Draft

UNOLS ANNUAL MEETING
October 6, 2006
National Science Foundation
4201 Wilson Boulevard, Room 1235
Arlington, VA 22230
Meeting Minutes

Appendices

Meeting Minutes

Executive Summary

The UNOLS Annual Meeting was held at the National Science Foundation (NSF) in Arlington, VA on October 6, 2006. The meeting was highlighted by a keynote address by the former California Congressman and White House Chief of Staff, the Honorable Leon E. Panetta. Mr. Panetta chaired the Pew Oceans Commission and currently Co-Chairs the Joint Ocean Commission Initiative with Admiral James D. Watkins. Mr. Panetta discussed efforts to establish a national commitment to the oceans and ways to promote the importance of ocean science.

The Annual Meeting also included reports on fleet renewal plans, agency activities, from UNOLS Committees, and a presentation on this year's accomplishments and goals for 2007.

Elections for the UNOLS Council were held with the following results:

- Chair Elect - Dr. Vernon Asper – (University of Southern Mississippi)
- Ship Operating Institution Representative - Dr. Robert Collier (Oregon State University)
- Non-ship Operating Institution Representative - Dr. Mary Jane Perry (University of Maine)
- Member At-Large - Dr. John Diebold (Lamont-Doherty Earth Observatory, Columbia University)

Louisiana State University, Baton Rouge was approved as a member of UNOLS.

At the conclusion of the Annual Meeting, Dr. Marcia McNutt (Monterey Bay Aquarium Research Institute) transitioned from the Chair-elect position to UNOLS Chair. Dr. Peter Wiebe (Woods Hole Oceanographic Institution) moved into the position of Immediate Past Chair.

Peter Wiebe announced to the membership that UNOLS ships are now officially "Dry Ships." At the UNOLS Council meeting on October 5, 2006, the UNOLS Council approved a policy that banned the use of alcoholic beverages on board UNOLS vessels.

Introduction and Welcome - Peter Wiebe, UNOLS Chair

Peter Wiebe, UNOLS Chair, called the 2006 UNOLS Annual meeting to order and welcomed everyone. The meeting was held at the National Science Foundation (NSF) in Arlington, VA on October 6, 2006.

Peter asked Frank Herr (Office of Naval Research) to introduce RADM Bill Landay, the new Chief of Naval Research. Dr. Herr gave a brief background and introduced RADM Landay, who as a Flag Officer served as the Program Executive Officer for Littoral and Mine Warfare. He also served as Commanding Officer of USS Aquila (PHM 4) a high-speed hydrofoil and as Commanding Officer of USS Paul Hamilton (DDG 60) among his many past duties.

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

Peter Wiebe reviewed UNOLS activities, issues and accomplishments over the past year. His slides are included as ***appendix III***. The activities included the following:

- A committee has been formed to establish American's with Disabilities Act (ADA) Guidelines for UNOLS Vessels
- A committee is working to establish Safety Standards for Human Occupied Vehicles
- Discussions have been initiated on the topic of Codes of Conduct and the impact of scientific studies on the environment.
- A UNOLS informational brochure has been drafted.
- RVOC has been tasked to address gender climate at sea.
- Peter reported before the Naval Advisory Research Council on the benefits of Navy's acquisition of Ocean Class vessels
- A document on procedures for recommending non-operational periods in the UNOLS Fleet has been drafted.
- The first Airborne Ocean Science Conference was held.
- Input to the FOFC Fleet Renewal Plan was provided.
- The Marcus Langseth Science Oversight Committee was formed.

2007 Fleet Operations: Budget Impacts and UNOLS Recommendations – Peter Wiebe

Peter reviewed the Council recommendations regarding non-operational periods. His slides are contained in ***appendix IV***. These recommendations are contained in a letter to the agencies posted at: http://archive.unols.org/publications/reports/budget_impacts/NonOp_Process_Recmd.pdf

The Council findings indicate that for the foreseeable future there will most likely be shortfalls in the utilization of the fleet. This is despite the fact that we have gone from 28 ships to 23 in the last few years.

The UNOLS Council has recommended a list of values to be used when making decisions about lay-ups, partial lay-ups and retirements. These values include meeting the science needs, geographic availability, costs of operation, quality of operation, sharing the pain and maintaining diversity of operators.

It was decided that the actual recommendations regarding non-operational periods would be made by agency program managers working with schedulers based on their budgetary constraints. Their recommendations would be formally reviewed by a subcommittee of UNOLS Council consisting only of members from non-ship-operating institutions. The subcommittee will seek input from and share the recommendations from the Agencies with UNOLS ship operators, the Council, and any other interested parties. They would provide feedback to the agencies and the community regarding these recommendations and provide suggestions for alternate solutions as appropriate. Out-year recommendations would probably be made through some type of rotational lay-up plan, but this would have to be reviewed each year to make sure it would work.

2007 ship schedules were reviewed. Only one lay-up is planned despite few schedules at optimal levels. There will be partial schedules on Endeavor, Oceanus and Seward Johnson (all at just under 150 days). Work in the Mediterranean and Venezuela make consolidating schedules difficult without compromising science objectives. The Cape Hatteras is a candidate for a full lay-up unless funded work materializes. In the Pacific, work is geographically spread out between San Diego and south, the Pacific NW and Hawaii making consolidation difficult. Point Sur and Sproul will operate with very light schedules, each under 100 days.

Discussion followed:

- There was general concern over the timing of the process. Recommendations that are made in the fall are too late and difficult to plan for. Sandy shore suggested that the timing should be re-examined.
- There was a question as to why there should be agency recommendations after going through the scheduling process? Reply - UNOLS did not specify when and how the agencies would develop their recommendations and it is likely the agencies would continue to develop recommendations as part of the scheduling process.
- The process would be implemented this year as a trial run with the de-facto recommendations from the Agencies provided to a UNOLS Subcommittee for their review and evaluation with input from ship operators.
- Marcia McNutt asked why some ships in 2007 would operate with light schedules. There is the concern that when ships have light schedules, the science budget suffers because of the inefficiencies in scheduling. Could these ships have been scheduled more efficiently? Rose Dufour replied that many ships are needed during peak times. The work in the Mediterranean could not have been accommodated if ships had been layed-up.
- Jeff Callahan asked if the process would be applied for the 2007 schedules. Peter replied, “Yes.” The subcommittee will review agency scheduling recommendations to be sure that all areas are covered and that questions like the one that Marcia asked are answered. It is a good open policy.
- Brian Taylor asked that since there have already been six scheduling meetings with all parties, why do it again? Mike Reeve replied that this would serve as a trial run and allow us to test the process.

