

UNOLS COUNCIL MEETING
National Science Foundation, Stafford I, Room 375
4201 Wilson Boulevard Arlington, VA
March 7-8, 2011

Meeting Minutes

Executive Summary:

The UNOLS Council met at the National Science Foundation (NSF) in Arlington, VA on March 7-8, 2011. Major discussion topics included:

- Fleet Operations and BP Research Funding for the Gulf of Mexico
- Antarctic research vessels and UNOLS, OPP, and OCE
- Greening the UNOLS Fleet initiatives
- Discussion on Membership Request from Schmidt Ocean Institute

The second morning of the meeting was devoted to a joint session with the UNOLS Fleet Improvement Committee. During this session, Fleet renewal activities were reported. There was a presentation on the preliminary results of a UNOLS survey on the decline in ship time requests and UNOLS outreach activities were also discussed.

Appendices – Meeting Presentations:

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XXVIII	<u>2011 UNOLS Council Nominations</u>
XXIX	<u>Ocean Class Acquisition Update</u>
XXX	<u>R/V <i>Sikuliaq</i> and RCRV Update</u>
XXXI	<u>Alvin Upgrade Project Status</u>
XXXII	<u>Ocean Observatories Initiative</u>
XXXIII	<u>Preliminary Results of Community Survey on Vessel Usage</u>
XXXIV	<u>Early Career Investigator Oceanographic Research Cruise Training</u>
XXXV	<u>UNOLS Outreach Resources</u>

Action Items

BP Research Funding for the Gulf of Mexico and UNOLS Ship Time – Draft a letter to Rita Colwell, Chair, Margaret Leinen, Mike Carin, VP of BP, NSF (others? Entire Board) regarding the BP Research Funding and the potential use of UNOLS vessels to support this effort. The high standard of UNOLS vessel facilities and service should be brought to light. Circulate the draft letter to Council. (Action – Bruce Corliss)

Polar Research Vessel (PRV) SMR Refresh – Provide Interim report identifying science drivers for PRV (June 2011). Finalize SMR Refresh ~ end of 2011 (Action - UNOLS PRV Subcommittee)

Green Ship Initiative – Plan Green Ship Workshop, January 2012 (Action - Bruce Corliss, FIC and RVOC advisors, UNOLS Office.)

Explore Options for Establishment of a UNOLS Speaker Series – Explore a regional approach to establishing a speaker series to highlight UNOLS ships and oceanographic research and to serve as an outreach activity to non-UNOLS colleges and universities, with particular attention given to institutions with under-represented minorities in the marine sciences. UNOLS representatives from each region could recruit speakers. (Action - Bruce Corliss, Council, and UNOLS Office)

Membership Request by Schmidt Ocean Institute (SOI): (Action – Bruce Corliss)

- UNOLS will extend an invitation to SOI to present information about their Institute to the full membership in 2011.
- UNOLS encourages SOI to attend any relevant UNOLS meetings as appropriate.
- UNOLS requests expanded information on their scientific and academic programs
- UNOLS recommends that SOI should become more familiar with the UNOLS organization and that the UNOLS Staff stands ready to assist.

Gender Climate at Sea – Voluntary On-Line Training Program – Customize the training program and explore options for administrating the program (Action - Jon Alberts)

Cape Fear Marine Inst. Marine Tech Program - Draft a letter to the North Carolina governor in support of the Marine Tech program at Cape Fear Marine Inst. (Action – Bruce Corliss)

Investigate the feasibility of a more flexible UNOLS to meet the needs of additional users - Examine vessel cooperative agreements and the USCG designation of a research vessel to

determine if they would impact uses of UNOLS vessels. (Action - Nancy Rabalais, Joe Malbrough, and Dennis Nixon)

Post Cruise Assessment Report (PCAR) – Continue the PCAR review. Implement a new on-line form (or forms). Add another member (fourth) to the subcommittee? (Action – Jon Alberts and PCAR subcommittee)

Nominating Committee – Review Council membership and positions opening, recruit individuals to stand for election in 2011. Form slate and submit to Council for endorsement. (John Morrison, Nancy Rabalais, Debbie Steinberg, and Annette DeSilva)

Ocean Class Advisory Committee (OCAC) – Clare Reimers has provided the Bruce Corliss with FIC's recommendations regarding the OCAC membership. Council endorsement is requested. (Bruce Corliss & Council)

UNOLS Survey on Ship Time Demand - Keep the survey open to collect additional data. Target early career scientists (Note – Deb Steinberg provided listserv contacts for DISCO and others. The Office contacted these groups with the survey link). Present the survey results in future UNOLS meetings and other forums. (Annette DeSilva)

Upon receipt, respond to recommendations from the Fleet Improvement Committee regarding: (Action – Council)

- *Oceanus* retirement/re-positioning
- Long Core Re-positioning
- Projected Service Life End Dates
- UNOLS Vessel Reclassification into a Four Class System

Meeting Summary Report

Day One - Monday, March 7th

Welcome and Introductions: The UNOLS Council met on March 7-8, 2011 at the National Science Foundation (NSF) in Arlington, VA. Bruce Corliss, UNOLS Chair, called the meeting to order and offered an opportunity for introductions. The meeting agenda is included as *Appendix I* and the meeting participant list is included as *Appendix II*.

A motion was made and passed to accept the minutes of the October 2010 Council Meeting (Gardner/Morrison).

