

Meeting Minutes

UNOLS Council Meeting March 21-22, 2007 (Wednesday and Thursday) Scripps Institution of Oceanography

*March 21st, Wednesday - 8:30AM-5PM in the T-29 Martin Johnson House, La Jolla.
March 22nd, Thursday - 8:30AM-Noon in the Marine Facilities conference room, Point Loma.*

Executive Summary:

The UNOLS Council met at Scripps Institution of Oceanography on March 21-22, 2007. Day one of the meeting included a joint session with the UNOLS Fleet Improvement Committee. Reports and updates on Fleet renewal plans and implementation were provided. The Council will reform a subcommittee to review non-operational ship time recommendations for 2008. A new activity that was initiated during this meeting was to create a subcommittee to inventory best practices for capturing and archiving data and meta-data. The JOI/CORE merger plans were discussed, as well as, UNOLS' role in the new organization. Plans for the 2007 Annual Meeting on October 11-12 were discussed. Dr. Arden Bement, NSF Director will be invited as the keynote speaker.

Action Item List:

#	Task Description	Assignment/Status
1	2007/2008 UNOLS Council slate <ul style="list-style-type: none"> • Confirm Nomination Committee membership and Chair - Bruce Corliss, Peter Ortner and Eileen Hofmann • Solicit Nominations • Present draft slate during the July phone conference 	<ul style="list-style-type: none"> • Marcia • Office • Nom Committee
2	Review Non-Operational Ship Time recommendations: <ul style="list-style-type: none"> • Confirm Ad-hoc committee membership • Request that Agencies working with SSC provide recommendations by July • The ad-hoc committee will review agency recommendations regarding non-operational periods 	<ul style="list-style-type: none"> • Office/Marcia • SSC • Subcommittee
3	R/V M.G. Langseth UNOLS Vessel Designation – Send letter of approval to LDEO with contingencies for successful completions of reflagging, conversion and NSF inspection.	Office & Marcia
4	Annual meeting room - Send an email to NSF on 3 April to confirm the meeting room.	Kate
5	Annual meeting Keynote Speaker - Confirm NSF Director - Arden Bement. (Dolly will check calendar).	Office and Dolly
6	July Council Phone/Web Conference – Week of July 9 th . Confirm data and time	Office

7	<p>UNOLS Office RFP</p> <p>At the July meeting, the Council will address two charter issues:</p> <ol style="list-style-type: none"> 1) Opening the Office host to all UNOLS Institutions (extend beyond operators). 2) Changing the term from 3-year to 5-year to conform to NSF timelines. <ul style="list-style-type: none"> • Include this item on the October Annual meeting agenda - Announce that there will be a solicitation for host institution. 	<ul style="list-style-type: none"> • Office and Marcia
8	<p>UNOLS Representation at JOI/CORE Board meetings – Request that UNOLS Chair or Vice-Chair be invited to participate in on the Board of Trustees meetings.</p>	Marcia
9	<p>Form Subcommittee on Data Management Best Practices - Create a subcommittee to inventory best practices for capturing and archiving data and meta-data.</p> <ul style="list-style-type: none"> • Draft a subcommittee task statement. This can be further refined once the subcommittee is in place • Put out a call for volunteers and ask for a brief statement of their interests and expertise, have they worked with policies and/or procedures. • Have the committee in place by the summer meeting. 	<ul style="list-style-type: none"> • Marcia • Marcia & Office – • Marcia & Office
10	<p>Create a model of a future fleet schedule – Create a model (or models) of future fleet schedules using past schedules as a basis, but include ship time for observatory work. Also model schedules with the O&M for observatories in place of other work. Draft a procedure for the modeling and the assumptions/criteria for Council/FIC review.</p>	Mike Prince
11	<p>UNOLS Brochure – Redraft the brochure. Simplify text and any charts. If charts are included, they should be easily interpreted by the general community. The brochure should have a “forward thinking” tone. It should be printed on recycled paper and state that clearly.</p>	Office with input from the Council
12	<p>Develop Webpage(s) for Science and Educational Opportunities – incorporate FIC suggestions, request Nixon review, finalize.</p>	DeSilva
13	<p>Ocean Class SMRs - Over the next two months verify whether or not these SMRs still represent the community’s requirements. Prioritize the SMRs with input provided by Navy on constraints.</p>	FIC
14	<p>Continue Review of the Post Cruise Assessment Reports (PCAR) - This committee needs some information from Mike</p>	PCAR Committee: Bob Collier (chair), Mary Jane Perry, Matt Hawkins, and Mary-Lynn Dickson.
15	<p>Codes of Conduct - The Impact of Scientific Studies on the Environment – stay informed.</p>	Office

16	Frequency Spectrum Management –RVTEC subcommittee will survey the RVTEC representatives on use of the frequency spectrum. They will liaison and provide input to CORF, Government managers and Otis Brown.	RVTEC
17	RVTEC/PI Communications – Identify mechanisms for improving communications between the RVTEC and sea-going scientists.	RVTEC and Council
18	Articles about UNOLS – Draft articles for EOS and other journals about UNOLS and the need for Fleet renewal	
19	ADA Guidelines for UNOLS Vessels – Draft an ADA Guidelines document for UNOLS Vessels that will address structural modifications as well as provide procedural guidelines.	FIC – Terry Whitledge
20	HOV Safety Standards – Develop a Safety Standards document for HOVs	DESSC Subcommittee on HOV Safety
21	Fleet Improvement Plan Update - Finalize all sections and projections.	FIC & Office

Appendices:

I	Agenda
II	Participant List
III	Fleet Improvement Committee Report
IV	R/V Marcus Langseth and MLSOC Meeting Report
V	Replacement Human Occupied Vehicle Project Status Report
VI	ORION Presentation
VII	Ice Breaker Status Report
VIII	ADA Guidelines Status Report
IX	Subcommittee on Non-Operational Periods in the UNOLS Fleet Recommendations (2007)
X	2007 and 2008 Ship Scheduling Report
XI	JOI/CORE Merge
XII	UNOLS Goals, and Objectives: 2006-2007
XIII	HOV Safety Standards Status
XIV	UNOLS Committee Reports
XV	AICC PowerPoint Slides
XVI	DESSC PowerPoint Slides
XVII	Post Cruise Assessment Report
XVIII	UNOLS Nomination Committee and Annual Meeting

Meeting Summary Report

Wednesday, March 21, 2007:

Introduction - The UNOLS Council met at Scripps Institution of Oceanography on March 21-22, 2007. Day one of the meeting included a joint session with the UNOLS Fleet Improvement Committee. Marcia McNutt, UNOLS Chair, called the meeting to order at 0830 and provided an opportunity for participant introductions. The meeting agenda (*Appendix I*) was followed in the order reported below. The meeting attendance list is included as *Appendix II*.

A motion was made and approved to accept the minutes of the October 2006 Council Meeting (Rob Pinkel/Margo Edwards).

Agency Reports, Budget Projections, Future Fleet Utilization, and Fleet Renewal Activities:

National Science Foundation (NSF) - Dolly Dieter provided the report for NSF. The Agency is working under a continuing resolution at the FY06 budget levels with some increases. There are no new starts under the MRE account, but they have asked for an exception. When NSF gets their final budget authority for FY07, they will have to spend the funds quickly. NSF is optimistic about the FY08 budget, but uncertain about the 2009 budget level, which they are starting work on.

Regional Class Research Vessel (RCRV) Acquisition – NSF and PEO-Ships requested a stop work order on the Regional Class design efforts last fall. The new work specification to resume work by the two design teams is expected within days. The RCRV designs were growing too large and expensive to build or operate. NSF has now put a cap of 155 feet length and made other changes to stay within budget. They have also raised the cap on construction costs. One estimate has the current budget to build these vessels as high as \$40M, which is a number that approaches a level that might preclude using "mid-size" infrastructure funds. NSF will have to review what they can afford. If they have to pursue MRE funds, the project would get delayed. NSF will wait to see what comes from the RCRV design efforts, as this will determine if they can move forward. Until these matters are settled, NSF will wait on the ship operator selection. All of their large infrastructure projects (ARRV, Drill ship, OOI) are behind schedule and over budget. It is not the best time to build ships as there is currently a shipyard boom and everything is more costly. The Ocean Sciences Division of NSF has so many large acquisition projects in the queue that they are under careful scrutiny by the highest administrative levels at NSF.