UNOLS Fleet Renewal Activities:

National Science Foundation (NSF) - Mike Reeve reported on the various fleet renewal activities supported by NSF.

Regional Class Ships – Mike provided a bit of history on the Regional Class acquisition process. NSF decided to support the acquisition of the ships, but they didn't have the internal experience to manage the construction effort. They formed a Memorandum of Agreement (MOA) with the Navy's PEO-Ships to manage the design/build contracts. A call for proposals to design and build the Regional Class ships went out and seven teams responded. In May 2006, contract awards were made to the teams. In November, the first design review meeting is planned with each design team and the UNOLS advisors. After a one-year design effort, one design will be selected for construction. The contract for construction of the first ship is expected in fall 2007. The ship is expected to take about two years for construction with another six months for outfitting. Solicitation for the operator of the first Regional Class ship is expected soon. The solicitation has been written and is going through NSF's internal review. Marcia asked if there would be any geographic constraints specified in the operator solicitation. Mike Reeve replied, "No."

Alaska Region Research Vessel (ARRV) – The ARRV is in NSF's Major Research Equipment – Facilities Construction account. Funds for construction of the ship have been included in the FY07 budget in both the Senate and House marks of the NSF budget and they are optimistic that it will be funded. The solicitation for operator and construction management of the vessel has been approved. The ship's design length is 236-ft overall and the estimated cost is $98M.

R/V Marcus Langseth – Dolly Dieter reported that Lamont-Doherty Earth Observatory (L-DEO) was awarded just under $20M for the purchase, conversion and outfitting of the R/V Langseth. The ship is in a shipyard in Nova Scotia undergoing the conversion, but they are delayed by about two months. After leaving the shipyard, the ship will transit to the Gulf of Mexico (Galveston) for about two months of outfitting and then two, one month test cruises. The ship is expected to be available for operations in spring 2007.

Human Occupied Vehicle (HOV) Replacement – Dolly reported that WHOI submitted an unsolicited proposal and was awarded just over $20M to design and build a deeper diving HOV. They established an oversight committee chaired by Karen Van Damm, who has recently resigned due to personal reasons. Cindy Van Dover has agreed to chair the committee. They are using a two stage process with cost estimates and risk assessment before proceeding. To contain the rising cost of titanium, they have purchased the titanium directly without waiting for the construction contract. The Replacement HOV is expected to be ready for service in 2010, a delay from the original timeline.

Ocean Observatory Initiative (OOI) and ORION – Bob Detrick reported on the OOI and ORION activities. In April 2005 the ORION Office issued a Request for Assistance Proposals (RFA). The submission of about 48 full proposals, representing input from more than 550 investigators and direct participants was received. The observatory conceptual design was developed using the ideas submitted in the RFA Proposals and previous workshop reports. In March 2006, a design and implementation workshop was held in Salt Lake City, Utah to present the community with the conceptual design of the global, regional and coastal ocean research observatory network. Based on feedback and revised cost estimates, the design was refined and then went through an exhaustive design review meeting at MBARI in August. The network design was deemed to be good and ready for the next phase, which would be the more detailed preliminary design of the network. This will take about a year and be ready for review in the fall of 2007. The cost estimates have become more detailed and it has become apparent that the costs are greater than originally planned. This is requiring a de-scoping of the project to meet caps on capital costs ($310M) and on operations and maintenance costs ($50M/year). By January 2007 they hope to have a revised scope, detailing which components will be built. 2007 is primarily a planning year and the first assets would probably not be put in the water until 2008. Installation ship days are in the MRE budget, but these need to be refined with the new scope of the project. Marcia asked if the de-scoping would focus on keeping elements that will minimize the need for maintenance and repair. This would in turn

impact where assets are installed and what elements are deployed. It would have an impact on what UNOLS vessels will be utilized. Dennis Nixon asked if the observatory work is appropriate for UNOLS vessels. Bob Detrick replied that cable-laying and deployment of spar buoys would likely be handled commercially. Other work would be appropriate for UNOLS.

Ocean Class Acquisition Plans (ONR)

Ocean Class Acquisition Plans - Frank Herr (ONR) reported on the status of the Navy's plans to build Ocean Class ships. Over the past year there has been considerable effort. He praised RADM Landay and Assistant Secretary of the Navy Delores Etter for their efforts in the project. Secretary Etter commissioned the Navy Research Advisory Committee (NRAC), chaired by Frank Hernandez, to look at what Navy's investment should be in capitalization of the academic research fleet. They received a lot of support from UNOLS and the UNOLS office, which he thanked us for. One of the values they found in the UNOLS partnership was their ability to have access to a broader range of assets and to "right size" their projects on the appropriate platforms. Based on the recommendations of the NRAC, the Secretary and CNR put forth a recommendation to support the construction of two Ocean Class ships instead of the four originally planned. This was based on the current Navy requirements and budgetary constraints, including the retirement of Knorr and Melville in about 2014. The plan calls for the construction of the two new ships by 2015.

Over the coming year, ONR and PEO-Ships will request assistance from UNOLS to help with developing performance requirements for the Ocean Class ships based on the SMRs. In two years they will prepare a defense of the planned budget for these ships again as part of the normal process. Overall they think the process for design and construction will go forward in a way similar to that for the Regional Class vessels. They will also proceed with a plan for soliciting operators, either both at the same time or sequentially.

Bruce Corliss asked which ships the original four were supposed to replace. Frank Herr said that initially these ships (Ocean Class) would replace the intermediates. The timing now is that these ships will come on line as the Knorr and Melville go off line. The Navy will also rely more on AUVs and Gliders in the future.

Peter and Bruce summarized this plan as having two new Ocean Class vessels replace two global ships and five intermediate ships. Frank said that this was one way to look at it. Navy did not consider these issues, but focused solely on whether or not they should build ships and if so how many they needed and could afford to support.

