and strategies for supporting the future Fleet.
  - UNOLS has verified the projections that are contained in the NSF letter
  - A FIC subcommittee is preparing a response that will be vetted through the UNOLS Council.



# NRC - Decadal Survey for Ocean Sciences

- National Research Council's Committee on a Decadal Survey for Ocean Sciences (DSOS) 2015.
- **Project Scope** - Develop a list of the top ocean science priorities for the next decade in the context of the current state of knowledge, ongoing research activities, and resource availability. The DSOS committee's report will present a compelling research strategy for increased understanding of the oceans over the decade 2015-2025
- **Co-Chairs:**
  - **Dr. Shirley A. Pomponi -(Co-Chair) Florida Atlantic University**
  - **David W. Titley, USN (Ret.) - (Co-Chair) Pennsylvania State University**

<http://www8.nationalacademies.org/cp/projectview.aspx?key=49570>





# UNOLS Early Career Activities

- Chief Scientist Training Cruises:
  - 2011 through 2013: Pilot Program lead by Clare Reimers. Four cruises on *Wecoma*, *New Horizon*, and *Endeavor*
  - 2014:
    - *Atlantic Explorer*: currently at sea with Maureen Conti as PI
    - *Point Sur*: multiple cruises planned in the fall. Applications are being accepted.
    - Potential cruises: *Sharp* and *Blue Heron*
- UNOLS Early Career Scientist Workshops:
  - DeSSC – 2011 to 2013, December AGU in San Francisco
  - MLSOC – 2013, December AGU in San Francisco
  - FIC – 2014 Council March Meeting
  - 2014 Ocean Sciences – Jon Alberts, Annette DeSilva, FIC Chair, and UNOLS Chair-Elect participated in NSF's early career workshop.



*Thank you!*