

**UNOLS ANNUAL MEETING**  
**Thursday and Friday, October 11-12, 2007**  
**The National Science Foundation**  
**4201 Wilson Boulevard**  
**Stafford I, Room 375**  
**Arlington, VA 22230**

**Meeting Minutes**

**Executive Summary:**

The UNOLS Annual Meeting was held at the National Science Foundation (NSF) in Arlington, VA on Thursday and Friday, October 11-12, 2007. The meeting was highlighted by a keynote address by Dr. Arden L. Bement, Director of the National Science Foundation. Dr. Bement discussed NSF's support of basic research along with their support of the facilities and infrastructure that the research depends upon. NSF works to continually balance the costs of facilities with the costs of doing science.

The Annual Meeting also included reports on fleet renewal plans, agency activities, UNOLS Committees updates, and a presentation on this year's accomplishments and goals for 2008.

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**Meeting Summary:**

**Welcome and Introductions** - Marcia McNutt, UNOLS Chair, called the 2007 UNOLS Annual meeting to order and welcomed everyone. The meeting was held at the National Science Foundation (NSF) in Arlington, VA on October 11 and 12, 2007.

Introductions were made around the room. The meeting agenda is included as *Appendix I* and the attendance list is included as *Appendix II*.

Marcia reviewed the UNOLS activities, issues and accomplishments over the past year. Her slides are included as *Appendix III*. UNOLS activities included:

- The new UNOLS Ship time Request and Scheduling System was introduced.
- An Ad-Hoc committee to define best practices in Data Management was formed.
- A UNOLS Brochure was published.
- The final draft of the American's with Disabilities Act (ADA) Guidelines for UNOLS Vessels is in review
- Safety Standards for Human Occupied Vehicles are in review.
- The Ocean Class Science Mission Requirements were updated at the request of Navy.
- Academic Fleet Renewal Activities and Plans are ongoing.

In addition to the accomplishments and issues on the slide, Marcia mentioned a few other major issues that are being addressed by UNOLS. These include crew and marine technician retention/hiring, rising fleet operating costs, and shrinking agency budgets.

**UNOLS Membership Votes** - Marcia introduced the ballot items, which included elections for a Non-Operator representative and a Council Member At-large representative. The slate of nominees can be viewed at: <http://www.unols.org/meetings/2007/200710anu/slate07.html>. The membership was also asked to vote on proposed UNOLS Charter revisions and re-adoption. The proposed revisions to the UNOLS Charter were endorsed by the Council and can be viewed at [http://www.unols.org/meetings/2007/200710anu/uchart\\_draft\\_vers\\_7\\_2.pdf](http://www.unols.org/meetings/2007/200710anu/uchart_draft_vers_7_2.pdf). Ballots were distributed for collection later in the meeting.

**Request for Proposals to Host the UNOLS Office** – Mike Prince reported that the Cooperative Agreement to host the UNOLS Office by Moss Landing Marine Laboratories (MLML) Office will expire on April 30, 2009. A solicitation for a new host will be announced in 2008. MLML will not continue as host. A solicitation will be announced in late 2007/early 2008 and ask for letters of intent. An evaluation team will be formed to review the proposals and provide a recommendation. Mike encouraged members to consider hosting the office.

**Keynote Address - Dr. Arden L. Bement, Jr.** – Marcia McNutt introduced Dr. Arden L. Bement, Jr. Dr. Bement has been the Director of NSF for three years. He holds degrees in metallurgical engineering and his career has included work in industry, government and

academia. Prior to coming to NSF, Dr. Bement served as director of the National Institute of Standards and Technology of the Department of Commerce.

Dr. Bement's full key note address is included as *Appendix IV*. A high priority and one of NSF's major responsibilities is maintaining support for the facilities that they own. NSF is committed to completing the Drill Ship, the R/V *Langseth* conversion, the Hybrid Remotely Operated Vehicle (HROV), The Replacement Human Occupied Vehicle (RHOV), the Alaska Region Research Vessel (ARRV) and the Ocean Observing Initiative (OOI). NSF is also moving forward with the Regional Class vessels acquisition process. Dr. Bement emphasized the importance of balancing the availability of facilities (and facilities funding) with science funding in order to continue a healthy science system.

Discussion followed:

- Marcia McNutt asked if NSF would contribute support for an Ocean Studies Board (OSB) study to look at the facilities required to carry out the recommendations of the Ocean Research Priorities Plan (ORRP). Dr. Bement indicated that NSF is involved in the scoping of the study and that they would consider funding this study. He thinks that it is important that the study address all agency facilities.
- Nancy Rabalais asked if Dr. Bement had any comments regarding the challenges of keeping pace with ship replacement and maintenance as the ships in the fleet reach their retirement age. Dr. Bement – It all comes to the balance. As the fleet is upgraded, the Operational and Maintenance (O&M) costs must be carefully considered. If the O&M costs start escalating to a level that they impact the funds available for research efforts, renewal will be slowed down.
- Marcia stated that NSF's Ocean Sciences section has had success with getting projects into the MRE account (ARRV, OOI, Drill ship). However, the new facilities will be expensive and there might not be enough funds to operate and maintain them all. Dr. Bement – International partnerships should be formed to help support future facilities and research. He referenced the use of the foreign vessel, *Oden* for McMurdo Station support in the Antarctic.
- Wilf Gardner said that he was glad to hear Dr. Bement mention satellites in his talk. What can NSF do about getting access to the Color satellites? Dr. Bement – There is an NSF partnership with NASA and there was a recent amendment for additional funds to support the Color satellite.
- Sandy Shor recommended that the vacant positions in NSF Geo-Sciences and Ocean Sciences should be filled as soon as possible. Dr. Bement – More federal employees are needed at the high office levels; there simply are not enough people. UNOLS can help by spreading the word in the community and encouraging peers to serve at NSF. A lot can be learned during a three to four year assignment.
- Nancy Rabalais asked about the possibility of encouraging more collaboration with industry to support science. Dr. Bement - As for collaborations, there are a lot of industries that rely on the oceans. Successful ocean models and other research of interest to industry could lend itself for collaborations.
- Denis Wiesenburg asked if NSF would continue to support more and more of the ship operation costs. Dr. Bement – NSF has been working to increase their facility support, but Navy has moved more to modeling and has decreased their use of ships. He doubts that we will see the past ship use levels from the Navy. They see a ship use decline from other