Alaska Region Research Vessel (ARRV) – NSF held a weeklong panel review for the ARRV design with only one proposal from the University of Alaska, Fairbanks (UAF). The panel did a very thorough job, looking carefully at all aspects of the proposal. A phased approach to the construction and awarding of the funds was recommended. The project must stay close to the budget, because even a 10% overrun would result in an increase of \$10M to \$15M.

Marcia asked if new people with large project management experience would be hired to support NSF in their acquisition efforts. The projects will have to include this type of project management expertise. Dolly replied that NSF is recruiting a new section head and will also hire

an IPA to help with infrastructure project management.

National Oceanic and Atmospheric Administration (NOAA) - Beth White provided the NOAA report. NOAA, like NSF, does not have a final FY07 budget yet. Their Continuing Resolution spending plan must still be approved by the Office of Management and Budget (OMB) and the pertinent Appropriations Committee. They have finalized FY07 allocation plans based on the current understanding of the continuing resolution. The FY07 budget will not support as many operating days for the NOAA fleet or UNOLS charter as in FY06.

The Ocean Exploration vessel, *Okeanos Explorer* is undergoing conversion in Todd Shipyard. It came with an earmark for conversion of \$18M, which is not enough to support the entire conversion plan. Another \$9M is required for a telepresence capability and to complete scientific outfitting. The vessel is expected to be mission ready in July 2008.

V.T. Halter Marine is constructing a \$15.5M SWATH to replace *Rude*, NOAA's smallest hydrographic vessel operating on the east coast. The caterpillar propulsion engines intended for the SWATH were affected by new EPA regulations concerning emissions. The wait for engines that will meet the new EPA pollution requirements has delayed the project by at least 75 days.

NOAA believes the engine problems experienced on the new Fisheries Survey Vessels (FSVs) *Oscar Dyson* and *Henry B. Bigelow* have been corrected and the vessels are now operating. FSVs 3 & 4 delivery is now delayed by a couple months due to the need for VT Halter shipyard to repair structural damage caused by Hurricane Katrina. A third quarter 2008 and 2009 delivery is now anticipated. School naming contests resulted in the name *Pisces* for FSV3 and *Bell M. Shimada* for FSV4.

NOAA is trying to move forward with a shallow water fishery survey vessel design, but has been told by the Department of Commerce that they will need to show solid requirements for the ship in a Fleet Capitalization Plan that is currently being drafted. NOAA is working closely with Commerce and OMB during the development of the Plan in the hope it will meet with success and be provided to Congress.

Office of Naval Research (ONR) - Bob Houtman provided the report for ONR. ONR has an FY07 budget and it is similar to past years. Bob expects that his base budget for FY08 will continue at about \$10M with additional funds from other Navy users.

For 2007, *Melville* was taken out of the normal scheduling and is being used for Navy projects in the Far East. The plus-up money for FY07 has been applied for the extended Navy ship time operations (*Melville*) and the remainder is being split between the University of Washington (UW), University of Hawaii (UH) and Woods Hole Oceanographic Institution (WHOI) for maintenance, ship equipment, etc.

Two Ocean Class vessels are identified in the FY08 budget to be funded in SCN budgets in FY11 and FY12. ONR has sent funds to PEO-Ships to put together a conceptual plan for these ships. They need to put together the project plan and supporting documents to get a milestone A decision by October of this year. ONR will ask UNOLS to assist by reviewing the Ocean Class

SMRs over the next two months and verifying whether or not these SMRs still represent the community's requirements. The Navy will also look at Navy requirements and they will use these to build the documents for the decision A. Jim Cochran asked if prioritization was something they wanted also. Bob indicated that prioritization would be very useful. UNOLS will need information on any Navy constraints to help with the prioritization efforts.

Dolly emphasized that it is important to keep the ship design within constraints. The vessels must have a realistic day rate and construction cost.

Rose Dufour asked Beth White for the projection of the support needs for the Deep-ocean Assessment and Reporting of Tsunamis (DART) project. Beth didn't have the projection available.

Fleet Renewal Plans:

Interagency Working Group on Facilities (IWG-F) Fleet Renewal Plan Update – Bob Winokur provided the report. He began by first mentioning that Congress provided the Navy with \$116M to build a new oceanographic vessel (T-AGS66). The Navy cannot request any additional funds for the ship's construction and must keep the acquisition within the budget.

Bob thanked UNOLS for their help with the Federal Oceanographic Facilities Committee (FOFC) Fleet Renewal Plan. At the direction of the Office of Science and Technology Policy (OSTP) and OMB, the "Plan" will now be a "Status Report." The report went through repeated review processes, and although IWG-F thought that they had accommodated all comments, OSTP and OMB disagreed. In general OSTP and OMB felt that the plan was overly strident and too optimistic.

The Status report addresses the federal fleet through 2015. Any ship that is not in a budget appropriation had to be removed from the plan. Through 2015, the federal fleet stays relatively constant. Past 2015, the size of the fleet is reduced. IWG-F had to move from stating requirements in the report, to stating missions. OSTP and OMB questioned the impact new technology would have on ship demand and asked, "Can technology replace ships?" IWG-F had to address this question, and pointed out that often new technologies do not replace ships, but instead increase demand on ships.

IWG-F is now a subcommittee of the Joint Subcommittee on Ocean Science and Technology (JSOST). IWG-F will provide the draft Status Report to JSOST at their meeting on 22 March.

IWG-F is contemplating what their focus should be next. The IWG-F charter is to address facilities, not just ships. Bob would like to suggest that the Group build upon the Ocean Research Priorities Plan (ORPP) to create what might be called an Ocean Facilities Priorities Plan. The plan would look out 20 years and determine what facilities would be needed to support the recommendations of the ORPP. They would build a report around the themes identified in the ORPP. It would be based on science and agency needs.

Discussion followed:

Marcia thought this was a good strategy because OSTP and OMB were heavily invested in the ORPP. Also NSF put in a lot of effort to make sure that the ORPP was scientifically sound. Using the ORPP would mitigate any comments that it was not appropriate to look at facilities planning out in the future. Putting a facilities plan together with the ORPP will make the whole more acceptable to the community and perhaps to OMB.

Margo Edwards asked if the new icebreaker assets that were recommended by the recently released Ocean Studies Board (OSB) report had been included in the IWG-F Status Report. Bob Houtman replied they were not included by direction because the icebreakers are not appropriated and the icebreaker policy is being developed.

Jeff Callahan asked if the status report would be an annual report. Bob Houtman replied that it would not, but the report would be reviewed at regular intervals.

Beth White mentioned that Barbara Moore had made the case during a recent IWG-F meeting that unique facilities such as underwater habitats (*Aquarius*) should be included in facilities plans. Marcia explained that Rick Spinrad has suggested an interagency review of major facilities to determine their demand and support needs, as well as, how they might be shared among the agencies. The review could evaluate which facilities are truly unique and what their demand is. Those facilities with low demand would be removed from consideration. The study would help establish the real facility priorities on an interagency basis.

Bob Winokur said that there are members of the IWG-F who think the IWG-F should address satellites. Bob feels that these are already covered by other groups and it is something that he doesn't want to deal with.

Mary Jane Perry asked if facilities such as Toga-Tao arrays and ocean observatories would fit into the facilities. Bob Winokur thought that the Toga-Tao arrays and other in-place arrays would be included, but is undecided as to whether observatories should be included. The boundaries on what facilities the IWG-F addresses will have to be defined.

Marcia thought that it might be a good idea to let new facilities like observatories develop more before becoming part of the agenda for UNOLS and IWG-F.

Fleet Improvement Committee (FIC) Meeting Summary and Fleet Improvement Plan Recommendations - Dave Hebert (FIC Chair) summarized the FIC meeting that was held just prior to the Council Meeting. His slides are included as *Appendix III*.