Federal Oceanographic Facilities Committee (FOFC) Fleet Renewal Plan Update - Bob Winokur gave a status report of the FOFC Fleet Renewal Plan. He thanked Peter Wiebe and Dave Hebert for their review and contributions to the Plan. The FOFC has been morphed into the Interagency Working Group on Facilities (IWG-F). The IWG-F reports to the Joint Subcommittee on Ocean Science and Technology (JSOST). They have drafted a Fleet Renewal plan that addresses the oceanographic vessels of each member agency. The draft plan is going through agency reviews. Bob's goal is to provide the reviewed and corrected plan to the senior leadership (Sub-Cabinet Level) soon so that it can be finalized and approved by the end of the year.

This plan addresses the federal research and survey fleets, not just the academic fleet. The total number of ships between now and 2015 will remain stable at about 47 ships. The plan includes the new planned UNOLS vessels; R/V Langseth, the ARRV, three regional vessels and two Ocean Class vessels. Four new NOAA Fisheries Research Vessels are included. Over the next decade there will be a decrease in intermediate research vessels and regional fisheries vessels. The report acknowledges the under-

utilization of intermediates and the increases in fleet costs. The report mentions but did not go into too much detail on icebreakers, OOI, and other elements such as AUVs and Gliders.

The IWG-F Fleet defined by their plan is constrained by and controlled by the budgetary process. The only component of the fleet that has any planned expansion is the NOAA fisheries fleet. Navy, Coast Guard, and EPA are not expanding their fleets. NSF-owned vessels will decrease in number.

The IWG-F's charter will expand their focus a bit to include aircraft and other facilities. They will appoint a new Chair once they start meeting.

The report will be distributed once it is approved but not before.

Fleet Improvement Committee (FIC): Fleet Improvement Plan - Dave Hebert (FIC Chair) reported on the Committee's efforts to draft a Fleet Improvement Plan (FIP). They are using the FOFC plan as a basis, but expanding upon the Facility needs to identify ships that are needed to carry out future science initiatives. Dave's slides are included as ***appendix V.***

Dave reviewed the FIP document outline. The first section will provide a detailed science justification for fleet renewal. The document will also provide an explanation on what it is and isn't. There will be a section on future Fleet projections. In an attempt to be consistent with the FOFC report, the FIC worked to reclassify the ship classes. This effort was coordinated with FOFC. Dave presented the new ship classifications. The utilization and projection charts are being updated using the new classification. The projections are also being updated using the latest information on plans for the Ocean Class.

Dave presented charts showing utilization trends and projections. The utilization charts show a sharp decline in the number of ship days funded. This is a result of rising operating costs (fuel) and budget constraints. A chart showing the projections with two Ocean Class ships (instead of four ships), indicates that by 2014, there will be a shortage of ships based on current utilization. A table comparing the current fleet with the fleet of 2020 shows that by 2020 there will be about 1000 fewer ship days available annually to support science.

FIC will review vessel retirement dates and contact vessel operators to determine if service life extension programs (SLEPs) should be considered.

Presentation of the Ancient Albatross Award – In 2006, the University of Alaska announced the retirement of R/V Alpha Helix (which had been the oldest ship in the UNOLS Fleet). With the ship's retirement, the University of Alaska passes along the Ancient Albatross Award to the operator of the next oldest ship in the Fleet. Dennis Wiesenburg (UAF) presented the award to Scripps Institution of Oceanography as operator of R/V Melville. The Award signifies the oldest and longest operating vessel in the UNOLS Fleet.

UNOLS Membership Votes

Ballots were distributed for Council elections and an application for UNOLS membership from Louisiana State University (LSU).

UNOLS elections for the following UNOLS Council positions were held:

- Chair Elect (2 year term) - individual affiliated with any UNOLS Member Institution. At the completion of the 2-year term, the candidate will become the UNOLS Chair.

- Operator Representative (3 year term) - from among designated UNOLS Member Operator institutions
- Non-Operator Representative (3 year term) - from among designated UNOLS Member Non-Operator institutions
- UNOLS Council Member At-large (3-year term) At-large, affiliated with any Member Institution

The slate of nominees can be viewed at: <http://archive.unols.org/meetings/2006/200610anu/slate06.html>.

Federal Agency and CORE Reports:

National Science Foundation (NSF) - Julie Morris, Director of Ocean Sciences, gave a brief NSF report. She introduced herself and provided some background information. She is a geochemist and her research areas include work in the Subduction Zones.

NSF is operating under a continuing resolution that is expected to last through mid-November. There is a possibility of an omnibus bill. NSF ship utilization for 2007 is about 500 ship days above the 2006 ship utilization level.

Dr. Morris reported on the status of the Integrated Ocean Drilling Program's (IODP) conversion of the Joides Resolution as a Scientific Ocean Drilling Vessel (SODV). This effort is funded by NSF's Major Research and Equipment Facilities Construction (MREFC) account. The ship will serve as a state-of-the-art, riserless drilling research platform. Unfortunately, the conversion effort has coincided with a period of high ship building costs and as a result, the project has a budget shortfall. They will need to evaluate whether they can get all of the conversion work accomplished with the funds available, or if there needs to be a de-scoping. NSF must demonstrate to Congress that they strongly support American shipbuilding. This will be a factor in all of NSF's vessel acquisition and conversion efforts.

Dr. Morris reported that NSF is looking at ways to bring additional money into ocean sciences. Research themes and priorities have been identified. Ocean Science themes include research that will enhance human health and marine health. There is hope that the priorities will encourage additional support across the nation.

In September 2006, NSF released its strategic plan to guide the agency's priorities and investments for the next five years. The plan, titled Investing in America's Future, focuses on specific goals and outcomes for the next five years. The new plan identifies four (outcome-based) goals: discovery, learning, research infrastructure and stewardship. Each is linked to specific investment priorities, and emphasizes actual results, or outcomes. Dr. Bement recently addressed the Geosciences Section on where the section would fit into the National investment plan. Geosciences are inherently multidisciplinary and its science is of great national interest. Some examples include natural hazard predictions, natural resources (water and oil), pollution impacts, etc.