agencies and areas as well. On the positive side, Dr. Bement said that in his time in DC, he has never seen support as strong as it is now for NSF on both sides of Congress; however competition for resources has never been greater.

**2008 Fleet Operations: Fleet Operations and UNOLS Recommendations** – Liz Brenner, Ship Scheduling Committee (SSC) Co-Chair, summarized the ship scheduling process over the past year and projected 2008 fleet operations. Her slides are included as *Appendix V*.

Over the summer, UNOLS ship schedulers held teleconferences; one meeting each for east and west coast Intermediate/Regional schedulers and one for the Global/Ocean class schedulers. East and west coast Intermediates/Regional schedulers were tasked to independently recommend options that would consolidate work on fewer ships. Problems were encountered as multiple requests for specific periods of time made it difficult to efficiently consolidate without moving science programs out of desired time and or weather windows. ONR recommended not to lay-up any of the Navy owned ships.

The SSC held a meeting at NSF on 19 September to review ship schedules and resolve problems and double bookings. At the conclusion of the meeting, the recommendation was made for schedulers to identify stand down periods and to refine daily rates. The schedulers were advised that the rates should be developed with the assumption of no lay up support. Schedulers were asked by the funding agencies not to post 2008 schedules until further notice.

A series of charts were presented. The total estimated fleet operating cost for 2008 is \$79.9M and is higher than can be supported by the current budgets. The average ship day rate is very high in 2008.

A chart showing the 2007 and 2008 operating days and estimated cost by agency was presented. ONR doesn't expect a budget plus-up this year. The next slide shows a comparison of the estimated operating costs with the available budgets. NSF, ONR, and NOAA are all projecting deficits: NSF's deficit is \$7.3M, ONR = \$2.4 M and NOAA = \$1.1M.

A bar chart showing the 2008 days per ship illustrated that other than the *Pelican*, *Sharp*, and *Savannah*, all other ships are operating below capacity. A series of slides followed showing the 2008 utilization by ship class and region.

Discussion followed:

- Sandy Shor – Germany is looking to charter a Global ship. Operators interested in chartering their ship to the Germans, must send a proposal written in German. It is due in mid-November. SIO and UW have indicated that they will not respond. U. Hawaii will submit a proposal and if awarded, the German work would replace ship time that has been already slated for *Kilo Moana*. The *Kilo Moana* work could be picked up by another UNOLS vessel.
- Peter Wiebe – Will the delay in posting 2008 schedules impact the science parties who must make cruise purchases and shipping arrangements? Mike Prince – Most of the people with potential cruises in early 2008 have been contacted.
- Sandy – When will the schedules be posted? Linda Goad – They hope to have updated cost estimates by the end of October. Schedules will be posted sometime after that.

- Joaquim Goes – Has there been any effort to contact other foreign countries to use UNOLS vessels? India needs ships and has funding. He suggested that Dennis Nixon bring UNOLS brochures for ISOM.
- Bob Knox cautioned that the India ship time project in 2007 worked out well, but it isn't a trivial task. He advised that everything should be cleared early on with agencies and the foreign country.
- Linda Goad – To avoid insurance issues associated with foreign cruises, establish collaborations with the country participating in the cruise, then hull insurance is not needed. Bob Houtman reinforced this statement. It is much more difficult to schedule commercial time on UNOLS ships because UNOLS vessels cannot compete for business. There are also insurance issues. Commercial work does occasionally get scheduled on UNOLS vessels, but it is taken on a case by case basis.

### **Federal Agency Reports:**

**National Science Foundation (NSF)** - Dolly Dieter provided the NSF Report. NSF is operating on a Continuing Resolution and they hope that it won't be extended for the remainder of the year. If it is extended, it will drastically affect projects like the ARRV.

Dolly discussed the status of open vacancies within NSF. NSF is still trying to hire an Assistant Director. Eric Itsweire is the Acting Ocean Section Head. Interviews for the Section Head position are expected soon. The Integrative Programs Section (IPS) Head position is expected to be advertised soon. The Oceanographic Instrumentation and Technical Service Programs Director position will probably be filled by a visiting scientist.

Ship renewal efforts were planned and initiated when budgets were strong. The projected operating costs for these new ships and systems are high. The balance between facilities funding and science program funding is a major concern at NSF and will be addressed.

The Regional Class Research Vessel (RCRV) acquisition project started when the budget was healthy. The cost for ship construction is going up. Shipyards are busier than they have been since WWII. Steel, copper and other material costs are all going up. Labor costs are also going up. NSF still hopes to build all three ships. There is concern that if the ship costs get too high it will be necessary to use the MRE account for funding. This could result in a delay of about five years.