The FIC spent much of their meeting discussing the Fleet Improvement Plan (FIP). Dave showed the FIP table of contents and the project website. The FIC has been having phone conferences about every two weeks since October to review the Fleet Plan.

The IWG-F fleet status report will be used by FIC as the baseline for the minimum fleet requirements in the Fleet Improvement Plan. FIC would then articulate what they felt the requirements were beyond the minimum based on scientific demand.

Through a series of slides, Dave showed how the projections called for in Figure 17 of the 2001 FOFC Fleet Renewal Plan have changed over the years. Figure 17 is a projection of ship construction through 2020. The 2001 Plan included “gray” ships, which were ships that UNOLS had recommended for construction (if the budget could accommodate them). These ships have been removed by the IWG-F status report. The seismic ship moved forward from 2018 to 2007 with the acquisition and conversion of R/V *Marcus Langseth*. The ARRIV funding and projected construction will take longer than originally planned and it will not enter the fleet until 2010. Dolly cautioned that the ARRIV is not in the MRE approved budget yet. She projected that the ARRIV would not operate until 2011. The Ocean Class ships have been reduced from a total of four to two ships. The revised Figure 17 shows a scaled back renewal plan.

Dave explained that to be consistent with the IWG-F status report, they would consider a ship to be operational for a full year even if it only operates one day in that year. However, there are still some differences between IWG-F and UNOLS in ship service dates (see Appendix III, slide 8). The UNOLS dates are based on the latest available information. The timeline shows the new UNOLS dates for ships beginning operation. These dates will continue to change, for example the ARRIV will probably enter the fleet in 2011 at the earliest.

The FIC members spent a lot of time discussing the UNOLS Fleet Projections, which always get a lot of attention. In the past, the FIC had used the averages of past years of utilization as the projection. They are now considering either flat line or curve projections to evaluate various scenarios. The committee would also like to point out that during the summer months, ships are often used to full capacity to meet demand.

The chart showing a comparison of today's fleet with the fleet of 2025 was reviewed and options of looking at the fleet at points other than 2025 should be considered. For example, the IWG-F status report only projects to 2015, so that might be a year to consider.

Other items discussed that are related to the need for additional ships beyond what are included in the IWG-F status report include items such as the Ocean Commission reports, the ORPP, and new initiatives related to global climate change (see *Appendix III* for additional items).

Dave reported on new ships that the Fleet Improvement Plan might recommend that include a vessel between the Regional and Ocean Class size, a Regional Ship that can meet all of the desired SMRs (Intermediate size), and another Global Class vessel.

The FIC also reviewed Service Life Extension Program (SLEP) recommendations and costs. The bottom line is that there is some flexibility that would allow vessels to operate beyond the currently stated retirement dates. The Intermediate Class SLEPS do not enhance science capabilities and these ships will still not meet the Ocean Class SMRs. (See slides for other SLEP constraints)

Toby Garfield pointed out that the Intermediates and Regional ships will be well over thirty years old soon, and given the nominal ten-year timeline to get new ships online we have a real problem facing us. Dolly said that the agencies were all well aware of this problem. In some cases some of the work in the ten-year timeline has already begun, and there is flexibility due to

the material condition of the vessels in the fleet.

Dave showed the changes in the FIC membership. Jim Cochran is finishing his first term. A motion to reappoint Jim Cochran to a second FIC term was approved unanimously. Nominations to replace Terry Whitlege will be entertained as he is finishing his second term. They will be looking for a biologist.

Beth White asked if there has been any thought on people support. New ships with advanced technologies will require a different skill base. Marcia McNutt replied that the Marine Technology Society visited MBARI to discuss this issue. They are very concerned with this and are beginning to address it.

Facility Design, Construction, and Conversion Efforts

UNOLS Facilities:

Marcus Langseth Conversion Status - Steve Holbrook reported on the first official Marcus Langseth Science Oversight Committee (MLSOC) meeting, which was held earlier in the week on March 19-20 in Galveston, TX. His slides are included as ***Appendix IV***. The R/V *Langseth* is docked in Galveston and the MLSOC had an opportunity to tour the ship and observe the conversion effort. Steve reviewed some of the major changes to the ship, which include the starboard side deployment deck and the marine mammal observation tower.

The terms of reference for MLSOC include providing state-of-the-art seismic acquisition capabilities. This goal is probably unrealistic because the capabilities have been reduced by removing half the seismic equipment from the ship, however, the facility will be near to state of the art.

Other goals are to lower the threshold of expertise needed for users of the seismic facility and to increase the quality and accessibility of archived data.

Steve reported that the first meeting was very productive and to some extent was a handing off from the Ewing Replacement Oversight Conversion Committee (EROCC) to the MLSOC during this joint meeting. The committee is very broad based with representation from industry, marine mammal expertise, and general oceanographic people.

The key issues covered during the meeting include:

- Staffing - Staffing of cruises for four different scenarios such as 3D, 2D, OBS deployment with guns only, and general oceanography were considered. The committee felt that it was critical to provide adequate staffing, especially for 3D cruises. The model of just having a science officer will not work.

Shipboard processing needs were discussed. Navigation is crucial. Real-time brute stack capability is required. Hardware and software will be in place, but not necessarily the onboard processing staff. [Brute stack is a processed seismic record that contains traces (seismic data

recorded for one channel) from a common halfway point between a seismic source and a receiver at the Earth's surface. The traces have been added together from different records to reduce noise and improve overall data quality. A brute stack will allow a first cut look at the data.]

- Lowering the threshold for user expertise was discussed. This will be difficult, but important.
- Shakedown cruise - The cruise plan is extremely tight and some rearranging was discussed. There was some danger of not getting the 3D test portion done to the point that a 3D image data could be obtained to verify that everything works properly.
- Marine Mammal Observation (MMO) - LDEO and NSF will take the lead on this. R/V *Langseth* will be proactive and be a prime MMO platform. Five full time observers will be on all seismic cruises.
- Ombudsman role – The MLSOC will work to liaison between the facility operator and the community. They will communicate via a web site, AGU town hall meetings, and direct contact with future and past PIs.
- Long range planning – This will be difficult, but the committee will communicate pending research sites to the community. They will try to avoid long transits.

R/V *Langseth* Conversion Status - John Diebold continued with a report on the ship's conversion status. The ship is finally in Galveston after delays moving the ship out of the shipyard in Nova Scotia and getting approval from the Coast Guard to transit to Galveston.

LDEO will conduct multi-beam calibration, dynamic positioning (DP) calibration and an NSF inspection before conducting a combined testing and calibration cruise. They have about two and a half months before they need to get underway with an ambitious plan for completing all required conversion and outfitting tasks. There is a lot of work left on the ship interior. Most of the exterior conversion work has been completed.

Lab outfitting is just beginning. John showed a picture of the main lab. Much of the overhead, joiner work and flooring work that should have been done in the Nova Scotia shipyard, will have to be done now in Galveston at the same time as the outfitting. There are a lot of challenges, but they have a plan to move forward that was developed by the industry people that now work for LDEO. All of the LDEO technicians are at the ship and assisting with the outfitting. Jeff Rupert (LDEO) will be the ship's scheduler.

Rose Dufour asked what the ship's day rates would be for the various seismic operations. John replied that they have not done the final calculations yet. The 3D operations will require additional people and fuel. Ship operation costs are expected to be about \$33K per day. The cost for 2D seismic is expected to cost an additional \$12K per day, and slightly more for 3D seismic.

UNOLS Vessel Application - Mike Prince reported that LDEO has submitted an application to approve the R/V *Marcus G. Langseth* as a UNOLS vessel with contingencies for reflagging, conversion completion and a successful NSF inspection. The application was distributed to the Council prior to the meeting. Mike explained that in the past, applications have been approved conditional upon the successful completion of the contingencies and the appropriate correspondence to indicate that the contingencies no longer exist. Often the NSF inspection is carried out just prior to science operations. A motion was made to approve the R/V *Marcus G Langseth* application for UNOLS vessel status conditional on the contingencies being removed (Ortner/Corliss). The motion passed.