Agency Reports:

National Science Foundation (NSF) – Bob Houtman provided the report for NSF. His slides are included as *Appendix III* and include information about the GEO FY12 Budget. During the on-going Continuing Resolution, NSF is working at 90 percent of their FY2010 budget level. In 2012, a 10% budget increase has been requested for GEO. A chart showing the GEO 10-year funding history is included in the slides. The funding spike in 2009 represents the one-time addition of the ARRA funding (stimulus).

Bob reviewed the goals and FY2012 priorities for the Science, Engineering and Education for Sustainability (SEES). The budget for this program will provide GEO with an \$87.2 M increase.

Bob's report provided an infrastructure update. Construction is underway for Ocean Observatories Initiative (OOI) and R/V *Sikuliaq*. The NCAR Wyoming Supercomputer Center is in its final year of construction. Three Regional Class Research Vessels (RCRVs) are under consideration as an MREFC project.

Lastly, Bob commented on the concept of NSF's "OneNSF," which will work to bring all of the directorates within NSF into a more collaborative organization.

NAVY – Tim Schnoor provided the report for Navy. 2011 started with three Navy ships in the shipyard. The *Revelle* shipyard period is complete. *Atlantis* is still in the shipyard for installation of the EM322 multibeam system. The A-frame is also being removed for refit to support the *Alvin* Upgrade vehicle. The ship should be out of the yard in late March. *Thompson's* Z-drives are being overhauled.

The AGOR Z-drives continue to be problematic. It has prompted a study. The operators are changing to a different type of maintenance regime for the propulsion system.

In 2011, ONR and NRL combined will support about 500 ship days; however, there are some acoustic studies that are winding down this year. Physical Oceanography finished a Typhoon study. There is a 3-ship Navy operation planned this year.

There is an effort to start up some research programs with Vietnam and to foster interest a ship visit is planned. *Revelle* may stop in Vietnam. They hope to get work in the South China Sea.

At the end of the calendar year, Navy is supporting a science demo on *Revelle* that will attempt to use an Unmanned Aircraft System (UAS) in the Indian Sea. Rob Pinkel will be the PI. Hopefully the demo will continue to promote the use of unmanned vehicles.

National Oceanic and Atmospheric Administration (NOAA) – Ralph Rogers gave the report for NOAA. This was a challenging year due to budget constraints. NOAA was able to keep the ships busy last year, but they are not sure that they can continue at this level this year.

The fifth Fisheries Research Vessel (FRV) is under construction, but it has been moved from the Mississippi shipyard to a yard in Wisconsin.

With the Continuing Resolution, the base funding for the NOAA research fleet is down to about 100 days per ship. The repair of the *Miller Freeman* was cancelled and two ships were laid up.

The Deep Water Horizon is still buying ship days from NOAA. Deepwater is taking over one of NOAA's laid up ships, the *McArthur*.

NOAA still relies on the UNOLS vessels for research operations.

Bruce Corliss - Is the DeepWater Horizon work supported by BP funds? Ralph – Yes. NOAA is funding the operations up-front, but will be paid back from BP.

UNOLS 2011 Fleet schedules and science operations, estimated operation costs, and 2012 ship scheduling – Stewart Lamerdin, Ship Scheduling Committee Chair, began the ship scheduling reports. His slides are included as *Appendix IV*.

There has been some officer transitions in the scheduling committee. Stewart has moved into the Chair position, leaving the Chair-Elect position open. A motion was made to confirm the appointment of Rose Dufour and Liz Brenner as the SSC co- Chair-Elects. (Rabalais/Gardner).

The estimated 2012 Fleet utilization was presented. The schedules for the Global vessels are shaping up, but the other classes are quite low at this time. A slide with the OOI ship projections was provided. In 2011, there are a lot of weak ship schedules.

A chart showing Operating Days vs. Cost was presented. Even if the number of operating days remains level, the costs go up. The high fuel prices have heavily influenced the fleet operation costs. There are more days on Global vessels than other ships and these are the most expensive ships to operate. The total annual funding for technical services hasn't changed much from year to year.

Discussion:

- Mike Prince – The contributions from NSF and ONR are sizable.
- Nancy Rabalais – Do we have any idea how many non-UNOLS ships are working in the Gulf of Mexico? There are a lot of vessels: *Weatherbird II*, *Alpha Helix*, *Farrell*, etc. Ralph Rogers indicated that he could look into this.

BP Research Funding for the Gulf of Mexico and Ship Time Plans - Jon Alberts provided the report. His slides are included as *Appendix V*. For 2011, there haven't been any BP requests.

- Nancy Rabalais– The Gulf of Mexico Research Board is working to develop a master research plan. It might be complete by the 1st of April. There are issues that are being worked out, such as, data, fiscal reporting, etc.
- Bruce Corliss – There has been discussions about using UNOLS vessels within the GRI Board, however it now appears that they are not interested in using our ships.
- Nancy - The UNOLS has fleet has certain safety and equipment standards that they offer.
- Debbie Steinberg - Why isn't the UNOLS Fleet being considered for use? Nancy – Other ships cost less, but they don't provide as much.
- Jon Alberts – UNOLS has been very proactive and has remained engaged in the GRI status.
- Bruce Corliss– Should we send a letter to Rita Colwell? Peter Ortner – the more people who request our ships the better. The high standard of UNOLS should be brought to light.
- Nancy – The UNOLS letter should be sent to Chairs, Rita Colwell and Margaret Leinen, and Mike Carin, VP of BP; the person involved with coordinating Gulf of Mexico operations.