Dolly reviewed the RCRV project status. The status is included in *Appendix VI*. The original Phase I Design contract was awarded in April 2006. The current design completion date is 20 March 2008. Phase II, Detailed Design and Construction, is proposed to start in the first quarter of FY09 and last 27 months. It is doubtful that the solicitation for operators would go out before the end of FY08.

**Office of Naval Research** - Bob Houtman provided a report for ONR. Dr. Etter will be leaving as the Assistant Secretary of the Navy for Research, Development and Acquisition by the middle of November 2007. She has already signed off on the acquisition of the two Ocean Class

Research Vessels (OCRV). Details of the OCRV acquisition plans are included in *Appendix VII*.

Acquisition of the OCRVs is budgeted at \$185M for two ships to be delivered in FY14/15 with funding in FY11 and FY12 for construction. ONR, with assistance from PEO-Ships, is finalizing documents to initiate the program in FY08. PEO-Ships will do a cost estimate evaluation based on science mission requirements and construction costs. They are still discussing whether to use one, two or more design/build teams.

There are three organizations within Navy that are involved in the OCRV project. The sponsor is the Oceanographer of the Navy, the Chief of Naval Research is the mission sponsor, and PEO-Ships is providing project management support. UNOLS will be included as part of the process.

In budget news, ONR's FY08 facilities budget is \$10M with additional support from other parts of the Navy, for a total of \$11.5M. Projected operating costs currently exceed this level. Like NSF, the Navy is also on a continuing resolution.

- Peter Wiebe – In 2006, the Navy used one of the Global ships to support Navy programs. Bob – This will not be the case in 2008. Data analysis and planning will be carried out in 2008.
- Denis Wiesenburg – Is the Navy seeking the full \$185M OCRV budget in any one year? Bob Houtman – The \$185M would be split over two years in FY11 and FY12.

**United States Coast Guard (USCG)** – Lisa Mack provided the report from the USCG. She reviewed recent operations on USCGC *Healy* and *Polar Sea*. *Healy* recently returned to port following the 2007 operations and will be getting ready for 2008 operations. *Polar Sea* will be on standby support for *Oden* for the Deep Freeze 09 operations. If *Polar Sea* is not needed for the Deep Freeze 09, the Coast Guard will want to run an Arctic cruise in spring 2009 to conduct training, shakedown, and other Coast Guard Missions. Next year, *Polar Sea* probably won't go to the Antarctic, and only *Oden* will be used. *Polar Star* is in caretaker status.

Dennis Nixon asked if there are any USCG plans to replace *Polar Sea* and *Polar Star*, especially with the increased interest in the Arctic and the Law of the Sea ratification. Lisa Mack – A National policy statement is needed in order to get a replacement. A pre-acquisition study that would include a mission needs analysis and an alternative means analysis is needed. The cost for the study is estimated at \$500K and the study would take a year. USCG doesn't have funding for this and feels that a presidential determination is needed to ensure funding for these further studies.

**National Oceanographic and Atmospheric Administration (NOAA)** – Larry Pugh reported for NOAA on behalf of Beth White. Her message is inserted below:

“NOAA's Office of Marine and Aviation Operations leadership has recently changed. The two star who provides leadership over the NOAA Corps and OMAO - Rear Admiral Sam De Bow - has been replaced by Rear Admiral Jon Bailey, and the one star who

provided leadership over the operational centers, the Marine Center and the Aircraft Operation Center - RDML Richard Behn (pronounced Bain) - has been replaced by RDML Phil Kenul. We are looking forward to their new leadership for the next several years.

On the acquisition front, *Pisces* (FSV3), *Bell M. Shimada*, (FSV4), and *Ferdinand R. Hassler* (SWATH) are all still in various stages of construction at Halter Marine in Mississippi. Delays because of damaged ways caused by Katrina and keeping the shipyard's interest for the SWATH when larger, less complicated construction projects are there to be worked on continue to be our challenges. The second phase of converting *Okeanos Explorer* (the ex-Navy T-AGOS *Capable*), has been awarded to a yard in Bellingham, WA - Puglia (the g is silent). The first phase has been completed by Todd Shipyard in Seattle. We expect the vessel to be in shakedown and sea trials next summer and operational near the end of the FY.

Other than that, budgets remain pretty stable and I don't anticipate any big spikes in resources available for charters or other things although we keep trying.”

**Oceanographer of the Navy** – Bob Winokur provided the report for the Oceanographer. He discussed the Congressional line item to build a new survey ship with a finite amount of money. The new ship will be a TAGS 66 and will be based on the design of the current TAGS ships. It will have a moon pool. The Oceanographer cannot request additional funds for this ship and they will have to stay within budget. Halter Marine will build the ship and NAVSEA is managing the shipyard contract.

The Oceanographer is the resource sponsor for the new OCRV AGORs, and ONR is the program sponsor. It will be problematic to get any additional funds for these ships so it is important that they stay within budget.

**Facility Renewal Plans and Activities** (not already reported):

**Alaska Region Research Vessel (ARRV) Acquisition Status** – Terry Whitledge provided the status of the ARRV. His slides are included as *Appendix VIII*.

The University of Alaska Fairbanks (UAF) signed a Cooperative Agreement with NSF on 7 August 2007 for the ARRV. There are four Phases to the acquisition process. The Phase 1 task is to develop a project execution plan (PEP), establish an earn value management (EVM) system and refresh the design. This effort is expected to take nine months and cost ~\$2.5M. Phase 2 will consist of the bid package preparation and shipyard selection. It is expected to take 3 months and cost \$809K. During Phase 3 the ship would be constructed and outfitted. This would take 24 months and cost ~\$112.5M. The final phase is for pre-operation testing and trials and would cost ~\$7M. The total project is not to exceed \$122,930,218. Details of the phases are contained in the Appendix.