Replacement HOV Status – Bob Detrick reported on the status of the Replacement Human Occupied Vehicle (RHOV) project. His slides are included as *Appendix V*. The first phase, fabrication of the personnel sphere, is moving forward with Southwest Research Institute as the contractor. Testing of the hull titanium has been completed. The hull Preliminary Design Review (PDR) was completed in December 2006. In February, the Replacement HOV Oversight Committee (RHOC) met and decided to move forward with the project. Detailed design has started. Ingot production of the titanium began in March. The titanium was purchased last year to lock in the price (titanium prices have tripled in the past few years). A new hull forging process will be used and a slide showing the various steps was presented. The timeline for Phase 1 was reviewed. The forging process will take a year to complete. This will be followed by machining and welding. The hull is expected to be complete in 2009.

Next Bob discussed Phase II of the project, which is for vehicle design and construction. WHOI issued a Request for Proposals (RFP) for the vehicle design in November 2006. The RFP was sent to seven potential offerors, but only two proposals were received. The decision was made to cancel the RFP because the bids were too high. WHOI has explored options to reduce cost. These are outlined in Bob's slides. One option was to revise the contracting strategy, which is how WHOI is moving forward. Under the new strategy, they will negotiate the price for detailed design, fabrication, and testing six weeks after completion of the vehicle PDR. They will include a clause that allows WHOI to cancel the contract based on the estimate. There will be more collaboration between WHOI and the Contractor in developing the Statement of Work (SOW), providing a clearer understanding by both parties. WHOI just received approval from NSF to move forward with the revised RFP.

Bob reviewed the RHOV timeline. They hope to have the vehicle fabrication bids by the end of May. Design and costing will take about four months and would be followed by the decision on whether or not to move forward with the project. The personnel sphere would be integrated with the vehicle in early 2009 and system tests would take place later that year. If all progresses on schedule, the RHOV would be ready for science operations in 2010.

Dolly added a few comments. It was decided to go ahead with the sphere construction despite the possibility that they won't build the RHOV because of high costs. This is because the sphere could be used to improve the *Alvin*. The *Alvin* would have better capabilities with the new hull, but would not be rated for deeper depths unless *Alvin's* foam was replaced. NSF Contracting is heavily involved with this project and they are comfortable with this approach.

Non-UNOLS Facilities:

Ocean Observatories - Bob Detrick provided a status report on the Ocean Research Initiative Observatory Network (ORION) and the Ocean Observatory Initiative (OOI). His slides are included as *Appendix VI*. Bob presented the OOI Funding Profile. OOI was slated for a FY07 start, but that is still under negotiation. The continuing resolution will not allow new starts under the Major Research and Equipment (MRE) account. OOI is in the FY08 budget.

One of the issues that came up during the FIC meeting was operation and maintenance (O&M) support funds for OOI. Bob explained that there is money in the MRE account for ship time to install the observatory; however, O&M ship time requirements will not be funded from the MRE account. O&M funds would come from the normal Research and Related Activities (R&RA) OCE funds. Bob's slides show the budget timeline for funding OOI.

The components of OOI are Coastal, Regional Cabled Observatory and Global Arrays. A series of slides was shown that outlined the scope, changes and potential budgets for each component.

Regional Cabled Observatory (RCO) includes two stages. Stage I is the Neptune Canada section, which is funded separately. Stage II is the NSF funded section, which is now down to four nodes from the original fifteen.

The Global Scale Observatory includes six sites that would focus on remote, high latitude sites where observations are scarce and hard to come by. There are five discus buoys that send data back through telemetry. There is one SPAR buoy in the mid Atlantic that would have power generation capability.

Coastal arrays includes the Pacific Northwest Endurance Array off of Oregon and Washington and a Coastal Pioneer Array on the east coast that would include moorings, gliders and Autonomous Underwater Vehicles (AUVs) to provide a 4D view of a block of the coastal ocean. This array is moveable.

Details about each of these types of observatories are included in *Appendix VI*.

Bob provided the status of OOI planning (see slide). The ORION office is moving ahead with the hiring of Implementing Organizations (IO). The RCO IO is in the final review stage and is expected to be awarded in March 2007. The Cyber-infrastructure IO is under review and an award is expected in April 2007. The Coastal/Global IO award is planned for August 2007. According to the FY07 schedule timeline, construction proposals will be submitted in late 2007 followed by a design review and National Science Board (NSB) approval before money could be spent starting somewhere in 2008.

In other supporting activities, the MARS cable has been laid and the trawl resistant node will be installed by the end of March 2007. The MARS commissioning is planned for September 2007, which represents a major milestone. Neptune Canada plans are on schedule for operation in 2008.

In concern over the projected OOI budget, NSF placed a cap on the O&M budget of \$50M. In response, some de-scoping of the project was done to stay within the \$50M limit. Bob explained that this was a big challenge and more of a constraint in terms of the final OOI design. These O&M constraints were particularly restrictive for the Global arrays and the Coastal observatories. The basic result of de-scoping is fewer nodes.

Mary Jane Perry made the comment that it seems necessary to look at where geographically the installation ship time would be needed, how much time is needed, and what types of platforms are required. As UNOLS considers vessel retirement dates, the OOI facility needs must be considered. Dave Hebert showed a table that had been presented during the FIC meeting <http://www.unols.org/meetings/2007/200703fic/200703ficap_03.pdf>, slide 18. The table provides estimates for potential utilization of UNOLS vessels to install and then maintain the various OOI components. The table was compiled with the latest information provided from the ORION office. It lists the types of vessels that could support the work. The total O&M days are estimated at around 259 per year.

Marcia made the point that as OOI moves forward, UNOLS will need to build in flexibility into ship scheduling to allow event response, or response to a problem with a remote (or even nearby) component of the observatories. We will also have to look at flexibility on the part of scheduled PIs if an observatory component needs to be visited by a ship nearby. Use of other assets such as NOAA and foreign ships should also be evaluated. If flexibility cannot be accommodated, the observatories will have to face down periods.

USCG Icebreakers - Margo Edwards, past Chair for the Arctic Icebreaker Coordinating Committee (AICC) gave a brief status of the USCG icebreakers. Pictures of the ships and multibeam data are provided in *Appendix VII*. USCGC *Polar Sea* supported Deep Freeze in 2007, together with the Swedish icebreaker *Oden*. The *Polar Sea* departed Seattle Nov. 18 and arrived at McMurdo on January 1, 2007, a few days after the *Oden*. Favorable offshore wind conditions blew ice out of the ship channel, making operations easier. *Polar Sea* is expected to arrive back in Seattle in April 2007. *Polar Star* remains in caretaker status at the USCG Base in Seattle.

USCGC *Healy* completed her dry dock period in February and conducted sea trials March 1-3 and a shakedown cruise from March 8-16. The AICC participated in a shipyard visit and looked over the hull, fuel tanks, and multibeam system. The multibeam system has been problematic on *Healy* where the more ice you have, the more problems you have. Margo showed multibeam data to support the need for a system upgrade. In the next couple of years, the hope is to have a new multibeam. SAIC has been awarded a contract to look at what multibeam would work best on *Healy*. They had hoped to see how the EM122 would work on *Oden* in the ice this year, but the delivery is behind schedule.

Healy will sail in early April for Dutch Harbor to start the 2007 science missions. Three cruises have been scheduled: the BEST project in April-May; a northern Bering Sea cruise in May-June; and a cruise in August-September on the Chukchi Cap/Arctic Ocean. The gap in the schedule has not been filled and *Healy* is scheduled to return to Seattle between the 2nd and 3rd cruise. It is ironic that in the International Polar Year (IPY) July and August are open on *Healy*'s schedule.

American's with Disabilities Act (ADA) Guidelines – Terry Whitley, Chair of the ADA subcommittee, reported on the ADA workshop and the status of efforts to draft ADA guidelines for research vessels.

