

UNOLS COUNCIL MEETING

July 13-14, 1999

Bermuda Biological Station for Research
Hanson Hall
17 Biological Station Lane
Ferry Reach, St. George's, Bermuda

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Welcome and Introductions - The UNOLS Council met in Hanson Hall at the Bermuda Biological Station for Research. Bob Knox, UNOLS Chair, called the meeting to order at 8:45 am on 13 July 1999. The items of the agenda, [Appendix I](#), were addressed in the order as reported below. The participants of the meeting are listed in [Appendix II](#)

Tony Knap welcomed Council Meeting participants to Bermuda Biological Research Station.

Accept minutes - The minutes of the February 1999 UNOLS Council Meeting were accepted as written.

COMMITTEE REPORTS:

The UNOLS Committee Chairs provided written reports of their respective committee activities prior to the meeting, see [Appendix III](#). Bob Knox provided a summary of the reports. The Committee Chairs added comments to their written reports.

Arctic Icebreaker Coordinating Committee (AICC) - Jim Swift reported that a NSF funded PI on a recent POLAR SEA cruise sent a post-cruise letter to the US Coast Guard. The letter gave a critical account of the science support provided during the cruise. The USCG has taken the letter under review and will provide a response. Jim commented that the letter provides good suggestions that would benefit future USCG science cruises. One suggestion was to have USCG officers participate in research cruises on UNOLS vessels.

There was discussion on OMB's suggestion to have NSF take over the operation of HEALY. It was noted that the suggestion is dead for the time being. If the suggestion had been endorsed, it would have made HEALY a UNOLS ship, and not be operated by the USCG.

Fleet Improvement Committee (FIC) - Bob Knox summarized the written FIC report. There was a brief discussion on why a letter was sent to WHOI requesting that they make their SWATH a UNOLS vessel. Larry explained that after presentations by WHOI on their SWATH design, the FIC recommended that the SWATH vessel become a UNOLS vessel since it would offer a unique capability to the scientific community. It was suggested that in the future FIC should continue to be proactive in recommending

ships to the UNOLS Fleet when appropriate.

Research Vessel Operators' Committee (RVOC) - Bob Knox summarized the written RVOC report. Paul Ljunggren added that a subcommittee has been formed to study portable vans. The study will include an inventory of containers now available in the fleet. The inventory of vans will provide a clear picture of what is available and allow budgeting for replacements. The study also hopes to provide guidelines for procurement and use of vans. Issues such as proper securing of vans and size recommendations will be addressed. The study was initiated in response to comments that some vans being used today are old, substandard and not USCG approved.

Research Vessel Technical Enhancement Committee (RVTEC) - Bob Knox summarized the RVTEC written report. Jack Bash commented on the growth and interest in technical support issues. In the eight years that RVTEC has been in existence it has grown in interest and helped to heighten awareness of support issues.

Ship Scheduling Committee (SSC) - Mike Prince distributed spreadsheets for UNOLS ship utilization in 2000, see *Appendix IV*. The sheets include the numbers which were available to date. The total days requested is a bit lower than the past two years, but the 2000 statistics do not include the SEWARD JOHNSON schedule. NSF's ship time is up from the past two years; however; Navy, NOAA, other, and institution days are down from the previous years. The NAVO ship time has not been included on some of the schedules. The small ship schedules are strong with LAURENTIAN at 232 days. On the other hand, coastal intermediate ships on the West Coast are showing relatively weak schedules at this time. The ship scheduling meeting will be held on 15 July.

DEep Submergence Science Committee (DESSC) - Bob Knox summarized the written DESSC report. Mike Prince commented that the ROV schedule for 2000 is very demanding and will be perhaps be impossible to fully accommodate in 2000.

Agency Reports:

Department of State (DOS) - Tom Cocke reported that, on the whole, things are going smoothly with clearance requests. Liz Maruschak has been of great assistance in Tom's office. NSF and ONR are providing support for Liz's position. She has been working to bring the computer systems up-to-date. Tom reported that Cuba has not been granting approval for clearance requests and that it does not look good for the future. It is unclear as to why Cuba is not responding to clearance requests. Clearances requests for work in China waters has also been a problem. Part of the problem is that China claims a lot of territory. Many times clearances are needed for both Taiwan and China.