An ARRV oversight committee has been formed and held their first meeting in mid September. Detailed activities during Phase I are listed in the slides. UAF hopes to complete Phase I by 7 May 2008. If all goes as planned, the ship would be complete by July 2011.

ARRV project organizational chart of key personnel is included in the Appendix, as well as the membership of the oversight committee. The oversight committee represents the community and includes a naval architect, polar marine scientists, marine superintendents, marine technical specialists, Alaska native/coastal community, and NOAA fisheries. Margo Edwards is the committee chair. There are weekly project conference calls and monthly oversight committee meetings. The ARRV project website is: <<http://www.sfos.uaf.edu/arrv>>

Discussion:

- Rob Pinkel – What is the annual cycle for the ship? Terry - The ship can work in seasonal ice and can operate in the Bering Sea year round.

**R/V *Marcus G. Langseth* Conversion** – John Diebold reported on the status of the R/V *Langseth* conversion. The USCG inspection has been conducted and the Certificate of Inspection is expected very soon. The JMS inspection is scheduled for 7-8 November. Once the inspection is successfully completed, the process of turning the title over from LDEO the NSF will begin. Shakedown cruise is optimistically planned for the week after the JMS inspection. Science operations are planned for early 2008.

Two meetings will be scheduled during the week of the AGU Fall Meeting. One meeting will be for the MLSOC and the other for the community.

John reviewed the R/V *Langseth* conversion milestones (**Appendix IX**).

**Replacement Human Occupied Vehicle** – Bob Detrick reported on the status of the RHOV project. His slides are included as **Appendix X**.

There are two major components of the fabrication process proceeding in parallel: the design, fabrication and testing of the personnel sphere with Southwest Research Institute (SwRI) as the prime contractor and the design, fabrication and testing of the new vehicle with Lockheed-Martin (Riviera Beach) as the prime contractor. There have been monthly phone meetings with the RHOV Oversight Committee (RHOC) to review the project status.

Bob reviewed the project's major milestones and planned activities. These are listed in **Appendix X**. On September 5-6, 2007 the Detailed Design Review (DDR) for the RHOV personnel sphere successfully completed. ABS accepted the hull design. Forging the sphere will begin the first week of November 2007. About 40 tons of titanium is needed for the sphere fabrication, but there is a lot of waste during production. WHOI will try to sell the waste. It is almost a two-year process for forging, welding, and testing sphere.

A contract with Lockheed Martin (Riviera Beach) for fabrication of the vehicle was signed on June 8, 2007. Only CLIN1 (preliminary vehicle design and detailed cost estimate) was executed. CLIN2 (detailed design, fabrication and testing) will be executed following the Preliminary Design Review (PDR) and detailed costing (provided cost is within budget). The formal PDR is scheduled for November 13-15, 2007 in Riviera Beach. The Replacement HOV Oversight



Committee chaired by Cindy Van Dover will meet in February 2008 to review the results of PDR and the detailed cost estimates.

Details about the vehicle buoyancy foam and battery development efforts are included in the slides. Pressure-compensated, Lithium batteries are being considered. Marcia McNutt cautioned Bob to talk to MBARI about their experience with batteries.

There have been a few personnel changes in the RHOV project. Anthony Tarantino (a former *Alvin* pilot) has been hired as the Assistant Project Manager for the RHOV. Robert Brown resigned as Project Manager for the RHOV effective Oct. 1, 2007. He will be replaced by Thomas Lewis, currently a Deputy Program Manager for the Naval Sea Systems Command.

If all proceeds on schedule, *Alvin* would be taken out of service in late 2009 for cross decking and pilot training. The RHOV would be ready to start science operations in mid 2010.

A comparison chart of the performance and science specifications between the RHOV and *Alvin* is included in the slides. The operating model for the RHOV would be similar to the existing *Alvin* operations. Vehicle launch and recovery would take place within the daylight hours. One design constraint for the RHOV was that it had to be compatible with *Atlantis* and the ship's handling system.

**Fleet Improvement Committee(FIC) Report** – Dave Hebert, FIC Chair, reported on Committee activities and issues, which included the Fleet Improvement Plan, future facility utilization projections and recommendations, ship scheduling model, and ocean observatory projections. His slides are included as *Appendix XI*.

Dave reviewed the status of the Fleet Improvement Plan. The FIC spent much of their recent meeting reviewing the draft document and associated figures. Sections I, II, and III have been drafted. They include the introduction, future science initiatives, and the UNOLS facility composition and utilization trends. Section IV, which contains the future fleet utilization projections and future requirements, still needs to be drafted. Section IV will include an update to Figure 17 of the 2001 FOFC report. Figure 17 illustrates the renewal plan timeline and new ship composition. A slide of the updated Figure 17 is included in *Appendix XI*; as well, as additional projection charts.

During the FIC Meeting, Mike Prince presented the initial results of modeling the 2006 ship schedules on the future fleet of 2017. In creating the model his assumptions were that all scheduled cruises from 2006 will be available for scheduling in a future year. The fleet composition for 2017 was based on FIC and agency renewal plans.

Mike scheduled the 2006 projects onto ships that would be operating in 2017. One exception was that he included *Sproul* and *Pelican* in the 2017 fleet, which doesn't match the FIC Fleet Improvement Plan. The model keeps cruises on the same 2006 ship and time frame as much as possible. Cruises in 2006 that were originally scheduled on ships that are "retired" in 2017 were rescheduled on the remaining ships, using the ship time request as a guide when moving dates or ships.