At the request of NSF, the UNOLS subcommittee was asked to draft ADA Guidelines that would address structural modifications and improvements as well as procedural guidelines for at-sea research operations by seagoing scientists with disabilities. The Committee's first task was to draft preliminary ADA design guidelines to be used in NSF's Regional Class Acquisition effort. Because of the RCRV's smaller size, implementing ADA structural modifications would be more challenging as compared to the larger vessels of the Fleet. One ADA stateroom on the main deck is recommended that could be converted for general use when there is no one in the science party with a mobility disability. Some modifications that would improve accessibility for visually or hearing impaired could be implemented easily and with low cost. The Regional Class ADA Guidelines were completed and provided to NSF in early June 2006. *Appendix VIII* provides the draft Regional Class ADA Guidelines.

To assist in the task of generating general ADA guidelines, a workshop was convened on September 18-19, 2006 at Woods Hole Oceanographic Institution (WHOI). The workshop provided an opportunity to discuss and review the proposed guidelines that had been drafted by Terry Whitley, as well as test the practicality of the procedural guidelines and identify any additional ADA recommendations. Workshop participants included ship operator representatives (captains, marine superintendents, crew, and marine technicians), agency representatives, Naval Architects, the UNOLS Risk Manager, a representative from the U.S. Access Board, and sea-going scientists including those with disabilities.

As part of the workshop, a tour of R/V *Knorr* was provided. The tour was very instructive in identifying the challenges for persons with disabilities. Some of the workshop science participants and one of the crewmembers are people with vision, hearing, and mobility disabilities. Obtaining their perspective on operations aboard a ship and responding to various situations was extremely useful. It was quickly realized that some of their suggested solutions to accessibility issues would enhance safety for all people on board the ships, such as improving markings and the visibility of hazards and the use of a buddy system for emergency situations.

The workshop findings reveal that many hearing and sight disabilities can be accommodated with modest cost and little to no redesign. Some examples include:

- Adding warning tactile stripping at the base and top of ladders and on weather deck edges.
- Extending railings at both the top and bottom of ladders.
- Providing adequate lighting in all areas, especially at ladders.
- Minimizing trip hazards by use of high contrast coatings.
- Reducing passageway obstacles.
- Implementing audio signals (door open/close, etc).

Many of the modifications that are required to accommodate mobility disabilities will be more difficult to implement on existing vessels because they could involve structural modifications to passageway widths, room size and layout, and ladders/stairs. It is better to implement these

structural ADA features in the initial ship design. As for the Regional Class ships, one ADA stateroom is recommended for the Ocean and Global Classes. There is a better chance of implementing a lift system on these size vessels, which would allow the ADA stateroom to be in locations other than main deck. John Diebold asked if the subject of specialized berthing vans had been suggested. Terry stated that it had, but was not discussed in detail. ADA access to vans in general was of concern and would need further evaluation.

The Workshop participants recognized that there are many procedural issues that would best be addressed by the UNOLS Safety committee. These relate to pre-cruise planning, at-sea operations, and emergency procedures. The workshop participants recommended that ADA procedural issues be addressed as a new section of in the Research Vessel Safety Standards (RVSS).

The workshop identified challenges that still need to be addressed. One of the biggest challenges in accommodating mobility disabilities is with egress to the ship and the gangway. Portable/temporary accommodations (people-rated personnel cages) for dockside access could be considered and further evaluated.

Once finalized, the general ADA guidelines for research vessels will be provided to the Fleet Improvement Committee for incorporation into the research vessel Science Mission Requirements (SMR). Sections of the ADA report can be extracted for inclusion in the SMRs to address ADA design requirements.

Terry Whitlege is working to incorporate the workshop recommendations into the draft ADA Guidelines for Research Vessels. The revised document should be ready for review soon.

Mary-Jane Perry asked if emergency evacuation procedures were discussed. Terry said this was a lively discussion at the workshop. Modifications to immersion suits will also be needed to allow use by disabled individuals. It was suggested that Alaska Cruise lines be contacted for “Gumby” suit suggestions. The steps that should be taken after evacuation must be well defined. Some of these details will need to be addressed in shipboard procedures.

Lunch Break

This concluded the joint meeting of the FIC and Council. The Council meeting continued.

2007 Recommendations on Ship Lay-Ups and Early Retirements – Mary Jane Perry provided the Ad-hoc committee report on their 2007 recommendations on Ship Lay-ups and Early Retirements. Her slides are included as ***Appendix IX***. The Ad-hoc committee included Vernon Asper (Chair), Eileen Hofmann, and Mary Jane Perry.

For 2007, one vessel, *Cape Hatteras*, was recommended for a full year lay-up, but as it turned out, additional Gulf of Mexico ship time requests, resulted in the ship operating with a partial schedule. Several vessels on the east and west coast were recommended for partial schedules. From a budget perspective, laying up a ship for the entire year is most effective, but from a science perspective full lay-ups are not good since peak season ship demand would not be met. As a result, in 2007 it was necessary to operate all of the vessels (even with partial schedules) in

order to meet the science demand with many projects in “peak” season and widely dispersed locations.

The sub-committee recommendations had been circulated to the UNOLS membership prior to the Council meeting and four ship operating institutions responded. One issue of concern was whether or not it made sense to remove special purpose vessels from the candidates for ship lay-ups. The subcommittee recommends that the “Meeting Science Needs” criteria be applied without any prejudice to type of work or ship required. Consideration should be given to past and potential delays to projects that might result from scheduling decisions and give precedence to projects that have been waiting longer for available ship time.

Another concern regarded “Sharing the Pain” and that laying up ships for long periods of time has a negative impact on personnel. Lengthy partial schedules in two adjoining years can be comparable to a full year lay-up in terms of the impact on crew. The subcommittee suggests that "sharing the pain" be considered on a multi-year basis.

Discussion centered on what the timeline should be for getting non-op recommendations drafted and then reviewed. The subcommittee recommendation is to use their review process earlier in the scheduling process with a target of having initial non-op recommendations by July. The July target would allow for getting May panel decisions, Navy and NOAA requests are better known, and Letters of Intent (LOIs) have been reviewed at least once to see where the weaknesses are. Earlier discussions will provide opportunities to explore alternate solutions before the process progresses too far to be changed. The subcommittee recommends that the agency program managers in conjunction with the UNOLS Scheduling Committee provide a set of plans for utilization of the UNOLS Fleet for 2008 in the July timeframe. In turn, the UNOLS Council Ad-Hoc committee would work to provide feedback within a month.

Rob Pinkel asked if UNOLS vessels could be used to meet commercial ship time needs. This provoked some lively discussion about how this would not be allowed in most cases and would be counter productive. There could also be hull insurance issues. In some cases commercial work might be possible, such as when an industry has a strong need for the asset.

Marcia will think about who the members of the ad-hoc committee should be for this coming year and make recommendations during Day 2 of the meeting.

UNOLS Fleet 2007 schedules, estimated operation costs, and 2008 ship scheduling – Rose Dufour, Ship Scheduling Committee (SSC) Co-chair, provided the report on 2007 schedules and projections for 2008. Her slides are included as *Appendix X*.

Rose explained that there were changes during the past year that affected the ship schedules, taking us from dire circumstances to something that ended up better than the 2006 utilization and no ships laid up for the full year. This increase in total ship usage was the result of several factors:

- ONR adding support to the Navy owned assets.
- NSF internal monetary shifts i.e. transfer 2008 BE ship funds into 2007 and anticipated carry forward.

- New NOAA/DART and foreign work.

Slides showing a comparison of what the 2007 ship time levels were by ship in July 2006 and compared with March 2007 were presented. The Global Class ships are in much better shape. In March 2006, projections called for the lay-up of two Global ships.

There are still some unresolved issues for 2007:

- Venezuelan clearance for *Seward Johnson*- Daley
- Indonesian clearance for *Revelle*- Goldfinger
- Mexican clearance for *New Horizon* -Umfoeher
- *Langseth* schedule- actual sailing date?
- NUWC work on *Thompson*- RFP has been released with no guarantee that UW will get the work

Early 2008 ship time projections estimate 3594 ship days. This is roughly the equivalent projection seen last year at this time for 2007 ship days, before the ship time additions were realized. In many cases the ship time additions made to the 2007 schedules will not be duplicated in 2008. A chart showing the funded and pending 2008 requests by agency with associated operating costs was presented.