The question was asked on how Geosciences (GEO) fits into the American Competitiveness Initiative (ACI). Dr. Morris explained that Geosciences might not be as strongly tied to the ACI as other disciplines such as, math, physics, etc. This is why the Director feels that NSF would be not be on a track for doubling the GEO budget in ten years, but instead in twelve years.

Office of Naval Research (ONR) – Bob Houtman reported that ONR does have their FY07 budget and it is level from last year at $10M. In 2007 they hope to have a plus-up of $4.4M and will look at options for how to spend the funds.

Oceanographer of the Navy – Bob Winokur reported for the Oceanographer of the Navy. Congress has put money in the FY07 budget to build a new Navy survey ship and will they will look at a variant of the TAGS60 ships. They have a finite amount of money for the ship construction. Like ONR, the Oceanographer of the Navy has their FY07 budget. They will continue to fully operate their seven survey vessels.

National Oceanic and Atmospheric Administration (NOAA) – RADM Behn provided the report for NOAA. NOAA still does not have a budget for FY07 and is operating on a continuing resolution. The House mark is below the President's budget and the Senate mark is above the President's budget. In July, the NOAA ship support facility on Lake Union experienced a dock fire. One of their ships was heavily damaged by the fire. They are working out interim pier arrangements.

In ship news, the FSV-1 Dyson and FSV-2 Bigelow are having problems with their drive systems. The Bigelow remains at the shipyard due to these problems. NOAA's Ocean Exploration vessel, Okeanos Explorer, will be at Todd shipyard for conversion. NOAA has exercised their option to construct a coastal SWATH vessel.

United States Coast Guard (USCG) – Commander Tom Wojahn provided the USCG report. The National Academy of Science (NAS) study recommended two new icebreakers to replace the Polars. There will also be a request for a Presidential determination on the need for icebreakers. Polar Sea will be ready for the next deep freeze and will do it in cooperation with the Swedish icebreaker Oden. The Polar Star is in caretaker status. Healy cancelled two programs and ended the field season early this year due to the tragic death of two crewmembers in a dive training accident.

Marcia asked who made the call to cancel the remaining science programs due to the accident and why was such a drastic measure taken. Tom said that VADM Wurster, Commander Coast Guard Pacific Area, made this decision based on the onboard assessment of the crew's readiness and that they considered the impacts to the science programs, both of which could be rescheduled.

Dennis Nixon asked when the results of the investigation will be released. Tom did not know if a date has been set as the investigation is still ongoing.

Kathy Crane asked if there would be a debrief with all the agencies impacted by the change in schedule. Tom said no, but this would be addressed during the scheduling meeting. Also, VADM Wurster will meet with members of the science community to address how the decision was made and what could improve communications and relations with the science community.

USCG Commandant ADM Allen has had discussions with NSF Director Dr. Bement on the future of the Polar programs. The Coast Guard has a budget for FY07, but NSF does not. Under the current arrangement, NSF receives funds for science operations on Healy and passes them along to the USCG.

Department of State – Liz Tirpak provided the Department of State report and explained that she has been in her position for ten years. She stressed that it is important to have a single point of contact when requesting clearances with her office and to keep the Department of State in the loop to avoid unintended consequences and confusion. She also stated that clearances only come from the Ministry of Foreign Affairs. Clearance from a single agency within a foreign coastal state does not mean that a clearance has been obtained. There are some countries that are still having clearance issues. In particular, Venezuela has been a problem.

There are growing concerns about marine genetic research. If your research involves this type of work it

is an issue to highlight in advance with State to avoid particular problems in some countries.

The Department of State is trying to put forth some black and white policy papers to provide guidance to US researchers and ship operators.
About a year ago Liz's office had a dream to update their database. Now they have a new team of programmers. Anyone who is interested in testing the system should contact Liz.

Keynote Address
The Honorable Leon E. Panetta,
Co-Chair, Joint Ocean Commission Initiative

Peter Wiebe welcomed the Honorable Leon E. Panetta to the UNOLS Annual Meeting and thanked him for taking the time to address the membership. Peter provided a brief report on Mr. Panetta's background and Ocean related activities and initiatives.

Mr. Panetta provided the 2006 UNOLS Annual Meeting keynote address. Comments from his address are reported below:

He was honored to be invited because of the dedication and commitment of the UNOLS organization to the oceans and to marine science and education. Mr. Panetta was raised in Monterey, CA.

A commitment to marine sciences and obtaining knowledge is crucial for our ability to move forward with ocean policies and priorities.

We live in a unique but also dangerous time. We face many crises that could affect life itself. We have faced natural events that threatened life in the past, such as earthquakes, tsunamis, storms, etc. But now we face dangers from human activities that are creating problems such as pollution and global warming.

Both the Pew Oceans Commission (Chaired by Mr. Panetta) and the US Ocean Commission (Chaired by ADM Watkins) came to similar conclusions. They looked at the same issues, but with different memberships. A large number of hearings throughout the country were held. The findings were similar and are familiar to most in the community:

- There is a crisis in fisheries with 90% of large fish gone.
- Pollution - millions of gallons of oil goes into the ocean every year; equal to the Valdez spill.
- Populations are increasing in the coastal areas – we have lost 90% of our wetlands and are losing 20,000 acres every year. Hurricane Katrina was more damaging due to the lack of wetlands.
- Governance problems – There are a Federal, State and local laws and regulations and a myriad of agencies, but no real coordination. Many times disputes are resolved in Federal District courts, which is not a good way to govern.
- Funding for marine research and education - It is a virtual scandal. Oceans represent 71% of the earth's surface and they are linked to weather, climate and the sustainability of life itself. Less than 4% of the Nation's investment in

research and science goes to ocean science. 1500 people have been to the top of Everest, 300 into space (12 on the moon) but only two people have gone to the deepest portions of the ocean. Spending money on space in the billions is not necessarily wrong, but more should be spent on the oceans.