Antarctic Research Vessels and UNOLS:

PRV Workshop Recap/Committee work update – Jon Alberts and Vernon Asper provided the report. Jon's slides are included as *Appendix VI* and provide the committee membership list and their task statement. The Polar Research Vessel (PRV) workshop was well attended with about 50 participants. The focus of the workshop was to identify the science drivers for a PRV, this was missing from previous studies.

Vernon explained how this PRV effort differs from previous studies. This is a bi-Polar vessel. The last effort was conducted by ARVOC.

Jon said that an interim report would be provided to NSF with the workshop findings. The final PRV report will be expected in about a year.

UNOLS-USCG Memorandum of Agreement (MOA) for MST training – Jon Alberts reported that years ago an MOA was drafted that provided procedures for matching MSTs with training opportunities on UNOLS vessels, but was never signed. It has now been signed. Jon's slides are included as *Appendix VII*.

Robin – this is very important because the USGS MST turnover frequently.

NSF Solicitation for USCGC *Healy* Ship Support – Tim McGovern reported on the status of the NSF Solicitation for USCGS *Healy* Ship Support. Tim's slides are included as *Appendix VIII*. Award notifications will be made later in the year.

Status of cooperative relationship between UNOLS, OPP, and OCE – Tim McGovern reviewed the list of cooperative efforts between OPP and OCE. His slides are included as *Appendix IX*.

Tim mentioned that he is new at NSF and is from the University of Hawaii where he was the Tech Manager.

Currently, OPP and OCE are discussing the feasibility of having a regional research vessel support operations out of Palmer Station, Anvers Island, Antarctica. In particular, they are looking at having the *Pt Sur* spend 60 days working off Palmer Station. Transit time is roughly 30 days each way. The vessels would support local diving operations, monitoring equipment maintenance, deploy and recover AUV's (especially sea gliders). One key area where a regional vessel could help Palmer Station is by extending small boat operations beyond the current limitations. Right now, small boat ops are limited to the immediate range around the station, or must rely on the *LM Gould*. Having a regional vessel available would free up the *LMG* for other cruises and extend the operations of the small boats, and field camps along the peninsula. Tim's slides are included as *Appendix X*.

Some of the issues they are currently addressing in regard to the vessel capabilities are:

- Must be capable of launching 20' Zodiaks
- 10+ berthing spaces for science
- Ice and blue-water experienced crew
- Vessel must use fuel compatible with the station
- Endurance of 20+ days

Based upon discussions with MLML, these all appear to be addressable.

In mid April OPP program managers and Stewart Lamerdin (MLML) will be visiting Palmer Station on the *LMG* to see first hand the facilities at Palmer Station and the working conditions and operations they could be dealing with. The biggest issue is the budgets. If OPP and OCE budgets are heavily cut, then this will likely have to wait until the funding situations improve.

Discussion:

- Annette DeSilva – When would this happen? Tim – It would be a four month period in the 2012 Antarctic season (perhaps starting in late 2011).
- Kenneth Coale – How has the Christ Church earthquake impacted operations? Tim – There were a lot of flight redirects after the earthquake. USAP was able to offer rescue support for the locals and their facilities were utilized.
- Debbie Steinberg – The *Point Sur* option is very exciting. If this is to happen in 2012, when would requests go in? Tim – They have to wait until the budget decisions are known.
- Clare Reimers – Are all issues resolvable? Tim – They should all be resolvable for the *Pt Sur*. Kenneth Coale cautioned that there might be other issues regarding waste disposal.
- Annette DeSilva – How has this type of work been supported in the past? Is this new work that is being driven by demand? Tim – Yes, this regional vessel will provide greater access to near ice regions.
- Robin Muench – This near-ice area has been very important in recent years. Ice melt in the area is very important and is changing the dynamics of the area.

Break

Department of State – Liz Tirpak (Dept of State) discussed the RATS system. She encouraged everyone to pay attention to the Dept. of State's website. Updates are posted regularly. There have been no staff changes. Roberta Barnes has been very valuable.

Green Ship Initiative – Bruce Corliss provided a status report on plans for a Green Workshop. His slides are included as **Appendix XI**. The workshop objective is to conduct an assessment of current technologies, designs and practices for environmentally sustainable research vessels. The proposed date is January 10-12, 2012 and the workshop would be held at the Nicholas School of the Environment, Duke University, Durham, NC. The workshop participant list would include representatives from UNOLS, federal agencies, naval architects, industry, and marine scientists. There would be invited presentations on various aspects of green ships: design, technology, and practices. Proposal for support of the workshop has been submitted to NSF and ONR. Bruce reviewed the long-term goals for greening the fleet (see slides).

- Liz Tirpak suggested that Bruce contact the International Ship Operator's group (ISOM) as some of the foreign countries have been interested in green initiatives.
- Bruce – In Sept 2011, there will be a green ship workshop in DC that he plans to attend. Many industry representatives attend the workshop.

Explore Options for Establishment of a UNOLS Speaker Series – One of the goals for 2010/2011 is to explore options to establish a speaker series for highlighting UNOLS ships and oceanographic research. Efforts would be made to reach non-UNOLS colleges and universities, with particular attention given to institutions with under-represented minorities in the marine sciences. Bruce Corliss led the discussion and his slides are included as **Appendix XII**.

Bruce suggested a strategy for conducting the series. It could be a pilot program and the series would run for three years beginning in the fall 2011. The program would be evaluated in 2014. Bruce proposed that the country be divided into six regions. There would be one or two UNOLS reps in each region to recruit speakers and coordinate the speaker series. Funding for regional travel would be from the UNOLS budget. Bruce showed with the UNOLS map with the regions.