In 2006 the fleet consisted of 23 active ships. The model fleet of 2017 includes 19 active ships. Since R/V *Langseth* was not yet in service in 2006, it was not scheduled in 2017. Also, since the ARRV was not available in 2006, there were no requests for its use. The 2017 model schedules some of the global ship work on the ARRV.

Initial results show that in 2017, there would be 195 days of unscheduled work in the Atlantic. The unscheduled work includes multi-ship operations and requests for work in remote areas that could not be accommodated because of fewer ships available. It also included days requested for the HBOI submersible. These could not be carried out because the submersible support ship, *Seward Johnson* was retired by 2017. The initial model results indicated that the 2017 schedules would be inefficient and some work would be stranded. There would be less operational flexibility and more transit days would be needed. Multi-ship programs would be difficult to carry-out. Accommodating demand during peak seasons would also be very difficult.

Sue Banahan attended the FIC meeting and provided Ocean Observatory Initiative (OOI) projections. Some of her slides are included in *Appendix XI*.

The NSF/MREFC capital investment for OOI is \$331M over five years. The operation and maintenance (O&M) funding to support OOI would ramp up during installation until 2014 and then level off at a cap of \$50M annually.

A brief overview of each OOI component is included in the slide package. The number of Global Scale Nodes (GSN) has been reduced to four and will include nodes in the Southern Ocean, Station Papa, Irminger Sea, and the Mid-Atlantic. The Regional-scale nodes (RSN) in the NE Pacific have also been reduced and the nodes lost due to inflation include the mid-plate node and the node that connects to Canada Neptune. Coastal-scale assets are planned in the Mid-Atlantic Bight shelf-break (Pioneer Array) and the NE Pacific continental margin (Endurance Array). Each observatory scale incorporates mobile assets; such as gliders and AUVs. Cyberinfrastructure will be developed to allow adaptive sampling, collaborative experimentation and analyses. Sketches of each OOI component along with descriptions are included in *Appendix XI*.

A chart showing the OOI estimated days at sea projection through 2015 was provided. The Coastal Arrays in the Pacific and Atlantic can be serviced with UNOLS Intermediate, Regional, and Regional/Coastal Class ships. The GSN and RSN observatories call for Global Class vessels. Servicing of observatories will be highly dependent on ROVs.

**Interagency Working Group on Facilities (IWGF)** –Bob Winokur reported that the IWGF Fleet Status Report is in the final stages of approval at the Office of Science and Technology Policy (OSTP) and anticipate that it will be released soon.

Because of the challenges IWG-F faced in finalizing their status report, future IWG-F proposed activities will be very clearly articulated to the Joint Subcommittee on Ocean Science and Technology (JSOST) and approved by JSOST before any work begins. IWG-F has proposed a study to identify the infrastructure required to support future science, which would be broader

than just ships. It would address the entire infrastructure needed to support science objectives and be based on the Ocean Research Priorities Plan (ORPP). As a first step, the study proposes to inventory the facilities currently available. IWG-F project has been proposed to the JSOST and are waiting for approval to proceed.

The Ocean Studies Board (OSB) has made a proposal to do a similar study. OSB and IWG-F will have to determine how to coordinate their efforts if both activities move forward.

Bob Winokur thanked UNOLS for their input to the Fleet Status Report.

**Presentations to Sandy Shor** – On behalf of UNOLS, Mike Prince presented Sandy Shor with a plaque acknowledging UNOLS’ appreciation for Sandy’s service to the Academic Fleet while at NSF. Sandy was praised for the improvements that he implemented to NSF’s Instrumentation and Technical Services program.

*Day one of the UNOLS Annual Meeting adjourned at 1700. An evening reception hosted by UNOLS immediately followed.*

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## **Annual Meeting – Day 2, Friday, October 12<sup>th</sup>**

**Call Day-2 Order** - Marcia McNutt, UNOLS Chair, called day-2 of the meeting to order at 0830.

**UNOLS Elections Results** – Mike Prince reported that there was not a majority winner in the Council election tally and the ballots were not set up for an instant run off. Also, since a quorum of ship operating institutions was not present at the meeting, a run off election will be carried out by email between Doug Biggs and John Morrison and between Nancy Rabalais and Chris Measures.

**Consortium for Oceanographic Leadership (COL)** – Marcia McNutt gave a report on the new Ocean Leadership organization and their future plans. The new organization merges the Joint Oceanographic Institutions (JOI) and the Consortium for Oceanographic Research and Education (CORE). Unlike JOI, COL has elected trustees that represent the community rather than their individual institutions. Eric Barron has been elected as the first Chair of the board of trustees, Shirley Pomponi is the Vice-Chair, and Brian Taylor is the Treasurer. There is an executive committee of about fifteen trustees.

There is a search for a President of Ocean Leadership. RADM Dick West, President of CORE, has announced his intention to retire, but he has been asked to stay on board until the new COL President is in place. A well-qualified set of applicants applied for the COL President position. A small group of candidates have been selected for interviews by the Executive Committee.

COL has proposed that the UNOLS Chair be an ex-officio (non-voting) member of the board of Trustees.

Discussion:

- Bob Knox asked if the new organization would combine the activities of the two JOI and CORE organizations, or would it expand, or head in a new direction all together. Marcia explained that from the beginning, the intent was for the whole (COL) to be more than the sum of the parts. The new organization should be able to accomplish some things that were not possible with the separate entities.
- Jeff Callahan – Is there any linkage between the old CORE membership and the new organization? Marcia – In the last year, there was a big push to have the CORE and JOI members join each other’s organization. There were only three members who weren’t already members of the other organization. The total membership is about 95.
- Peter Wiebe asked about the precautions taken regarding lobbying efforts. Marcia explained that COL has been very careful about this and only unrestricted non-federal dollars would support lobbying.