ADM Watkins and Mr. Panetta are not walking away from the reports they authored, but are working to promote the findings. There must be a national commitment to the oceans through the adoption of a National Ocean Policy by Congress. Some of the areas that need attention are:

- NOAA needs to be established by law. It was established by Executive Action during the Nixon administration and is funded annually by Congress. They typically fund the programs they care about.
- Coastal zone management needs to be conducted through an integrated ecosystem management structure. A clear definition of "ecosystem" defined by science is needed.
- Fisheries management needs to be updated by bringing the Magnuson Act into the twenty-first century, with decisions based on science. They have a good bill out of the Senate, but need something from the House.
- There should be a doubling of funding for ocean science.
- The United Nations Convention on the Law of the Sea (UNCLOS) needs to be signed by the U.S. It is only being held up by a few members of the Senate Foreign Relations Committee. It will impact our credibility and our ability to affect jurisdiction issues if we don't ratify this treaty immediately.

The states and regions as well as the present administration are working to develop an ocean action plan, interagency working groups, and the establishment of the largest ocean protected area. They are lobbying for the appropriate budgets, but it is not clear how much will be done in a lame duck session. The Ocean Action Plan would include research priorities and priorities for infrastructure.

The oceans cannot be restored without the work of the ocean sciences. There needs to be new knowledge and understanding of the conditions and biology of the oceans. We need all the information brought together in a cross disciplinary way and we need to monitor in a comprehensive way. We need to integrate and synthesize all the information that is available and we need to share and educate the public with this knowledge.

Mr. Panetta's personal opinion is that the Administration and Congress have been irresponsible in their management of the budget. There is no budget; they are passing emergency supplements to fund the war and other issues. They are borrowing to pay for the war, Katrina and tax cuts. He feels that this approach will come home to roost because they are managing by crisis. When they eventually deal with the budget deficit, science will have to compete with defense, entitlements, veteran's benefits, and social security. Science will lose.

What do you do about it?

- You need to unify and not just go for your individual piece of pie.
- You need to make the case that ocean sciences are a part of the American Competitiveness Initiative, the case has to be made in this context.
- You need to establish a trust fund for the oceans. There is debate about where this would come from, but it would provide some stability for funding of ocean science, education and policy.

- If you want to compete for funds, you need to "Fight for them."

Discussion followed:

Dennis Nixon asked who is keeping the UNCLOS from going to the vote. Mr. Panetta replied – Senator James Inhofe of Oklahoma is keeping this from the floor. The reason has to do with the perceived loss of sovereignty associated with the UN, but Mr. Panetta and ADM Watkins plan to make the case that we could lose sovereignty over some parts of the EEZ if we don't pass UNCLOS.

Bob Knox asked how we "Fight" for ocean research and education. Mr. Panetta replied that we must impress on OMB that there are priorities associated with the oceans. If there are priorities, they need to be funded. You need to have a disciplined budget and set priorities. You need a lobbying strategy where you make personal contact with the five or six key people in the administration and Congress. Personal contact is important.

Marcia talked about the need to increase the level of consciousness with the public so that interest and knowledge of the oceans is at the same level as that of space exploration.
Marcia asked what we could do to achieve this. Reply:

- Education at the K-12 level.
- PBS specials and other documentaries.
- Publicize key findings in public journals and papers in a way that is understandable to the lay person, not just in academic journals.
- Lobbying efforts are necessary.
- NASA established sub-contractors all around the country (ala Defense budget). We need to determine if there are elements of the ocean science enterprise that could be established more broadly. Tie the relationship of what we are doing to the Congressional member's district.
- We need to make people understand the links between the oceans and what is happening in their world.
- This country is driven by either leadership or crisis. More and more we are governed by crisis, but if you could get the Administration and Congress to take the leadership in protecting the oceans, then it will get done.

Consortium for Oceanographic Research and Education (CORE) – Kevin Wheeler provided a brief CORE report. CORE lobbies for initiatives such as fleet renewal, increasing ship utilization, and OOI support. They can set up meetings between science groups and policy makers. They have worked to get Senators out on ships. This is effective as it will give them a better understanding about ocean research. They don't forget experiences on ships.

CORE and the Joint Oceanographic Institutions (JOI) are in the process of merging and reuniting. Bob Gagosian has been working on the structure of the merge. It will take some time to reorganize and get a new President for the merged organization.

UNOLS Elections Results – Peter Wiebe announced the results of the UNOLS Council elections:

- Chair Elect - Dr. Vernon Asper – (University of Southern Mississippi)
- Ship Operating Institution Representative - Dr. Robert Collier (Oregon State University)
- Non-ship Operating Institution Representative - Dr. Mary Jane Perry (University of Maine)
- Member from any UNOLS institution - Dr. John Diebold (Lamont-Doherty Earth Observatory, Columbia University)

Louisiana State University, Baton Rouge was approved as a member of UNOLS. The UNOLS Representative will be the Dean of the School of Coast and Environment, Dr. Edward Laws.

Peter Wiebe announced that UNOLS ships are now officially "Dry Ships." At the UNOLS Council meeting on October 5, 2006, the UNOLS Council approved a policy that banned the use of alcoholic beverages on board UNOLS vessels. This decision was based on the consistent recommendations of the UNOLS Risk Manager and the stated preference of NSF and ONR program managers that UNOLS take this position to promote safe operations and to limit the liability associated with making alcohol available while at sea

COMMITTEE REPORTS

Ship Scheduling Committee (SSC) – Rose Dufour, SSC Co-Chair, provided the report. Her slides are included as ***appendix VI*.**

The UNOLS ship scheduling outlook in early summer was disparaging with the prospect of two large ships and one to two Regional or Intermediate Class vessels (one from each coast) slated for lay-ups. Utilization was down by 37% from past years with 3150 total days compared to about 5000 days. By summer's end ship days had been added to the fleet, bringing the total up to 4074 days. The fleet is still down by about 20%, and nearly all ships are operating below their target days, however the good news is almost all ships will operate in 2007.

Rose showed charts for fleet utilization trends and operation costs. Although days funded have gone down significantly, the operating costs have gone up. Charts showing vessel utilization and support by agency were presented for 2006 and 2007. The total fleet support by agency was shown in pie charts for 2006 and 2007.