Tom commented that his office is receiving many clearance requests that have not been submitted using proper procedures. The normal practice is for a scientist to work with a UNOLS Operator when submitting a request. Tom estimated that there are approximately ten people who do not use the system properly. The Council suggested that Tom send the names of the offenders to the UNOLS Office, SSC Chair, or ship operator, who in turn will educate the offender on how to properly submit a request.

When asked about the state of the computer systems in Tom's office, Tom indicated that there are still problems. As an example he reported that his e-mail was down from December until July. It is very distressing that the State Department is not providing adequate computer systems or e-mail service. There is also concern from the other agencies about funding a person to work in the State Department (although everyone has high praise for Liz and greatly appreciates her efforts).

National Oceanic and Atmospheric Administration/Ocean and Atmospheric Research (NOAA/OAR) - CDR. Beth White gave the report for NOAA/OAR. She began by reporting on personnel changes. RADM Bill Stubblefield retired this year and RADM Evelyn Fields has taken over command as the new director of the NOAA Corp Operations. RADM Albridge retired in July from the NOAA Commissioned Corps.

The Senate mark on the NOAA budget has just been released. Funds for chartering are included. The

Sustainable Seas program is underway. The Sustainable Seas Expeditions will explore the underwater rim of the United States. It is a multi-million dollar project of the National Geographic Society that will span five years. The program was funded through a \$5 million grant from the Goldman Fund in partnership with NOAA's national marine sanctuaries. The program will apply new submersible technology. This year operations began in April on NOAA's ship, McARTHUR along the West Coast.

NOAA/National Marine Fisheries Service (NOAA/NMFS) - Jim Meehan gave the report for NOAA/NMFS. He began by reporting that the Senate mark appropriates approximately \$54 M for a fisheries vessel. The mark also indicates approximately \$60M per year for the next six years for fisheries vessels. NOAA had requested four vessels, but the mark indicates six vessels. Ship construction for the fisheries vessels will be through NAVSEA. The CBA is expected to be on the street in July. The Data Acquisition Plan which, among other things, lays out the NMFS long-term needs for ship use can be found at the website: http://www.st.nmfs.gov/st2/omb_link.html. The NOAA fishery research vessel (FRV) design calls for vessel 213-ft LOA, ~46-ft beam, and ~19-ft draft. The ship is to be diesel/electric with the goal of meeting ICES noise requirements. The first four FRVs are to be FRV40s. Ships are needed in the Alaska region and off the Northeast US.

A variety of questions arose regarding the NOAA FRVs and ship needs. There was a general discussion on whether any of these ships would be brought into the UNOLS system. The question arose on whether or not there will be funds in NOAA's budget for chartering after construction and operation of the new FRVs.

National Science Foundation (NSF) - Dolly Dieter began the NSF report by noting that the budget looks level for 2000. Don Heinrichs will retire at the end of the year. Holly Smith has come aboard at NSF as a science officer in the Facilities Section. Beth White is on loan from NOAA a couple of days a week to assist NSF in the Facilities Section. She will be involved with ship scheduling.

As a result of the NSF Academic Fleet Review, improvements to the fleet and operations are already underway:

- UNOLS ships will be equipped with de-fibrillators. Mike Prince has been spearheading this effort to provide de-fibrillators to all UNOLS vessels.
- A van study is underway. Joe Coburn is heading a group to provide guidelines for van design as well as an inventory of the vans that are presently in the system. This effort was partially a result of the comments provided by the science user community.
- Plans for a Winch and Wire Symposium are underway. This effort again stemmed from comments received from the science user community. Heavy science packages are being handled. Additionally new cables are coming on the market. A steering committee has been formed by Jack Bash to coordinate this effort.
- A workshop is being planned to address submergence science facility needs into the future. The workshop will address the science to be conducted in the next 5, 10, 15 years as well as the facilities needed to meet these research requirements. NSF, ONR and NOAA are funding the workshop.
- NSF encouraged proposals for crew training from UNOLS operators. A number of UNOLS operators submitted proposals. These proposals are either being fully or partially funded. The proposals requested support for STCW, management, safety, and engine training.

There was a brief discussion on long-coring and what efforts are underway. Dolly reported that there are some individuals who are addressing this issue. Recently there was a visit to the French vessel, MARION DUFRESNE, which has a 50m coring capability. The US does not have this capability. The US community will need to determine what long-core capability is needed? They also need to determine if a portable system is feasible? HEALY will have a 30m capability. The long-core will require a synthetic wire and heavy-duty winch.