Discussion:

- Clare Reimers – Would one goal be to bring more institutions into UNOLS? Bruce – If they could identify schools with marine programs.
- Mike Prince – There are some UNOLS institutions who are members who you never hear from. Then there are some ship operators who are not UNOLS members. In the past, we considered having UNOLS meetings at non-UNOLS schools in order to get the word out.
- John Morrison – It would be good to have boilerplate slides from UNOLS. Wilf – We have these already, they are on the UNOLS website.
- Dave Fisichella – It is good to talk about what is done on ships in terms of science, but also in terms of the other marine careers, such as, marine technicians and crew.
- Bruce Corliss – He said that he would identify individuals who would like to take the lead on this.
- Bob Collier – Some of the operating institutions in each region might want to get involved in this effort.

COMMITTEE REPORTS:

Bruce Corliss reported that the RVTEC has nominated Dave Fisichella as the Chair for RVTEC. A motion was made and passed to appoint David Fisichella as the RVTEC Chair (Ortner/Rabalais).

Ship Scheduling Committee (SSC) – Stewart Lamerdin, SSC Chair reported that Rose Dufour and Liz Brenner have been nominated as the Ship Scheduling Committee Co-Chair Elects.

Jon Alberts reported that over the past year, the SSC conducted a lot of their business by web conferencing.

Linda Goad has announced her plans to retire. NSF has posted her job announcement, but the deadline is tomorrow.

Fleet Improvement Committee (FIC) – Clare Reimers provided the FIC report. Her slides are included as *Appendix XIII*.

NOAA's Pacific Home Port construction in Newport, OR has been moving forward very quickly.

Clare reported that she attended the MLSOC meeting in October, but at that meeting it was decided to have an MLSOC member be the liaison to the FIC. Sandy Shor will be the MLSOC/FIC liaison. A new member to FIC is Fernando Martinez.

The next FIC meeting will start tomorrow morning as a joint session with the Council.

FIC has recommended members for an Ocean Class Advisory Committee to the UNOLS Council for approval. FIC reviewed the OCRV mission equipment plans and has provided comments to the Navy.

David Bradley has drafted an Appendix on Ocean Acoustics for the Fleet Improvement Plan. FIC review of the draft is needed.

Clare reported that she submitted a RAPID proposal for a Chief Scientist training workshop. The workshop would train early career scientists on how to be a chief scientist. Linda commented

that the proposal would be funded. The proposal includes plans for two training cruises on *Wecoma*. FIC members will be asked to contribute to the training curriculum

During the FIC meeting a panel discussion on Ship Radiated Noise is planned. Experts in the field will be presenters.

SMR discussions are planned during the FIC meeting and there will be time to hear about “lessons learned” from the design and construction efforts for *Sikuliaq*, OCRV, and the RCRV.

There will be discussions during the FIC meeting on Fleet Planning. NSF will report on the new service life end dates for NSF-owned Intermediate and Regional class vessels. FIC has recently learned that *Oceanus* might be taken out of service in 2012.

FIC will hear about possible options for repositioning the WHOI Long-core system from *Knorr* to another UNOLS Global vessel.

Discussion:

- Al Suchy – Last year FIC looked at questions from NSF for the RCRV. Was there any feedback from NSF on the FIC recommendations? Clare – The recommendations from FIC are public. These recommendations will be there for the teams who respond to the RFP for operations and construction of the ship.
- Matt Hawkins – There are a series of documents that will be put out with the RCRV solicitation. The NSF documents incorporate the FIC recommendations and NSF’s response.
- Debbie Steinberg – Why is the long core going to be moved from the *Knorr*? Clare – the *Knorr* is slated for retirement by 2015.

Deep Submergence Science Committee (DESSC) – Peter Girguis provided a written report on DESSC activities. His report is included as *Appendix XIV*.

2010 was a significant year at the NDSF. *ABE* was lost at sea in Spring 2010, *Alvin* was taken out of service temporarily in early summer due to subsurface indications, ROV *Jason* was able to fill in for *Alvin* during this time. The NDSF assets were also entrained in a great deal of work in the Gulf of Mexico in response to the oil spill.

After *ABE* was lost at sea, DeSSC was prompted to consider whether *Sentry* was ready for the NDSF. In response, DESSC produced a document that was provided to the NDSF, which outlined enthusiasm for *Sentry* as well as requested improvements to insure that *Sentry*’s operations are not hindered by the availability of personnel or other resources.

Alvin, as we know it, made its final dive in late 2010. Around the same time, the *Alvin* upgrade project passed its final design review and the project is moving forward.

Plans are also underway to replace the Launch and Recovery system for ROV *Jason*. The new system will be designed to enhance science capacity with a heavier lift capability.

At the spring DeSSC meeting, DeSSC will address the issue of copyright. Legal council has been asked to join the meeting to better understand the implications of retaining or changing copyright policy at WHOI.

In an effort to increase the scientific communities' interest in the NDSF, with generous support from the NSF, an NDSF booth at the 2010 annual AGU meeting was organized. This booth featured all the NDSF vehicles. The *Alvin* upgrade mockup sphere was on display in this exhibit.

Research Vessel Operators' Committee (RVOC) – Joe Malbrough, RVOC Chair, provided the RVOC report. His slides are included as *Appendix XV*.