NSF was able to transfer 2008 Biocomplexity in the Environment Program (BE) ship funds into ship funds for 2007 resulting in the ability to add several cruises that were slated for 2008 or were scheduled on foreign vessels. A better estimate of anticipated carry-forwards (about $1.5M) all added up to an infusion of $6.2M into OCE ship funds for 2007. The increase in anticipated carry forwards money can be attributed in part to falling fuel prices. In order to spend these additional funds NSF approved a one-time exception during the August 15th proposal target deadline of allowing for ship time to be requested in the following year. These proposals will be reviewed in the November panels, and if approved, ship time may be added to the latter half of 2007 schedules. The message to send back to home institutions will be that PIs should continue to write proposals for ship time. To date, NSF is supporting 2499 days of funded ship time in 2007, for a projected total of $50M (OCE, BE, ODP, OPP).

ONR has worked hard to come up with funds and projects in the Western Pacific in order to utilize Melville. A large Physical Oceanography project slated for 2008 will now have a 2007 component in order to start preliminary studies in the Kurshio Extension and the Luzon Straits. The hope is that by taking Melville out of the scheduling mix for Pacific work, the other Global/Ocean Class vessels could have healthier schedules. ONR will fund approximately $10 M for ship/technician time in 2007, mostly on the Intermediates and Regional Class ships, with the exception of the Melville's western Pacific work.

NOAA's numbers are down from previous years. The base usage from PMEL/AOML is scheduled, but Ocean Exploration (OE), NURP, Sea Grant, ECOHAB and DART are down. The cruises for 2007 amount to about 344 days compared to 630 days scheduled in 2006. NOAA has taken a wait-and-see approach to scheduling more work in 2007 on UNOLS ships. Their Congressional appropriation process and timing for known budgets for the upcoming fiscal year forces them to be conservative in their requests to UNOLS. Most of the 2007 DART work will rely on commercial and foreign vessels that take

advantage of regional assets and partnerships for future DART maintenance. OE plans to utilize Jason on R/V Ron Brown.

Institutional funds have been used to fill in gaps, and provide days on various schedules that either ensure operations for 2007 or round out schedules towards the target operating days for each class vessel. For example the University of California has augmented the Revelle's Indian Ocean schedule by 68 days, bringing a potentially weak schedule up to the Global vessel target of 275-300 days. University of Washington will continue to fund 45 days for student cruises on the Thompson. WHOI has added approximately 21 days of new institutional/private funds to Oceanus' schedule, thus ensuring operations in 2007 of that vessel. Seward Johnson has 14 days of State Funds scheduled, plus they contribute institutional funds towards supplementing fluctuation in the daily rate. Endeavor has scheduled 42 days of state days. In addition, there are unquantifiable costs subsidized by operating institutions that enable ships to operate, such as OSU's non-charge for hull insurance. Other ships that have state/institutional funds on their schedules for 2007 are Cape Hatteras, Point Sur, Savannah, Barnes, and Urraca, bringing the total contributions to 347 days.

Research Vessel Operators' Committee (RVOC) – Tim Askew, RVOC Chair, reported on Committee activities. They held a meeting in April 2006 after waiting 18 months to shift the time of year for their Annual Meeting. The meeting was hosted by the University of Washington (UW) and started off with a presentation by UW Associate Professor, Dr. Deborah Kelley. She provided an overview of hydrothermal vent systems and the "Endeavor Observatory". This was well received and they plan to continue science presentations as part of all future meetings.

The meeting also included discussions and presentations on gender climate at sea, the grounding of the R/V Alliance, Risk management issues, and agency reports. The status of group purchases was reported.

Rick Trask (WHOI) held a discussion on "Wire Testing" with an emphasis on UNOLS wire specification being re-evaluated. The testing and specification should better emulate actual use in the field. Field data is necessary to validate actual use for incorporation into the specifications.

Invited speaker, Morgan Turrell, from the National Transportation Safety Board (NTSB), Marine Accident Section, gave a presentation on "What to Expect If Your Ship Has an Accident".

The Safety Committee is working on an update of the Research Vessel Safety Standards (RVSS) and would like to have it completed by April 2007.

Meeting workshops included "Load Handling System Design Standards" and "Wire Safe Working Loads" as a combined workshop. As science continues to push the upper limits of cable and wire capabilities the fatigue strength needs to be addressed so that operations can advise science and crews when "safe" operating limits have been reached. It also helps to determine at what point existing equipment needs to be modified, upgraded or replaced.

A second workshop was on Alcohol, Drugs, and Sexual Harassment policies with the primary objective of creating a uniform policy for UNOLS vessels. A new section on "Personal Safety" will be included in the RVSS that tailors sexual harassment issues specifically to sea going operations.

The Florida Institute of Oceanography will host the 2007 RVOC meeting.

Research Vessel Technical Enhancement Committee (RVTEC) – Bill Martin, RVTEC Chair, provided the Committee report. His slides are included as ***appendix VII***. RVTEC will hold their 2006 Annual Meeting on October 16th. It will be a one-day meeting hosted by Woods Hole Oceanographic

Institution and will be immediately followed by the International Marine Technician (INMARTECH) Symposium. INMARTECH is held every two years.

The RVTEC meeting agenda includes:

- Chair election results (Online voting prior to meeting)
- Equipment Calibration discussions
- Defined Levels of Technician / Instrumentation Support Update
- Satellite Communication Systems
- HiSeasNet
- NOAA VSAT Project

Woods Hole Oceanographic Institution will also host the INMARTECH 2006 on October 17-19. Topics include:

- Shipboard Handling Systems & Over-the-Side Operations
- Innovations in Vehicle Systems
- Equipment & Procedure Innovations
- Underway Data Collection & Archiving
- Long-tern Instrumentation Deployment
- Equipment tricks, Techniques, and Cool Products
- International Shipping – Dealing with new regulations
- Ship to Ship/Ship to Shore Wireless Access Protocol (SWAP)
- Shipboard Networks and Network Security

Fleet Improvement Committee (FIC) – David Hebert, FIC Chair, reported on FIC activities. His slides are included as ***appendix VIII***. The committee will continue their work on the Fleet Renewal Plan and will work closely with FOFC on their related effort. They will continue interactions with the ORION Office to determine the observatory facility needs for UNOLS vessels and other assets.

The FIC will continue the process of defining the Global Class SMRs.

A subcommittee chaired by Terry Whitledge was formed to draft Americans with Disabilities Act (ADA) guidelines for research vessels. The tasking for this came from NSF due to their need to ensure that new construction and conversion efforts address ADA requirements. The committee will consider both structural modifications and procedural guidelines for shipboard operations when persons with disabilities are onboard.