Naval Oceanographic Office (NAVO) - Gordon Wilkes provided an overview of the UNOLS/NAVO ship activities over the past three years (1997-1999), see *Appendix V*. The NAVO scientists have enjoyed the cruises with high grades for support (and food). Nine different UNOLS institutions supported NAVO ship use. In the three years, there are a total of 1297 NAVO ship days on nine different ships. With the

data collected from these ships, all of the Navy's gravity requirements outside of the EEZ have been met. The 1999 NAVO work schedule includes a shallow water bathymetry survey using CAPE HATTERAS. This project required a special equipment installation. Most of the 2000 NAVO work will be in shallow water. Gordon presented the NAVO CY2000 projections for UNOLS ship time. The projections include two options; one if they receive full support at \$7.5M and the other if they receive partial support of \$3M. It is unclear at this time how much funding will be available for NAVO use of UNOLS ships in CY2000.

There was a brief discussion on the feasibility of using UNOLS vessels for NAVO surveys in foreign EEZs. UNOLS vessels doing research in an EEZ require foreign clearance. It was questioned on whether or not it would be possible to combine academic research programs with NAVO work in a foreign EEZ when the UNOLS ship received a clearance to do the academic work. This is a complex situation which would need to be further investigated.

Terry Schaff pointed out that support for NAVO ship time on UNOLS vessels has been coming through NOPP. It would probably be more appropriate if this funding now began coming from the Navy's budget. NAVO has had a chance over the past few years to become familiar with UNOLS operations.

Oceanographer of the Navy (OON) - Pat Dennis reported that RADM Ellis has been replaced by RADM Dick West as the Oceanographer. Admiral West is new to the academic research community; his background is in missile defense. Adm. Ellis has moved on to the Pentagon to work with in the deep submergence program. Rick Spinrad is now aboard as the new Technical Director of the OON. He has hired Tom Cuff as his deputy.

Pat continued by reporting on the NAVO ships. USNS HENSON (T-AGS 63) will be deployed in the fall. BRUCE HEEZEN (T-AGS 64) will be delivered in the beginning of 2000. The keel laying ceremony for T-AGS 65 is planned for the end of July 1999. The sponsors for the ship are the wives of the three admirals (Gaffney, Ellis, and Sargent) who have been involved in the T-AGS 60 Class construction project.

The Navy survey vessel, BENT, will be transferred to Turkey. The future of the MOANA WAVE is still to be decided. One option would be to have the MOANA WAVE transferred to the state of Alaska. University of Alaska has requested that this not be a replacement for ALPHA HELIX. The ship would perhaps be run jointly by the University of Alaska, Alaska Fish and Wildlife, and a private Native American group. The ship would be used for fisheries research, training, and oil spill disaster assessment. The ship would not be a UNOLS vessel. The issue of transfer will likely not be resolved before the end of the summer. The Navy would prefer to transfer the ship as opposed to laying it up since a lay-up can be expensive.

Office of Naval Research (ONR) - Tim Pfeiffer provided the report for ONR and began by reporting that ONR and NRL ship time is down in 2000 from 1999. There are approximately 770 days scheduled in 2000. Work will include a program in the Sea of Japan, as well as a program using KNORR in the Mediterranean. Within ONR there has been a change in emphasis, with less physical research and more acoustic research.

Consortium for Oceanographic Research and Education (CORE) - Terry Schaff gave the CORE report and provided information on the budget. The Senate has marked up the NOAA bill. NOAA requested \$3M for NOS use of UNOLS vessels. The Senate mark shows an increased NOAA budget, but it looks like it may exceed the funding caps. Terry is dismayed by the lack of support from UNOLS institutions regarding future NAVO use of UNOLS ships. Only five institutions have expressed concern. There is \$3M included in the budget for Navy survey work on UNOLS ships in 2000. There is \$9M added for the SWATH construction project. This amount should cover the estimated added construction costs of the SWATH.

Terry also discussed future facility planning. At the National Ocean Research Leadership Council meeting there was a discussion on facility planning. The group is considering taking the lead on this activity. This may overtake the efforts of FOFCC. The Leadership Council includes the leaders of the nine agencies. In the testimony provided by Bob Knox at the NOAA fisheries hearing, he alluded to the

lack of facility long term planning. There may be another hearing in the near future to address this issue. Some of this is being driven by the need for long-term observatory systems. Efforts to convene a Stratton-II committee are on hold for time being. A new commission may be considered after the election year.