The RVOC Safety committee has been focusing on Appendix A and B of the Research Vessel Safety Standards. Workshops are planned to educate the community (crew, marine techs, and science users) on Appendix A. Appendix A addresses wires and safe working loads. Annette emphasized that these workshops should also be attended by the science party who operate their own winches/handling system

Jon Alberts commented that the Safety Committee has been working hard over the last couple years. Next on their list will be to address medical standards for the fleet.

Research Vessel Technical Enhancement Committee (RVTEC) – Dave Fisichella, RVTEC Chair, provided the RVTEC report. His slides are included as *Appendix XVI*.

During the last RVTEC meeting, the Chair-Elect position was created and members voted to nominate Daryl Swenson to the slot.

The goal moving forward for RVTEC will be to foster more participation from the technical community and to broaden the input. Greater specialization of scientific equipment reflects the need for an increased footprint of tech services. This will be discussed into the foreseeable future.

The RVTEC meeting has grown in attendance and in response a new format is needed that will better engage the participants.

The INMARTECH meeting that had been planned for New Zealand was cancelled. It was too expensive for many.

RVTEC members will attend RVSS Appendix A workshops that are offered this year.

The RVTEC continues to discuss the Post Cruise Assessment Reports (PCAR) at their meetings. Marine technician submittals of the PCAR forms are low and a new form is needed for the techs.

Another area that gets a lot of attention from RVTEC is Satellite communication bandwidth. Most ships have both HiSeasNet and Fleet BroadBand.

Discussion:

- Larry Atkinson – What is the relationship between technicians and OOI? David – He feels there will be more reliance on the techs.
- Stewart Lamerdin – In regard to the PCAR, what type of information from the technicians would be useful to the agencies? Linda Goad – She reads every PCAR and the more information that they get, the better.
- Wilf Gardner – He emphasizes the timeliness of submittals of the PCARs. We need to get the data earlier than later.

- Mike Prince – We have been dealing with this forever. His personal opinion is if you want candid useful information, the person filling out the form must know the value of the information.
- Robin Muench – The icebreaker users are required to fill out a long post cruise form when they leave the ship. Then there is a phone debrief. It is very useful.

Ocean Observing Science Committee (OOSC) – Larry Atkinson, OOSC Chair, provided the OOSC report. His slides are included as *Appendix XVII*.

Larry reviewed the membership and the original charge to OOSC. He showed the timeline for installation. Systems are going in the water, so it is time to think about science proposals.

Defining the role of the OOSC has been a focus of the committee. They will work to better understand OOI. OOSC want to make sure that they don't duplicate the efforts of the OOI Program Advisory Committee (PAC).

Discussion:

- Nancy Rabalais – Do the agencies feel the need to advertise how to access the OOI? John Morrison – Yes – they reminded folks of this at the Pioneer Workshop.
- Larry Atkinson - There is an OOI Operations & Maintenance meeting in mid May. OOSC members will attend the meeting. This is the first time that they will meet in person.
- Morrison – OOI design plans are firming up. Has OOI spoken to UNOLS about the ship needs? Jon Alberts – Many of the people who are in OOI are very familiar with UNOLS. John – OOI will need to have the right facilities available at the right time.
- Linda Goad – There is about 150 days annually of OOI ship time.

Arctic Icebreaker Coordinating Committee (AICC) – Robin Muench, AICC Chair, provided the AICC report. His slides are included as *Appendix XVIII*. He reviewed the icebreaker accomplishments from winter 2010/11 (see report).

Robin reported that because there is only one Arctic icebreaker now in service, the MOA to use UNOLS vessels for MST training is very important.

Robin showed the 2011 Healy cruise tracks. There is a lot of focus on the Arctic North Slope.

Polar Sea suffered engine damage during the BEST cruise. The engines had just been rebuilt. Up to a couple of weeks ago the engines were under repair, but then it was announced to decommission the ship. *Polar Star* is now being overhauled to reenter service.

Marcus Langseth Science Oversight Committee (MLSOC) – Jon Alberts provided the MLSOC report. His slides are included as *Appendix XIX*.

Graham Kent will be up for re-election this year. Prior to this Council meeting the MLSOC provided a set of recommendations to the Councils regarding R/V *Langseth* planning and operations. MLSOC would like the Council approval of the recommendations so that they can be sent to NSF for consideration.

A motion was made to accept the MLSOC recommendations and send them to NSF (Wilf Gardner/Kenneth Coale).

Discussion:

- Bruce Corliss – He had some reservations regarding the panel recommendation. Linda Goad – There was a concern that reviewers would get sticker shock when reviewing proposals for use of *Langseth*. NSF has now blocked out the facilities for separate review.
- Linda –The MLSOC recommendations should be sent to Rodey Batista and Rick Carlson.

Linda Goad provided an update on the *Langseth*. The *Langseth* operation is under an NSF business review. \$4M was awarded to make improvements to the vessel and make it more capable to support general-purpose science. The ship will have an NSF inspection that must be passed or LDEO could lose the ship. During the Business Review, 200+ deficiencies were identified. All of these will have to be addressed by September. The ship will have the Kongsberg system and an ADCP.

Discussion:

- Annette – Will the ship have general-purpose technical support? Linda – They will get this through the Tech Pool.

The Council voted all in favor to approve the MLSOC recommendations. The motion passed.

Scientific Committee for Oceanographic Aircraft Research (SCOAR) - Dan Schwartz, SCOAR Chair, could not attend the Council meeting, but provided a written report, which is included as *Appendix XX*. Annette summarized the report (see the Appendix).