One task for the subcommittee was to draft preliminary ADA guidelines for the Regional Class acquisition effort. Using existing documentation these were completed and provided to NSF in early June 2006.

The committee convened a workshop at WHOI on September 18-19, 2006 that included a tour of R/V Knorr. Workshop participants included sea going scientists with vision, hearing, and mobility disabilities. Their input on the ship tour was extremely useful. Some of the suggested solutions would enhance safety for all people on board, such as improving markings of obstructions and the use of a buddy system for emergencies. It is generally thought that hearing and sight disabilities can be dealt with both in conversions/existing vessels and new construction. Mobility accommodations will be harder to deal with in existing vessels because it could involve passageway widths, room size and layout, and stairs than cannot be easily modified. It is better to deal with these issues in the initial design.

Procedural ADA issues will be incorporated into the Research Vessel Safety Standards (RVSS) and these topics will improve safety in general.

A revised draft of the ADA Guidelines will be shared with the UNOLS Council before being submitted to NSF and the community. When finalized, the guidelines would be incorporated into the Science Mission Requirements (SMR).

FIC will continue communications with the University of Hawaii to learn about the capabilities of the new over-the-side handling system for Kilo Moana.

Arctic Icebreaker Coordinating Committee (AICC) – Carin Ashjian, AICC Vice-Chair, reported on 2006 Icebreaker and AICC Activities. Her slides are included as ***appendix IX***. She reviewed the current AICC membership. Margo Edwards' term as Committee Chair will end in early 2007 and Carin Ashjian will become the new Chair.

Since fall 2005, AICC has held two meeting; one in December 2005 in Seattle, WA and the other in April 2006 at NSF. A debrief of one 2006 Healy cruise was completed and the second is to be scheduled. AICC provided a report to the National Academy of Science Committee on the Assessment of USCG Polar Icebreaker Roles and Future Needs. They continue to monitor icebreaker science-local community communication, and continue to urge scientists to contact communities early regarding planned science activities. AICC is recommending a single annual planning meeting in Barrow, AK of all interested parties

USCGC Healy completed two of her four scheduled programs for the summer 2006 field season. The first cruise was May 7 - June 5 to the North-Central Bering Sea for biology research (Grebmeier/Lovvorn). The second cruise was July 18 - August 22 to the Chukchi Borderland for Seismic Mapping and Sediment Coring (Lawver).

During the second cruise, a tragic accident claimed the lives of two Healy divers, Lt. Jessica Hill and Petty Officer 2nd Class Steven Duque. All science activities were ended immediately and the ship transited to Barrow and then to Nome, AK, where the scientists disembarked. Because of safety concerns, the CG decided to end the Healy's 2006 mission and the ship returned to Seattle at the end of August. The investigation into the accident is ongoing. Captain Doug Russell was relieved of command in late August. He has been replaced by Captain Tedric Lindstrom.

The first 2006 cruise (HLY0601) was highly successful. For the second cruise, there were difficulties with the installation and operation of the seismic system used to survey the Canada Basin. These difficulties ensued from problems encountered by the outside contractors tasked to set up the system and were not associated with CG operations. Ice cover was exceptionally heavy near Barrow this year, resulting in delays in executing the cruise track. Despite these difficulties, the science mission was reported to be successful by the chief scientist.

In 2007, Healy's plans include a 30-day Bering Ecosystem Study (BEST) program, a 30-day program in the Northeast Bering Sea, and the NOAA mapping cruise that had been originally scheduled for 2006. There is room in the schedule for other cruises and IPY activities (which are presently unscheduled).

In other Icebreaker news, Polar Sea's short-term repairs are complete. There was a shakedown cruise in late June that included icebreaking. The ship will conduct Deep-Freeze 2007 with Oden. The Polar Star was dispatched in January to Antarctica to support Deep Freeze 2006 after the Russian icebreaker Krasin lost a blade on one of its propellers. The ship returned to Seattle and is presently in "Caretaker Status" at USCG Seattle Base.

The final National Academy of Science report "Assessment of US Coast Guard Polar Icebreaker Roles and Future Needs" was released on September 27, 2006. The report emphasized the need for the US to "project an active and influential presence" in both polar regions and to maintain a leadership role in polar research, with an icebreaking capability to maintain access to polar regions including year-round access to the Arctic.

The report recommended the construction of two new heavy icebreakers to be operated by the USCG. The report also recommended that the USCG receive maintenance and operations funds to "support an increased, regular, and influential presence in the Arctic", with other agencies providing incremental support for directed missions such as science. A detailed list of the report's recommendations is included in ***appendix IX*.**

AICC will hold their next meeting in January 2007 in Seattle. There are few upcoming membership changes on the Committee. Robin Muench will replace Robert Bourke and Kate Moran will replace Margo Edwards.

Plans are presently being developed for a small (10 people, with participation from AICC/science, USCG, and NSF) "Icebreaker Retreat" to be held on December 7-8 at the USCG Base in Alameda, CA. The purpose of the retreat is to continue to improve science-USCG relations, especially in the context of this past summer's events, to discuss the findings of the NAS Committee Report, and to move forward in a constructive manner to best serve the interests of icebreaker science. Kathy Crane recommended that NOAA contact Margo Edwards about NOAA participation at the retreat.

DEep Submergence Science Committee (DESSC) – Annette DeSilva provided the DESSC report (***appendix X***). In 2006 the committee established criteria for incorporating new assets into the National Deep Submergence Facility (NDSF). NSF requested DESSC to develop the criteria because in the coming years there will be significant demand for new tools to support deep submergence research. There will also be a need for uniform community access to them. The criteria are included in ***appendix X*** and are also available on the UNOLS web page at: <http://archive.unols.org/committees/dessc/CRITERIADOCUMENT_062206.PDF>.

Applying the criteria, DESSC reviewed a request to add the Autonomous Underwater Vehicle (AUV) ABE/Sentry to the NDSF. DESSC recommended that it be added to the NDSF concurrent with the removal of the two towed vehicles DSL-120A and Argos II. The Council endorsed DESSC's recommendation in June 2006.