Rose stated that the recommendations for ship lay-ups need to be considered early on in order to give the scheduling committee focus. She presented the 2008 scheduling time-line. Schedulers will work to complete their Letters of Intent (LOIs) by May 15th. Ship schedulers would meet (or teleconference) by mid to late June. In September, all schedulers would meet at NSF to finalize plans.

Dolly commented that there is a lot of concern within NSF that the facility to science funding ratio is getting to high.

The ship scheduler should keep searching for “outside” sources of money and work. The large-scale programs in the future will require the use of the UNOLS assets, but to bridge the gap during lean years, it also requires that the fleet consider ways to stay operational and economical.

In other Ship Scheduling Committee (SSC) topics, Rose stated that they would like to recommend a change in tenure of the SSC chair and vice chair so that the vice chair automatically rotate into the SSC chair position.

Rose reported that as a mapping tool that Department of States’ Geographers recommends: <<http://www.vliz.be/vmdcdata/marbound/>>, a reference book: Prescott and Schofield, Maritime Boundaries of the World, 2nd edition. The cost for the book is \$213 on Amazon.

Consortium for Oceanographic Research and Education (CORE) and Joint Oceanographic Institutions (JOI) Merger – Marcia discussed the future joint organization of CORE and JOI and implications for UNOLS. Her slide is included as *Appendix XI*. JOI and CORE were formally one organization under JOI with ADM Watkins in charge. When ADM Watkins was increasingly interested in the JOI organization being involved in advocacy, he and the Board

decided to form CORE for the role of community advocacy, education and community outreach, while JOI operated the drill ship. They now believe that the two organizations should be reformed as one again. JOI has taken on the OOI program. CORE has taken on a number of community education and research programs such as the Ocean Science Bowl, NOPP, and advocacy with Congress. This has created a somewhat artificial divide between the two parts. Forming a new organization would better align community needs and advocacy.

The plan is to elevate ocean issues to a higher level, speak with one voice, become expert in program management, public outreach, etc on behalf of the community. They would not expand their staff to replace the educational and research expertise in the community, but instead they would staff the organization with experts in creating coalitions of larger community wide initiatives and managing them. They will engage industry, government, and NGOs in addition to the core academic members.

There will be a new governance structure with an elected Board of Trustees. The elected board of trustees will be from a slate of nominated trustees that would represent the broader community. They would presumably elect those that the membership felt would best represent the overall community. There would be twelve seats that are open to representatives from all member institutions, which number around sixty. There will also be three at-large slots that are likely not from the member institutions and may come from industry, or other outside sources. The At-large reps would be selected to bring in outside perspectives. This should help with the perception that the organization is looking after the welfare of the community as a whole rather than an insiders club.

The Board of Trustees will have committees for different projects such as for OOI, the Drill Program, NOPP, etc. Marcia thinks that UNOLS needs to start thinking about how UNOLS will get UNOLS information flowing into this new structure. One thought would be to ask very early on to have the UNOLS Chair or Vice-Chair be invited to give a report to the Board of Trustees and sit in on the board meetings as a regular participant.

There will be a search for a president of the new organization and the president will be selected by a search committee and the Board soon after forming the new organization. The staffs of JOI and CORE would be merged to some extent. Bob Gagosian has been the integration champion, putting together the plan for the merger. Board members would serve three-year terms and could be re-elected for one additional term. Initially, board members would be elected into three different categories with shorter terms for some in order to provide for staggered terms.

Clare Reimers asked where the National Association of Marine Laboratories (NAML) fits into all of this. Marcia replied that NAML has stayed in touch with what is going on and there will be a committee of the new organization that will be focused on these other community groups. UNOLS might also be involved in this group, but should be involved at the top level as well.

Marcia would like to see UNOLS issues higher on the agenda and given consideration in decisions about advocacy and public outreach. Marcia is currently the Chair of the JOI Board and can introduce the idea of having UNOLS participate in their meetings. A meeting is planned at the end of the May.

The merged organization will have a new name and will be incorporated in Delaware.

Mary Jane Perry asked if there would be different classifications of membership. Marcia replied that there is, but it will be between academia and industry. Industry membership cost will be high.

Break

New UNOLS Web Page - "Watchstander Opportunities" - Annette DeSilva reported that she created a draft template for a web-based set of pages that would allow Principal Investigators to post calls for watch keepers, as well as, education and outreach cruise opportunities. The site also allows individuals who are interested in participating in a cruise, to submit a request. A list of these individuals would be available by request or in a password protected area. Once the draft web pages are complete they will be circulated for review.

UNOLS 2006/2007 Issues and Objectives – The Council reviewed and discussed the status of this year's objectives <<http://www.unols.org/info/issues.html> - objectives>. The issues and objectives are contained in ***Appendix XII***.

Under scheduling and utilization, issues related to retirement of research vessels and planned retirements as it relates to fleet renewal and better utilization of the fleet have been discussed extensively by FIC and Council. If fleet renewal relies on NSF for any increases, the options are limited. The Navy will provide two new vessels and we can expect no more. Including new platforms in NSF's MRE accounts is not an option for at least five years. OCE and GEO have hit the MRE account hard in recent years with quite a few projects. The price for the Regional ships with full outfitting is up around \$40M, with \$25M to build the basic research vessel and \$15M for university oversight, outfitting, delivery, etc. NSF cannot ask for cost sharing, but institutions could offer it up. Also, States could help with the costs of these renewals. Marcia asked if there was any hope of re-engaging the Navy beyond the two ships that they have committed to. Bob Houtman replied that in the current climate, no. He considers the community to be very fortunate to have achieved the recommendation for the two vessels. There is a lot of other demand for navy dollars.

Marcia suggested that utilization and scheduling impacts should be modeled with the changes in the fleet composition (retirements and increased demand). The model should consider the types of work that are expected in the future (OOI) and show how they fit. The model should represent a future schedule that includes current demand, OOI demand (and locations), with the retirement of ships. The model could help make the case for renewal efforts going forward and also help to make informed decisions about whether or not to retire ships on schedule or to change the retirement dates. Marcia requested that Mike Prince create a modeling method and to obtain feedback from Linda Goad, Bob Houtman, Ralph Rogers and the scheduling committee. He should work with JOI/CORE to identify out-year facility requirements.

Another area that should be explored was in methods for better serving the requirements of NOAA and ONR programs and to better align NOAA funding processes with the UNOLS

scheduling and proposal process. Beth White commented on NOAA's scheduling process. The FY10 planning process is beginning so as to better matrix NOAA with mission goals that run across the different offices. Ship time requirements are going up and people are getting better at justifying their requirements. The agency is looking harder at their priorities. There is a very large requirement for inundation mapping in bays and estuaries. Mapping fish habitats and characteristics are needed. Full water column and bottom mapping will be required. NOAA is a mission agency; you will never see fisheries and mapping requirements go away. Climate and ocean acidification will be drivers for ship time and R/V *Ron Brown* provides this to some extent. There are laws and acts (Magnuson Stephens Act) that are being re-enacted that will demand ship time.

Bob Houtman provided comments on the Navy's future ship time needs. The main drivers are the DRI programs, which are somewhat cyclical with big field years and then data processing years. They would like to get these more leveled out over the years.

Next the Quality of Fleet Operations was discussed. Recruiting and retention of skilled and experienced technical personnel and crewmembers is extremely important to successful science operations. Finding people with the skill sets necessary will be more and more difficult.

Fleet Renewal – The UNOLS Fleet Improvement Plan is being worked on actively and will articulate the UNOLS Vision.