Lunch Break

Request for UNOLS Membership - Schmidt Ocean Institute (SOI) <http://www.schmidtoccean.org/> - Jon Alberts reported that SOI has requested to become a UNOLS Member. The request is included as *Appendix XXI*.

Discussion:

- Robin Muench googled the definition of an “academic program” and it states that there must be a parchment at completion of the course.
- SOI compared themselves to MBARI and STRI.
- Peter Ortnor – Perhaps they do not have an academic research program yet.
- Robin – He would like to have a better understanding of the SOI organization and scientific staff.
- Rob Pinkel - We should be supportive of their research interests.
- Larry Atkinson – We should contact SOI and help them come into UNOLS by learning more about us.
- David Fisichella – He is leaning towards inclusion, but we should give them some guidance.
- Wilf Gardner – He couldn't find much information about SOI on their website. It might still be in development.
- Rob Pinkel – It his understanding that SOI's model for cruises is different from the UNOLS model where the Chief Scientist runs the cruise.
- Nancy Rabalais said that she would like to make a motion (the wording for the motion was drafted during the break).

UNOLS had a positive discussion regarding the Schmidt Ocean Institute’s request for membership. UNOLS will welcome SOI to present information about their Institute to the full

membership. Over the course of the next year, SOI should become more familiar with the UNOLS organization.

Motion: The UNOLS Council respond with positive comments to the Schmidt Ocean Institute application with regard to opportunities and request additional information on their scientific and academic programs (Rabalais/Ortner).

Amendment. The application for membership could be presented to the Council for consideration of action for the full membership in time for the Annual Meeting in 2012. (Collier)

Should this motion pass:

- UNOLS will extend an invitation to SOI to present information about their Institute to the full membership in 2011.
- UNOLS encourages SOI to attend any relevant UNOLS meetings as appropriate.
- UNOLS requests expanded information on their scientific and academic programs
- UNOLS recommends that SOI should become more familiar with the UNOLS organization and that the UNOLS Staff stands ready to assist.

The Council voted with all in favor, none opposed and the motion passed.

The Status of UNOLS On-Going Activities, Issues, and Items of Council Interest:

R2R Project Update – Bob Arko provided a written report, which Jon Alberts summarized. The report is included as *Appendix XXII*. The report includes an R2R proposed policy. The policy addresses what type of personal data that cannot be collected by R2R.

Discussion:

- Wilf Gardner – Why are brief absences from work okay to include?
- Bob Collier - He suggested that instead of informing us of what cannot be included, tell us what they would like us to include.

Gender Climate at Sea – Jon Alberts provided an Update on the Voluntary On-Line Training Program. His slides are included as *Appendix XXIII*.

Jon reported that he, Kenneth, Bruce, and Annette have reviewed a few of the Workplace Answers on-line courses and have decided on a course. The course can be introduced to UNOLS as a pilot program. We will explore options on how it can be executed. Stay tuned.

Clare Reimers - Who should take the course? Jon - The course is for anyone who participates in a cruise - science party and crew.

Consortium for Ocean Leadership: Working Group on Ship Funding – Jon Alberts reported that the Working Group will present their recommendations to the Ocean Leadership Board on Thursday of this week. The Board will recommend in a closed meeting if the report should go forward to the full membership.

Marine Technician Recruitment and Retention Pilot Program – Jon Alberts provided a status report on the Marine Technician Recruitment and Retention Pilot Program. Slides prepared by Alice Doyle are included as *Appendix XXIV*. Some of the activities over the past year include

- Marine Tech at-sea training

- Technician Exchanges
- UNOLS/MATE internship program
- Best practices/document depot
- Recruitment and Outreach
- Salary Survey

Jon reported that Alice Doyle conducted a survey on Training and Education courses that would be of interest to the Marine Technicians. Alice is also working on pre-cruise planning documents.

John Morrison reported that reduced funding support from North Carolina threatens the Marine Technician program at the Cape Fear Marine Institute. The Council approved a motion to draft a letter to the NC Governor in support of the Marine Tech program at Cape Fear Marine Inst (Fisichella/Ortner).

Break

Interagency Working Group on Facilities Infrastructure (IWG-FI) – Bob Winokur provided a report on IWG-FI activities. Bob reported that RADM Phil Kenil, NOAA and Co-Chair of the IWG-FI retired.

The IWG-FI has been working on the Strategic Action Plan (SAP) to the Ocean Policy. Their first draft is due on April 29th and a public comment period will follow. Each SAP must come up with six action plans. Each of these must be divided into near-term (2-years), mid-term (4-years), and long-term (6-years). Bob reviewed the six action items.

One of the actions is focused on the Arctic. This is an area of interest and there must be access for research operations in that area. Bob co-chairs the Arctic action plan with John Farrell of the Arctic Research Commission.

Other areas of the Ocean action plan that IWG-FI has been working on include:

- A coordinated National plan for fleet renewal.
- Unmanned facilities with focus on AUVs and UAVs

A sub-working group of the IWG-FI has been formed, the Task Force on Unmanned Systems (TFUS). TFUS has plans for a workshop at Stennis Space Center. The Navy is buying 150 gliders. A couple of the challenges that TFUS has been working to address are:

- FAA permission to fly Unmanned Autonomous Systems (UASs)
- Creating an inventory of unmanned systems.

Bob said that as the IWG-FI works on the strategic action plan, they would appreciate UNOLS feedback.