In order to better track the status of vehicle and system performance, DESSC will conduct debrief interviews of PIs who use Jason 2, Alvin, and ABE/Sentry. Participation in the debriefs will include DESSC, the science user, and the NDSF operator. Future DESSC meetings will include summary reports of these debrief.

A community on-line survey to identify what is desired in terms of science sensors and outfitting for the Replacement HOV is under development. It is expected to be available in 2007.

NSF and NOAA tasked DESSC to establish safety standards for HOVs. This task arose because the replacement for Alvin will not be inspected and certified by Navy and because of interest in using or operating other human occupied submersibles such as the HURL and HBOI vehicles. Certification of the replacement HOV will be by the American Bureau of Shipping (ABS) as is done with several other existing HOVs. A committee was formed to develop these safety standards, which will be modeled after the UNOLS Research Vessel Safety Standards. Dana Wilkes is the Committee Chair. Two in-person meetings and two phone conferences have been held during which the project tasking was defined,

current procedures and operating manuals were reviewed and an outline of areas to be addressed was formulated. Writing and research assignments were made and progress on first drafts was reviewed. Major chapters include HOV Operations, HOV Support Ship, HOV Handling Systems, Training Procedures for HOV Crew and Science User Safety Guidelines. This will be a multi-year effort with a goal of being completed before the new HOV comes on line. Monthly phone/web conferences will be held to review chapters and make changes as needed.

The 2006 DESSC Annual Planning Meeting will be held on Thursday, November 9th at the Seattle Aquarium. The meeting is in conjunction with the Western Society of Naturalists (WSN) meeting. This forum was selected in an attempt to better reach the deep submergence biologists. Traditionally the winter DESSC meeting has been held at the Fall AGU meeting in San Francisco and is well attended. The WSN Student mixer will immediately follow the DESSC meeting, and DESSC members Deb Kelley and Craig Young have been invited as this year's guest speakers.

Scientific Committee for Oceanographic Aircraft Research (SCOAR) – Mike Prince provided the SCOAR report (***appendix XI***). A major highlight of the year was SCOAR's first Airborne Ocean Science Conference at Moss Landing Marine Laboratories in May, with about 35 aircraft ocean/atmospheric scientists and operators attending. The suggestion was to continue with this conference about every two years.

SCOAR continues to contribute to discussions about a better method for disseminating information about the nation's fleet of research aircraft and about getting scheduled on one. SCOAR will participate in the NSF Atmospheric Science Facilities Assessment that is now underway. Various agency aircraft acquisitions or activities are underway. A "catalog of available aircraft" by NASA will be established. NOAA will acquire one more Twin Otter and one more P-3. NSF-NCAR will bring into service the HIAPER Gulfstream jet. The Naval Research Lab plans the addition of one more King Air. Tempering this news is the fact that budgets to operate the fleet of federal research aircraft continues to be tight.

Carl Friehe will replace John Bane as SCOAR chair in 2007. The next SCOAR meeting will be within the next several weeks and will take up the topic of a community survey of needed and desired airborne sensors.

Recognition of departing Council and Committee members

Peter Wiebe announced the names of departing Council and Committee members in 2005/2006 and thanked them for their service to UNOLS. These included:

- Council: Tim Cowles (OSU), Curt Collins (NPS), Wilf Gardner (TAMU), Cindy Lee Van Dover (William & Mary)
- DESSC: Mark Chaffey (MBARI)
- FIC: Ron Benner (U So. Carolina), Niall Slowey (TAMU)

Recognition of Mike Reeve – Peter Wiebe, on behalf of UNOLS, presented a plaque to Mike Reeve recognizing his service at NSF in support of the academic research fleet. Mike Reeve, Ocean Sciences Integrative Programs Section Head, will retire at the end of October 2006.

2006/2007 UNOLS Goals and Priorities - Peter Wiebe presented the 2006/2007 UNOLS Goals and Priorities. These are contained in ***appendix XII*** and also available on the UNOLS web site at <http://archive.unols.org/info/issues.html>.

The 2006/2007 UNOLS Goals are to:

- Promote broad, coordinated access to oceanographic research facilities (access)
- Support continuous improvement of existing facilities (improvement)
- Plan for and foster support for the oceanographic facilities of the future (planning)

Issues and Objectives for 2006-2007 are:

- Scheduling and Utilization
- Quality of Fleet Operations
- Fleet Renewal
- Communications
- Data management:

Additional details about the goals and objectives are contained in the slides. UNOLS welcomes community input regarding these goals and objectives.

UNOLS Other Business - Peter Wiebe reported on other UNOLS business. Slides that address each of the various topics are contained in ***appendix III***.

UNOLS Appointments to Committees – Over the past year appointments were made to the AICC, DESSC, FIC, and MLSOC. The names of the appointments are contained in ***appendix III***.

Marine Mammals and Acoustic Permitting Issues - NSF has hired an Environmental Officer, Bill Lang, who will assist in permitting issues. Advance notice of any cruise that would require marine mammal and acoustic permitting is crucial.

Codes of Conduct: The Impact of Scientific Studies on the Environment – The UNOLS Council heard a presentation from invited speaker, Lee Kimball (Consultant, and former Adviser to the World Conservation Union (IUCN)) on International Ocean Governance. She spoke about "High Seas" conservation and marine scientific research. The Council will stay informed about this topic.

UNOLS Briefing Package – This year a UNOLS brochure was drafted that provides a brief description of what UNOLS is and what it does. It included the committee structure and tasks, the number of ships, their distribution, and retirement dates. The status of the UNOLS fleet today and its funding was included. The brochure will be further refined before distribution.

UNOLS Ship Time Requests/Scheduling Database – Mike Prince reported that the new UNOLS STR/Scheduling database is ready for beta testing. Schedulers can finalize their 2007 ship schedules using the new system. One difference with the new system is that each scheduler, ship and technician manager, and principal investigator will create their own user account.

UNOLS Dues Accounting – The UNOLS membership dues account began the year with a balance of $1487.59. Funds expended throughout the year for catering, room rental, certificates/frames, and donations left a balance of $847.51.

UNOLS Calendar – Four UNOLS meetings are scheduled for the remainder of the year. SCOAR, RVTEC and INMARTECH will meet in October and a DESSC meeting is planned for November.

Adjourn