**COMMITTEE REPORTS** – Marcia McNutt introduced the UNOLS Committee Chairs who reported on their respective activities:

**Ship Scheduling Committee (SSC)** – The SSC report was provided earlier in the meeting. In other SSC news, Stan Winslow was appointed as Chair (to replace Rose Dufour and Liz Brenner) and Liz Caporelli was appointed as Chair-Elect.

**Research Vessel Operators’ Committee (RVOC)** – Matt Hawkins, RVOC Chair, reviewed Committee activities over the past year.

An important activity has been updating the Research Vessel Safety Standards. The revision of the Research Vessel Safety Standards (RVSS) has been a major effort and has taken longer than anticipated. The overall format has been radically changed to reduce ambiguity, fill gaps in the regulations, and to make requirements more binding.

Two new chapters have been added to the RVSS; “Personal Safety” and “HOV Submersible Safety.” The “personal safety” chapter addresses the American’s with Disabilities Act (ADA).

The current plan is to include the newly developed UNOLS Wire Safe Working Load Standards, and the UNOLS Load Handling System Design Standards as appendices to the RVSS. The wire safe working load standards results will be presented at the RVTEC meeting in November. Over the next several months, a comparison of 46 CFR “Sub-chapter U”, American Bureau of Shipping (ABS), and other design standards (ISO, DNV, etc.), will be conducted by Glostren Associates.

The other big issue facing both RVOC and RVTEC is personnel recruitment and retention. This includes both crew and technicians. The two groups have been gathering information and will formulate possible solutions. This is a highly complex issue and a single, simple “fix” is not possible. Creative solutions within current budgetary constraints must be developed.

The 2008 RVOC meeting has been set for April 22-24, 2008 at Old Dominion University in Norfolk, Virginia.

Marcia McNutt asked how the new RVSS would be disseminated and enforced. Dolly stated that the NSF inspections of the ships use the standards as the basis for their inspections.

**Research Vessel Technical Enhancement Committee (RVTEC)** – Bill Martin, RVTEC Chair, reported on RVTEC activities.

The annual RVTEC meeting for 2006 was held shortly after the UNOLS Annual meeting. The meeting was condensed to a one-day agenda because the meeting was held in conjunction with INMARTECH 2006. INMARTECH 2006 had over 120 participants from 14 countries.

The 2007 RVTEC meeting will be held on November 6-8 at Moss Landing Marine Laboratories. The agenda has been posted on the UNOLS website. They have invited Matt Hawkins to discuss Safe Working Loads (SWL).

The Radio Frequency (RF) Subcommittee sent their report to Dr. Peter Wiebe this past summer. Peter forwarded the report to Dr. Otis Brown. The subcommittee, with UNOLS, will work to gather RF Spectrum use information from the scientific community. Jerry Miller asked if the RF survey will focus only on ships. Reply – The purpose would be to expand the survey to all science uses including in water and air.

**Fleet Improvement Committee (FIC)** – David Hebert, FIC Chair, reported on the Committee projects and action item status. His slides are included as *Appendix XII*:

- The FIC is keeping informed on the ARRV, Regional Class and Ocean Class acquisition efforts.
- Ship conversions updates are reported on at each meeting
- Information about the new handling systems performance and status is discussed regularly.
- The Global Class SMRs will be updated with community feedback using the new SMR document template.
- The committee is working to complete the Fleet Improvement Plan
- The ADA Guidelines are drafted and have been reviewed. The document will be finalized with the comments received.
- The FIC Chair stays in regular contact with the OOI Office for updates on status, scope, and timeline.

Dave expressed his appreciation to Terry Whitley (UAF) for Terry's many years of active participation on the FIC. He welcomed David Checkley (SIO) to FIC as the new operator member.

**Arctic Icebreaker Coordinating Committee (AICC)** – Carin Ashjian, AICC Chair, report on the activities of the AICC in 2006/2007. Her slides are included as *Appendix XIII*. The Committee membership list is included in the Appendix.

The AICC was busy in 2006/2007 and activities included:

- December 7-8th, 2006 "Icebreaker Retreat", USCG Base Alameda CA
- January 9th and 10th 2007 - AICC Meeting in Seattle, WA

- Efforts to foster communication between the icebreaker science community and the local Alaskan communities adjacent to the science study areas continue. The 2007 *Healy* Chief Scientists, Dave Forcucci (USCG representative), and Carin Ashjian (AICC Chair) attended the 2007 Alaska Eskimo Whaling Commission Mini-Convention on February 28, 2007 to discuss the *Healy* cruise plans for 2007. Discussions with the AEWCC Chair have been initiated for a similar exchange prior to the 2008 cruises. In addition, discussion continues with the Department of State regarding how to improve notification to local communities of approvals for foreign vessels to operate in US Arctic regions.
- Prioritized science and science space upgrades to *Healy* proposed by Dale Chayes
- Conducted debriefs of *Healy* 2006 cruises
- Monitor and maintain interest in issues relevant to Arctic icebreakers

USCGC *Healy* completed three cruises during the 2007 season: the BEST project from April 10-May 12 (Ray Sambrotto, Chief Scientist – *Healy* 0701), the northern Bering Sea cruise from May 16 – June 18 led by Jackie Grebmeier and Jim Lovvorn, and a Law of the Sea seafloor mapping cruise on the Chukchi Cap/Arctic Ocean from August 17 – September 15 led by Larry Mayer. The *Healy* 0701 cruise included education and outreach activities. Two teachers participated in the cruise (one from NSF’s PolarTREC program and one from NOAA’s Teachers at Sea. Teachers interacted with scientists and shore based web managers to update and maintain web sites throughout the cruise. Scientists and teachers also interacted with local communities via the Aleutian Pribilof Islands Association. All three cruises were very successful, with all chief scientists offering high praise to the ship, the Captain, and the crew. Details about each of these cruises are contained in *Appendix XIII*.