Discussion:

- Kenneth Coale – will OMB bless the IWG-FI plans? Bob – They hope that OMB will work with the IWG-FI, but this is a concern.

Investigate the feasibility of a more flexible UNOLS to meet the needs of additional users - Nancy Rabalais reported that their subcommittee hasn't been active. A lot of their work depends on the cooperative agreements that UNOLS institutions have with NSF and ONR and on the

USCG designation of a research vessel. She, Joe Malbrough, and Dennis Nixon will look at these areas and then determine what would impact our vessel uses.

Post Cruise Assessment Report (PCAR) Subcommittee – Jon provided a status report on the PCAR subcommittee activities and the 2010 PCAR data that has been submitted. His slides are included as *Appendix XXV*.

The members of the PCAR subcommittee include Wilf Gardner/TAMU/Chair, Joe Malbrough/LUMCON/RVOC Chair, and Daryl Swenson/OSU/RVTEC Vice Chair. Another volunteer for the subcommittee is needed.

The 2010 data included statistics on the percent of reports submitted and on lost time, and shipboard accidents. There was some confusion regarding some of the charts and the definition of what constitutes an accident. There were also some questions about the nature of these accidents. Mike Prince offered to work with Jon to determine what should be reported on these charts.

Medical Advisory Service to Fleet - Jon Alberts provided that status of the effort to rebid the UNOLS Medical Advisory Service. The current contract will end in July. Jon's slides are included as *Appendix XXVI*. Two companies have bid and there will be a review of the proposals. Everything is on track to have a new contract in place by July.

Discussion:

- Kenneth Coale – How many calls does the service get annually? Jon – Last year there were 209 cases.
- Debbie Steinberg – Is there a requirement for an EMT on UNOLS vessels? Jon – It is up to the institution.

An Ocean Infrastructure Strategy for U.S. Ocean Research in 2030
<http://www8.nationalacademies.org/cp/projectview.aspx?key=49139> – Annette DeSilva reported on the status of the National Research Council's report. (See *Appendix XXVII*.) The draft report went out for an external peer review in early December. The committee is currently working on the response to the external review. The sponsor briefing for the report will be on Wed, April 20, with a public release of the report a day or two later.

Other Business:

Form Nominating Committee to review Council membership and positions opening, and to recruit individuals to stand for election in 2011 – There are two Council positions that will open in the fall 2011. (See *Appendix XXVIII*.) Kenneth Coale is completing his first term and is eligible for a second term. Rob Pinkel is completing a second term. Bruce Corliss appointed a nominating committee of John Morrison, Nancy Rabalais, and Debbie Steinberg to form the 2011 Slate of Candidates.

Annual Meeting - Bruce Corliss reported that he has spoken with Kate Moran and she is available to provide the UNOLS Annual Meeting keynote presentation.

The Consortium Ocean Leadership Board Meeting is on October 27 and 28. The UNOLS Office will poll the Council members for their availability in October. We will include the dates immediately before the Ocean Leadership meeting.

UNOLS Council Summer Phone/Web Meeting – The UNOLS Office will survey the Council for their availability for a summer meeting in June or early July.

Bruce thanked everyone at the meeting for participating in the meeting.

A motion was made and passed to adjourn Day. (Muench/Morrison)

Day-2: Tuesday, March 8th: Joint session of the Council and FIC

Open Day-2 of the Meeting: Bruce Corliss, UNOLS Chair, reconvened the meeting. Participants introduced themselves.

Facility Renewal Activities:

Ocean Class Acquisition Update - Chris MacDonald provided an update on the Ocean Class Research Vessel (OCRV) acquisition effort. His slides are included as *Appendix XXIX*.

Mike Prince commented that FIC will make recommendations regarding the membership of the Ocean Class Advisory Committee (OCAC). FIC input on the OCRV Mission Equipment System (MES) will be discussed during the FIC meeting.

Chris reported that the Continuing Resolution poses challenges to the OCRV project. At this time, the first OCRV has not been appropriated. They hope that the appropriation will happen in FY2011 so that the construction award can move forward.

Alaska Region Research Vessel, R/V *Sikuliaq*, Status and NSF Perspectives – Matt Hawkins reported on the status of the R/V *Sikuliaq* construction effort. His slides are included as *Appendix XXX*. Matt provided images of the hull forgings. Four modules are under construction. There have been design changes as a result of the ship's weight mitigation, including a lengthening of six feet.

The ship's launch is planned for June 2012 and preliminary acceptance by UAF will be on June 13. Science trials will be conducted from June to Dec 2012. The vessel is scheduled to begin science operations in CY 2014. The *Sikuliaq* will operate as a Global Class vessel.

The cruise path from the shipyard to Alaska after delivery of the ship will be completely dependent on science demand. There is a requirement for a warranty shipyard period in June 2014. Depending on demand, operations might begin in the North Atlantic.

Discussion:

- Bob Collier – What is the day rate? Matt - \$36k a day plus the tech rate.
- Mike Prince inquired about the Global Class ship designation. Matt – The designation was based on operation mode as opposed to size. The ship will operate in the North Atlantic, Antarctic, Alaska, Pacific, etc. It is an extremely capable vessel and has a good open water characteristic.

Regional Class Research Vessel (RCRV) Acquisition Status – Matt Hawkins explained the delay and status of the RCRV. The slides are included in *Appendix XXX*.