Communications, both internal and external to UNOLS were discussed. Members of RVTEC still feel that they are not as informed as they should be. Also, too few people in the academic or congressional ranks really know what UNOLS is or what it does. Better communication of important issues to the broader science community is needed. The new UNOLS brochure under development should be in place by the fall when the new CORE/JOI organization meets. Articles in EOS and other journals by committees, the UNOLS office, or individuals would be helpful. There is the issue of how do we get people to pay attention to the important UNOLS information (such as Fleet Renewal) that is being made available. Mike Prince explained that we try to provide the information by newsletters, web postings, meetings, and presentations. Rose stated that in-person pre-cruise meetings help to address specific fleet operation plans and information. All agreed that this is the most effective means of communications since the meetings include the marine superintendent, the technicians and the scientists. It was commented that email, websites, and other forms of mass communication are becoming less and less effective.

Data management was addressed next. The Ocean Observatory Initiative will be a driver in this trend. LDEO (Suzanne Carbotte) and their Seismic Facility are addressing data management issues. Metadata and a complete inventory of the samples collected during the cruise (with location) are included in their inventory. This effort is coordinated through RIDGE. Marcia suggested that a UNOLS subcommittee look at best practices and inventory how different types of data and samples are being dealt with, which are being handled well and how, and which need more work. MBARI maintains a database for samples that are collected. The database is for MBARI research use. Bill Martin commented that Dale Chayes made a presentation to RVTEC on how archiving of data will be handled in the future. UW sends their non-proprietary data to

LDEO. Other institutions collaborate on this as well. Beth White stated that NOAA would like to participate on this effort if a committee is formed.

UNOLS On-Going Activities:

UNOLS STR/Scheduling Database – Mike Prince explained that a beta test of the new Ship Time Request and Scheduling (STRS) system is ready for launching. All of the funded ship time requests have been entered into the new system and Mike is in the process of entering the pending programs.

Mike will hold a series of scheduling tutorials for the ship schedulers. As training, they will each be asked to duplicate their 2007 schedules in the new system. Then they will be asked to create their 2008 LOI. LOIs would be password protected but published schedules can be viewed without logging in.

PIs will be encouraged to use the new STR form, but it will be optional for a while. We will attempt to make the transition as easy as possible. The output of the new STR can be attached to the NSF proposals. There will be a field that shows the estimated cost for the ship time associated with the request. The technician support cost estimate can also be calculated. It would be based on an average for the class requested.

Mike reviewed the new form. User feedback can be submitted.

John Diebold asked if there is a “Part II” to the form, similar to that of the old form. In Part II the PIs are asked to provide more details about the request. Mike replied that this is still under discussion and can be coordinated with the RVTEC outline of technical services and instrumentation, which is being added to the system now.

Rose asked if the link to the EEZs could be added to the form. Mike said that they are looking into this.

Liz Brenner asked if the Department of State’s post cruise requirements would be incorporated into form. Mike replied that Aaron Payne (UNOLS Office) has been in touch with them about this.

Safety Standards for Human Occupied Vehicles (HOV) – Annette DeSilva provided an update on the effort to establish safety standards for HOVs. Slides are included as *Appendix XIII*. This is a multiyear project with the goal to complete the document before the replacement HOV comes into service. Subcommittee members are drafting the chapters and review of each chapter is being conducted by phone conference every other month. Four chapter reviews have been completed. They have modeled the HOV Safety Standards after the Research Vessel Safety Standards. The document is streamlined (brief and to the point) by making references to existing documents.

UNOLS Brochure – Mike Prince reported on the status of the effort to create a UNOLS Brochure. It was recommended that the brochure by simplified and confusing figures removed.

It was also recommended that the brochure be printed on recycled paper and to state that clearly.

Frequency Spectrum Management – Bill Martin reported that there has been very little input to the RVTEC subcommittee’s efforts to collect data on the frequency spectrum use of the fleet. They will push to get more information and participation and report back.

Gender Climate at Sea and RVOC Safety Committee Activities – Tim Askew reported on RVOC activities. The Safety Committee has been reviewing and editing chapters of the Research Vessel Safety Standards (RVSS) during weekly phone conference meetings covering two chapters a week. Chapter 18 of the document will address Personnel Safety. Gender climate, drugs and alcohol policies, and ADA procedural guidelines are included in this chapter. The chapter will have a template for a sexual harassment brochure that each institution can adapt for their own use.

Marcia asked if the sexual harassment brochure would have a requirement that ship users and crew sign a form to indicate they have read the brochure. Tim Askew replied that a signature is required at HBOI and at SIO. The Safety Committee hasn’t decided on whether the signature should be required fleet-wide.

Codes of Conduct - The Impact of Scientific Studies on the Environment – Mike Prince said that he is not sure how UNOLS should move forward on this issue. It has not been addressed since the last meeting. John Diebold reported that LDEO has a Codes of Conduct policy posted on their web page. Marcia mentioned that in the Monterey Bay sanctuary, AUV deployment was now considered a discharge of trash and would require a permit. Also, there is a requirement to pick up all anchors in the sanctuary. Mike Prince suggested that perhaps there should be an inventory of codes of conduct practices.

1700 *Adjourn Day One – Council Meeting*

Council Meeting Day 2: March 22, 2007

Call the Meeting: Marcia McNutt called Day 2 of the Council meeting to order at 0830.

Interagency Working Group on Facilities (IWG-F) – Bob Winokur reported on the IWG-F future initiatives during Day 1 discussions.

Committee Activities and Issues requiring Council Attention: Committee Chairs provided written reports in advance of the meeting. These are included as *Appendix XIV*.

Arctic Icebreaker Coordinating Committee (AICC) - Margo Edwards provided additional AICC information through a series of slides, *Appendix XV*. She gave a brief account of the *Healy* diving accident that resulted in two fatalities. The investigation into this accident revealed failures in oversight at every level aboard *Healy*, as well as numerous departures from standard

Coast Guard policy. Dolly Dieter stated that it is very important that any ship-related incident get reported to the agencies immediately.

A small (AICC, Science, USCG, NOAA, and NSF) Icebreaker Retreat was held on Dec 7-8, 2006. The goal was to strength USCG and science relationships and look at the “big picture” issues. Recommendations that came out of the retreat included:

- AICC should facilitate a workshop to address the science requirements of the new icebreaker fleet.
- AICC should develop new approaches for doing science on icebreakers and address questions; such as, should the science program be expanded, should *Healy* operate in other areas, should winter science operations be conducted.
- Increase publicity on the science accomplishments that are carried out on *Healy*. There should be a cooperative approach in developing a strategy for press releases. AICC should coordinate outreach activities with the agencies (USCG, NSF, and science). They need to develop a protocol and science must be involved.

AICC representatives and other *Healy* science users met with representatives of the Alaskan Native Communities to explain the science that would be carried out aboard *Healy* this season. One purpose of the meeting was to distinguish *Healy* science from all of the other ships that operate through the area. Carin Ashjian has also sent a letter to the Dept of State (DoS) requesting that they alert the Native communities by notice of upcoming science activities by foreign vessels. She hasn't heard back from DoS.

DEep Submergence Science Committee (DESSC) - Michael Tryon, DESSC member provided the committee report for Deb Kelley (see *Appendix XVI*). The DESSC held their winter meeting at the Seattle Aquarium in conjunction with the Western Society of Naturalists. This forum was selected to better engage the biologists. The DESSC meeting was poorly attended. However, DESSC members, Deb Kelley and Craig Young, were guest speakers for the WSN student mixer that immediately followed the DESSC meeting. Attendance at the mixer was about 100 students and the speakers were well received. Marcia suggested the Deep Sea Biology Meeting as a potential forum for reaching the biologists. Alternatively, DESSC could hold their traditional DESSC community meeting at AGU, but schedule special outreach activities such as the one that Deb and Craig participated in.

In other DESSC news, the autonomous underwater vehicle *ABE* has been added to the National Deep Submergence Facility (NDSF). DESSC applied their newly adopted criteria for adding new assets to recommend the inclusion of *ABE*. The committee also recommended that *DSL-120* and *Argo II* be removed from the NDSF.

A new activity for DESSC will be to conduct debriefs with the users of the NDSF vehicles. The goal is to identify problem areas and better track the effectiveness of system upgrades and improvements.