Scheduling of the icebreakers for 2008 will occur in October 2007. At present, it is expected that *Healy* will support spring and summer BEST cruises in the Bering Sea. The ship has also has been requested for Law of the Sea mapping in the Chukchi/Beaufort Seas and some short mooring deployment cruises.

USCGC *Polar Sea* supported the *Oden* during the 2007 Deep-Freeze cruise. USCGC *Polar Star* remains in caretaker status at the USCG Base in Seattle. Plans for *Polar Sea* still not set for 2008. *Polar Star* remains in caretaker status in Seattle.

AICC will meet in Seattle in November 27-28, 2007.

**DEep Submergence Science Committee (DESSC)** – Deb Kelley, DESSC Chair, reported on DESSC activities. Her slides are included as *Appendix XIV*.

The major activities over the past year included:

- DESSC responded to Barbara Moore’s (NOAA) request to host a workshop on the “Future Facility and Infrastructure Needs of NOAA/NURP.”
- Formalized the reporting process for debrief interviews with NDSF users (Chief Scientists)
- Provided comments on a new control van design for *Jason*. The community and DESSC feedback resulted in a van design that offer better interaction between the ROV operator and the science party.
- Solicited nominations for DESSC membership (microbiologist)

- Established an OOI/DESSC liaison
  - Prepared for a workshop on needs of submersibles and robotic vehicles
- Details about these activities are contained in Deb's slides.

Another major activity of a DESSC subcommittee has been establishing Safety Standards for Human Occupied Vehicles (HOVs). All chapters of the Safety Standards have been drafted and are in review. The chaptering include an Introduction, Definitions, Procedures, HOV Operations, HOV Support Ship, HOV Handling Systems, Training of HOV Crew, and HOV Science User Guidelines. The committee is chaired by Dana Wilkes. The membership list is included in the slides.

**Marcus Langseth Science Oversight Committee (MLSOC)** – Mike Prince reported for Steve Holbrook (MLSOC Chair). The Committee met in 2007 and provided input on the *Langseth* shakedown cruise plans. One of the issues that they have discussed is manning for seismic operations. They will provide input on the make-up of the support team as well as determining which responsibilities will be those of the science party and which will fall under the technical support group.

There will be a town hall community meeting for MLSOC at the fall AGU meeting in San Francisco. There will also be a MLSOC lunch meeting.

**Scientific Committee for Oceanographic Aircraft Research (SCOAR)** – Mike Prince reported that SCOAR is without a Chair. Carl Friehe stepped down. ONR has decided that SCOAR should regroup. UNOLS will move forward and send out a call for nominations for a new Chair.

**Recognition of departing Council and Committee members** – Mike Prince recognized the Council and Committee members who have completed terms or stepped down over the past year (*Appendix XV*). He thanked them for their dedicated service to UNOLS.

Departing Council and Committee members included:

- Council:
  - Bruce Corliss
  - Eileen Hofmann
- DESSC: Kathleen Scott
- FIC: Terry Whitledge
- RVOC: Tim Askew (Chair)
- SSC: Rose Dufour and Liz Brenner (Co-Chairs)
- AICC: Margo Edwards
- SCOAR: Carl Friehe (Chair)

***Break***

**Request for Proposals to Host the UNOLS Office** – Mike Prince reported that the Cooperative Agreement to host the UNOLS Office by Moss Landing Marine Office will expire on April 30, 2009. A solicitation for a new host will be announced in early 2008. He urged UNOLS

Members to consider hosting the Office. The term for hosting the Office will be for five years, with eligibility for a second term.

**Regional Class Update** – Dolly Dieter provided additional information about NSF’s Regional Class Acquisition process. NSF’s intent is still to build three Regional Class ships. The funding to support the project is from the mid-size infrastructure account. The mid-size infrastructure budget is typically \$15M per year. Because the Regional Class ships are estimated to cost about \$40M, the acquisition will be a multiyear effort. NSF is still committed to the project, but they will have to determine the optimal way to gather all of the funds needed to build a ship. The revised Regional Class specification placed a cap on the construction cost.

**2007/2008 UNOLS Goals and Priorities** – Marcia McNutt presented the 2007/2008 UNOLS Goals and Priorities as established by the UNOLS Council. Her slides are included as *Appendix XVI*.

The words, “efficiently run” were added to the UNOLS vision statement in reference to the Fleet. The mission statement was unchanged. Three major goals were identified for the upcoming year:

1. Enlarge the group of supporters for the UNOLS fleet both in terms of capitalization and operations.
2. Plan for the UNOLS of the future to meet the fleet and other infrastructure needs of the future.
3. Continuously work to lower barriers to effective use of UNOLS ships caused by disabilities, gender, or other special situations

The major issues challenging UNOLS are: Capitalizing UNOLS, operating UNOLS, and equal access to the fleet.