The solicitation was originally planned for release on January 24, 2011 but was paused due to FY11/12 budget discussions. The release of the RCRV solicitation is now expected in early summer 2011 after presentation to the NSB in May. Proposals will be due in the Fall 2011 with award of Phase I in spring 2012. If all goes as planned Phase III Construction would be awarded in Spring 2016 and the first ship would begin operations in spring 2019.

Discussion:

- Clare Reimers – What is the cause of the delay? Matt – The MREFC process will result in a two-year budget process.
- Peter Ortner – It is a different problem. Matt – The thing that drags this out longer is because of the MRE process.
- Stewart Lamerdin – This is an extended timeframe. How will the current ships be maintained? Matt – This is on the schedule for FIC discussion during their meeting tomorrow. NSF will seek FIC input.
- Al Suchy – With the OCRV (Continuing Resolution issue) and the RCRV long timeline, there is the potential of a significant gap of ships coming off line and new ships coming on-line. It is important to understand this. There could be a reduction in capacity.
- Matt – The *Oceanus* retirement is a condition in the Presidential budget. It is a done deal. We need to determine what will need to be done with the other vessels to keep them going. They are looking for recommendations from the FIC and the community.
- Maureen – Will the RCRV be built in sequence? Matt – They will all be under one contract.
- Clare – *Sharp* is well utilized. People want to use the new ships.

Replacement Human Occupied Vehicle Project – Brian Midson reported on the status of the *Alvin* Upgrade project. His slides are included as *Appendix XXXI*. WHOI successfully completed the project Final Design Review in the fall 2010 to proceed with Phase I. Brian reviewed the upgrade features of the vehicle (see slides). At the end of Phase I, the vehicle will have a new titanium sphere, but the vehicle rating will still be 4,500 m. The batteries remain the limiting factor for Phase II. The battery technology is not quite there. Hopefully by the next overhaul cycle, the batteries will be available. The upgraded vehicle has five viewports and a lot of penetrators.

Under the current schedule, the sphere will be delivered in May 2011 with hydrostatic tests in October 2011. Science trials are planned for May 2012.

Discussion:

- Jon Alberts – Is the funding there to go to Phase II? If the technology became available, would NSF have the money? Brian – It really depends on the budget. WHOI is working with industry to look at battery development.
- Jon Alberts – What batteries are Jamstec using? Brian – They are using Silver Zinc batteries. We cannot afford to use the same batteries.
- Brian – The science sea trials will last about one month.
- Stewart – What are the plans for the old sphere? Tim Schnoor – The Navy will loan the old sphere to WHOI for display.
- Jon – Is the ABS and NAVSEA certification a joint effort? Brian – It is two separate parallel efforts and comes at an added cost and added effort.
- Al Hine – Will the support platform require modification? Brian – The support ship A-frame will need to be upgraded. There will be some changes to the high bay.

- Will the upgraded *Alvin* be as capable as a new vehicle? Brian – There are two shortfalls, the variable ballast and the drop weights.
- Al Hine – Did anyone want to put four people in the sub? Brian – This was not considered.

Ocean Observatories Initiative (OOI) – Jean McGovern (NSF) provided an update on the OOI program. Her slides are included as *Appendix XXXII*. She reviewed the OOI organization, project roles, component descriptions, and program status. All of the details are included in the Appendix.

The education component will soon be announced. About 160 people are now involved with OOI. About 800 sensors will be distributed globally. OOI has undergone many changes in scope. Design elements and systems are being tested this year.

The Regional Scale observatory effort awarded an \$89M contract for cable laying in November 2009 and they are moving along.

The environmental assessment for OOI was very intense and included public hearings.

The Endurance Array should be in the water in 14 months.

Tim Schnoor – Is there a cyber security issue? Jean – The Regional-Scale array will use hydrophones, and this means that the Navy has to be involved.

Break

UNOLS Evaluation of Decline in Ship Time Requests – Annette DeSilva presented the preliminary results of the community survey on ship usage. Her slides are included as *Appendix XXXIII*.

The survey was announced in February 2011 and as of this meeting 260 surveys were submitted. The preliminary data summary is included in the slides.

The Council recommended that the survey remain open and that an effort be made to reach more early career students.

Early Career Investigator Oceanographic Research Cruise Training Opportunity – Clare Reimers reported on plans for an early career investigator cruise training opportunity. Her slides are included as *Appendix XXXIV*. The training cruises will be staged from OSU's Ship Operation's facility during 2011.

On each cruise, up to 14 participants and four instructors (scientists and marine techs) will work together aboard *R/V Wecoma*. The cruise will last ten days. FIC will track the participants after the workshop.

Discussion:

- Eric – Will there be a report at the Ocean Sciences meeting. Clare – She can try to do this.
- David Bradley – Contingency planning should be part of the training. Clare – They will try to develop some challenging situations. Peter Ortner – As an example, what would you do if you lost a day on the cruise?

UNOLS Outreach Initiatives:

Outreach Resources – Annette DeSilva reported on the UNOLS outreach resources that are available to the community. Details are included in *Appendix XXXV*. The resources include posters, slide packages, brochures, etc. Requests can be directed to the UNOLS Office. UNOLS is also on Facebook.

Suggestions for UNOLS Activities at the 2011 Fall AGU Meeting and the 2012 Ocean Sciences Meeting – The Council discussed and made suggestions for UNOLS activities at the National meetings. The suggestions included:

- Town Hall on Early Career Training Workshop experiences.
- ½ day session at Ocean Sciences on cruise training
- Present the ship time demand survey results at Ocean Sciences.

A motion was made and passed to adjourn the Council meeting (Collier/Rabalais).