FIC - Dave Hebert provided a full report earlier in the meeting, but commented that the Committee will continue work on the Fleet Improvement Plan and will provide it to the Council for review when available.

Research Vessel Operators' Committee (RVOC) - Tim Askew reported on plans for the next RVOC meeting to be held on 23-27 April and hosted by Florida Institute of Oceanography (FIO). The agenda is very full and details are included in *Appendix XIV*. The Safety Committee will meet on Monday, April 23, 2007 to continue work on the revisions and updates to the Research Vessel Safety Standards. This is Tim's last meeting as RVOC Chair. The Committee will solicit nominations for a Vice Chair.

Research Vessel Technical Enhancement Committee (RVTEC) - Bill Martin, RVTEC Chair, reported that the 2006 RVTEC meeting was a one-day meeting the day before the International Marine Technology (INMARTECH) symposium at WHOI. The INMARTECH Meeting was very informative and well attended. The 2007 RVTEC meeting will be held on 6-8 November at Moss Landing Marine Laboratories. Marcia stated that she would try to attend the RVTEC meeting on Nov. 7, 2007.

Lastly, Bill reported that there are two RVTEC candidates interested in the AICC liaison position. He will ask the RVTEC membership to vote.

Scientific Committee for Oceanographic Aircraft Research (SCOAR) – Mike Prince reported that SCOAR plans to meet on 18 April. Carl Friehe was the original chair of SCOAR, but then left for a position at ONR. He is now back at SCOAR as Chair.

Ship Scheduling Committee (SSC) – The SSC report was provided on Day 1.

MLSOC - Steve Holbrook said that he plans to contact other Committee chairs for input on how best to interact with the science community and serve in an ombudsman role.

Revisit Discussions or Actions from earlier in the meeting:

Form Ad-hoc committee to Review Non-Operational Ship Time Recommendations – Ad-hoc membership was discussed and Council representatives from non-ship operating institutions (and un-conflicted) include Mary Jane Perry, Vern Asper, and Carl Friehe. Mary Jane agreed to serve as Chair. Vern and Carl will be contacted to determine their willingness to serve on the committee.

Committee on Best Practices for Data Policy – Marcia recommended that a subcommittee be created to inventory best practices for capturing and archiving data and metadata. This should be less about policy, but instead best practices regarding data and metadata. The subcommittee would be tasked with preparing a white paper with their findings. The following steps were recommended:

- Marcia will draft a call for volunteers with a “loose” description of the charge/task statement.
- Send out a call for volunteers and ask for a brief statement of their interests and expertise. Any work with data policies and/or procedures should be highlighted.
- The call for volunteers should be distributed to the agencies and UNOLS community.
- Once the subcommittee is formed, they will be asked to refine their task statement.

- The goal would be to have the committee in place by the time of the summer Council meeting.
- The subcommittee would be asked to provide a status report in October at the UNOLS Council meeting.

Create a Model of Future Fleet Schedules – Mike Prince will create a model of a future fleet schedule using past schedules as a basis. Ship time for observatory work would be added to the model. Mike will draft a procedure for the modeling along with the assumptions for Council/FIC review. The model would help identify which science initiatives would go unmet, without a reduced fleet size.

UNOLS Brochure – The UNOLS Office will simplify the brochure by clearly describing the UNOLS organization and removing the projection charts. The brochure should be reformatted to present a better picture of the needs of the ocean science community.

Break

Post Cruise Assessment Report (PCAR) – Mike Prince summarized the final report from the UNOLS PCA Subcommittee for the years 2004 to 2006. The PCA Subcommittee included Curt Collins (Chair), Wilf Gardner, Mary-Lynn Dickson, and Tim Askew. Their final report is included as *Appendix XVII*. Mike discussed the PCA response rate and how the rate is calculated. They try to eliminate the transit and non science cruises from the total cruise tally. Multiple reports received by the science party for the same cruise counts as one report. Mike explained that they have considered weighting the cruise reports using the cruise days as a measure. A requirement of the UNOLS Office Cooperative Agreement is to increase PCA response. However, there has been a dramatic decrease in the PCA response since 2004. The low response will be discussed at RVOC. For 2006, the PCA response is down to 50% response. If weighting the responses by cruise length is considered, the response goes up to 65%.

The subcommittee recommends that the process of reviewing the PCAs continue. To carry out the review, the subcommittee looks over a subset of PCAs and over a three year period tries to review each ship.

Distribution of the PCA reports is to the respective funding agencies [Linda Goad (redistributes them as appropriate within NSF), Bob Houtman (Navy), Beth White (if NOAA cruise), the institution representative(s), and the UNOLS Office. Distribution of the PCAs within the operator institution is the decision of the institution. In some institutions, distribution might be limited to one individual, while in others it might be distributed to the marine superintendent, the technical supervisor, and even the facility directors.

One way to potentially increase PCA response is send feedback to the individual who submitted the PCA. Response might also increase if the Chief Scientist has some assurances that the distribution of the PCA is limited, but will also get serious consideration by those who are involved in its review.

As an action item for the Council, replacements for Wilf and Curt are needed on the subcommittee. Mary Jane Perry and Bob Collier volunteered to serve. Bob was appointed as Chair. Ex-officio members to the subcommittee are the RVOC Chair and Mary-Lynn Dickson (RVTEC).

Other Business:

Annual Meeting – Mike Prince reported that the UNOLS Annual Meeting is scheduled for October 11 & 12, 2007 (see *Appendix XVIII*). The FIC meeting will be on Wednesday, October 10th, the Council will be on Thursday morning, October 11th, and the Annual meeting will be on Thursday afternoon and Friday morning. The new format will be tried in an effort to reduce redundancy and increase participation. Dolly reminded Mike that a meeting room has not been reserved at NSF. The UNOLS Office will submit a room reservation request in April.

Keynote Speaker suggestions were discussed and it was decided to ask Dr. Arden Bement, NSF Director. He will be asked to discuss fleet replacement past and present, and share his thoughts on investments in the fleet. Dolly offered to check on Dr. Bement's calendar. It was recommended that Dr. Jarvis, acting NSF Geosciences director, be invited to the meeting.

Form Nominating Committee – A Nominating Committee is needed to review Council membership and positions opening, and to recruit individuals to stand for election. Terms ending in 2007 include Bruce Corliss (Member At-large) and Eileen Hofmann (Non-Operator representative). A Nominating Committee of Bruce Corliss, Peter Ortner, and Eileen Hofmann were suggested. Marcia will contact them to determine their willingness to serve.

Summer Council Meeting – The summer Council meeting will be via phone/web. The week of 9 July was suggested. The UNOLS Office will poll the Council for availability.

Opportunity for Additional Reports:

Agency Representatives – Beth White reported that NOAA received funding through an FY06 Hurricane Supplemental to acquire a third P-3 aircraft. The third aircraft will be used for air chemistry research and other non-hurricane research to ensure its other two P-3s can be dedicated to the hurricane mission during hurricane season. NOAA also received funding in the supplemental to acquire a Damage Assessment aircraft. This aircraft is intended to replace NOAA's Citation jet that does shoreline mapping. Work is also proceeding on the installation of a tail Doppler radar on the NOAA's Gulfstream IV high altitude jet. This will allow the aircraft to be more mission capable operating around and in hurricane and severe storm environments.

UNOLS Office Transfer - Mike Prince reported that on May 1st, the Office at MLML is starting its 8th year. In early 2008, the Council will need to issue an RFP for a new Office host and Executive Secretary. After proposal review, the Council would make a recommendation regarding the next Office and Executive Secretary to the agencies. Dolly stated that the next UNOLS Office will be operated under a 5-year Cooperative Agreement. Mike said that at the July meeting the Council will need to address two charter issues: 1) Opening the UNOLS Office competition to all UNOLS Institutions (extend beyond operators), and 2) Changing the term of

the office from three years to five years. At the October Annual meeting the Charter change should be on the agenda for membership vote.

The meeting adjourned at 11:40 am.