In terms of capitalization, the Navy’s commitment was reduced from four Ocean Class ships to build two new ships. It is difficult, lengthy process building new ships from NSF sources of funds. Ship procurement is a political minefield with paucity of US shipyards. On the positive side, NOAA was able to acquire and convert an Ocean Exploration ship with a new ROV. Private foundation investment in ocean research has never been higher. The Law of the Sea, ocean observing, etc. means that ships will be needed into the future.

Operating the academic fleet has presented increasing challenges. There are fewer agencies supporting fleet operations. It is difficult retaining a talented group of technical support at sea, with increased needs for high levels of training. There are overall higher costs associated with fuel, SOLAS, Homeland Security, etc. UNOLS will need to consider using the fleet in different, more efficient ways. We need to begin thinking about the “green” environmentally friendly ship of the future.

In regard to the issue of equal access to ships, UNOLS is making progress in ADA access. However, there are still problems with women feeling unsafe and harassed at sea or in ports. This item will be addressed by UNOLS over the next year.



**UNOLS Other Business and Activities of Interest** – Marcia McNutt provided brief updates on other UNOLS activities and issues of interest to the community. Slides are included as *Appendix XVII*.

Subcommittee on Data Management Best Practices – An Ad-hoc Committee has been formed to report on best practices for the collection of data and metadata at sea to promote public dissemination. The membership represents a wide spectrum of disciplines and ship operations across the UNOLS community. The Co-Chairs are Stephen P. Miller (SIO) and Robert Arko (LDEO). The Final report will be provided to the Council prior to their late spring/summer 2008 Council Meeting.

Crew and Marine Technician Retention and Hiring Issues – Matt Hawkins provided a report on this topic to the Council. The recruitment and retention of skilled technicians and crewmembers is a critical factor for ensuring the high quality of UNOLS fleet operations. The ability to attract and retain competent crew and technicians for the fleet is reaching crisis proportions. RVTEC and RVOC are gathering information from operating institutions to generate a list of tangible solutions to the problem. The list will be presented to the UNOLS Council for consideration.

American's with Disabilities Act (ADA) Guidelines and Implementation – Terry Whitledge has prepared a final draft of the ADA Guidelines for UNOLS Research Vessels. The draft document is in review by FIC and the ADA Committee. ADA procedural recommendations are being incorporated into the Research Vessel Safety Standard. NSF inspections of the UNOLS vessels will consider improvements that will enhance accessibility for various impairments.

Science Opportunities on UNOLS Vessels – A UNOLS web page for announcing science and educational opportunities aboard UNOLS vessels is now available: [http://www.unols.org/info/cruise\\_opportunities.html](http://www.unols.org/info/cruise_opportunities.html). Each year, a portion of UNOLS cruises have available space for science and education opportunities. A list of available cruises aboard these vessels will be maintained on the UNOLS website. Chief Scientist can also use the site to recruit "Watchstanders" to assist in their research cruise. Individuals interested in participating on a cruise, can submit an on-line form with information about availability and areas of interest. The UNOLS Office will maintain a list of individuals who are seeking cruise opportunities and will provide it to Chief Scientists/Pis on request.

To date, volunteers have come forward and are looking for opportunities on ships. However, we are still waiting for chief scientists to post opportunities. We need to get the word out. It was suggested that there be a link from the ship time request form to the volunteer page.

R/V M.G. Langseth UNOLS Vessel Designation – The UNOLS Council approved UNOLS vessel designation for R/V *Langseth* with contingencies for successful completions of reflagging, conversion and NSF inspection. The contingencies are expected to be lifted soon. USCG inspections are underway and successful completion is expected soon. The NSF Inspection is planned for early November.

UNOLS Appointments to Committees - Appointments to the UNOLS committees were announced by Marcia McNutt. They included:

- Executive Committee - Marcia McNutt (UNOLS Chair), Vernon Asper (UNOLS Chair-Elect), Deborah Kelley (Council), and Peter Ortner (Council)
- FIC - David Checkley (SIO)
- RVOC - Matt Hawkins (RVOC Chair), Peter Zerr (RVOC Chair-Elect)
- AICC – Steve Hartz (ex-officio: RVTEC rep)
- SSC - Stan Winslow (SSC Chair), Liz Caporelli (SSC Chair-Elect)

UNOLS Brochure – The UNOLS brochure has been printed. It describes UNOLS, the standing committees, the fleet, and facilities. The brochure explains the challenges ahead. It is printed on recycled paper. Contact the UNOLS Office for copies.

UNOLS STR/Scheduling Database - The new UNOLS Ship time Request (STR) & Scheduling Database is up and running, <[http://unolsweb.cms.udel.edu/STRS/Public/diu\\_login.aspx](http://unolsweb.cms.udel.edu/STRS/Public/diu_login.aspx)>. All ship time requests have been entered into the new STR system. 2008 ship schedules are being created using the new system. The STR database will be introduced soon to the science users and will be available for the February 2008 NSF proposal deadline. The technical services information database is in beta testing.

UNOLS Dues Accounting – The 2006/2007 membership dues balance forward was \$850.03. Membership dues collected in 2007 was \$1,800.00. Expenditures were \$3,400.91 (Catering, Room rental, certificates/frames, donations, etc.). The balance forward is -\$750.88. The Council will be asked to consider raising the dues.

UNOLS Calendar and activities at winter conferences – The winter Council meeting is tentatively planned for Feb 7-8, 2008.

***Proteus*** – UNOLS members were welcome to visit the Wave Adaptive Modular Vessel (WAM-V™), *Proteus*, at the Gangplank Marina in Washington DC. Information about the ship is available at <<http://wam-v.com/>>.

***The meeting Adjourned at 1145.***