United States Coast Guard (USCG) - A written report was provided by the USCG prior to the Council meeting, see [Appendix VI](#). The report provides a HEALY update, Polar Icebreaker Update, and news on the status of the USCG/NSF MOA.

UNOLS Issues:

NSF Academic Research Fleet Review - Dolly Dieter reported on the Academic Research Fleet Review, her viewgraphs are included as [Appendix VII](#). The Review Committee's report is being printed and will be presented to the Board of Directors later in the month (July). Dolly provided the names of the review committee as well as their charge. To perform the fleet review, the committee met four times; three time in 1998 and once in 1999. On the whole the report indicates that the system is working and major overhaul is not needed. However, some fine-tuning could lead to improvements. Dolly summarized the report's findings and recommendations:

- There is a present and projected near-term period of reduced utilization of the UNOLS Fleet. This period should be used to address management issues and improve capability, productivity, and quality of fleet operations as a means of achieving NSF research and educational.
- NSF must accelerate and expand efforts to articulate a broadly based vision for the future of ocean science and technology.
- The UNOLS system should be retained. UNOLS services are meeting community needs and costs appear comparable to other government and commercial operators.
- The funding agencies and UNOLS should work to enhance quality control, expand training of personnel in technical and safety procedures, and develop even higher standards for shared use facilities. This is a very high priority and continuing theme. It was one of the initiatives for offering support for crew training.
- NSF should continue the practice of periodically competing the management of the UNOLS office, and should consider funding it by a cooperative agreement rather than a grant. A cooperative agreement would add management oversight by NSF to the office. It increases report writing and feedback to the agencies. Fleet operations agreements need to be tightened also. A cooperative agreement would be more consistent with the way the rest of NSF does business.
- NSF should consider a trial including commercial ship operators as UNOLS non-member operators to provide unique fleet capabilities.
- There is a need for a strong, continuing program of new technology introduction; steady improvement of existing facilities and technologies; greater, continuing attention to quality control and safety; and a more systematic, standard approach to maintenance, renovation, upgrading, and replacement.
- There should be prepared and maintained a long-range plan for the modernization and composition of the oceanographic research fleet that reaches well into the 21st century.

The Committee's findings will be presented to the NSF Board of Directors later this month (July). The Board will then decide whether they agree or disagree with the report's recommendations. NSF will then have 30 days to respond to the recommendations of the Board

Executive Committee Appointments - Bob announced the appointments to the UNOLS Executive Committee: Bob Knox (Chair), Tom Royer (Vice Chair), Paul Ljunggren, and Patty Fryer.

Winch and Wire Symposium - Jack Bash reported on plans for a winch and wire symposium. The UNOLS Office has been funded by NSF to coordinate a winch and wire symposium. The symposium is very timely. During the Fleet review, comments were received from the community that the Fleet is not able to meet some of the winch and wire requirements that are currently demanded. Larger science packages continue to come on-line. We need to examine the next generation cables and what impact they will have on winch requirements. The symposium will be used to update the Winch and Wire book. The current book was printed approximately ten years ago and all copies have been distributed.

A steering committee has been assembled with representatives from ocean engineering, ship operators, technicians and the four primary research disciplines. NOAA has representation on the committee. A winch and wire questionnaire has been distributed to the community. Heroes are being identified to introduce the various topics at the symposium. Speakers from each of the fields will provide presentations to be followed by panel discussions.

The symposium is tentatively scheduled for 1-2 December.

DESCEND Workshop - Annette DeSilva reported on plans for a workshop titled, DEveloping Submersible SCience for the Next Decade, DESCEND. Viewgraphs are included as [Appendix VIII](#). The proposal for the meeting was jointly funded by NSF, ONR and NOAA (60%/20%/20%). A Steering Committee (Keir Becker, Jim Bellingham, Craig Cary, Patty Fryer (Chair), Lisa Levin, and Marv Lilley) was established and held a planning meeting in La Jolla on 24 June. The UNOLS office has designed a website for the workshop. The announcement for the meeting was included in the spring UNOLS Newsletter and was distributed broadly by e-mail and postal mail. Several individuals were selected as potential breakout session leaders and these individuals are being contacted by the steering committee. The workshop will be held on October 25-27, 1999 at the National Science Foundation in Arlington, VA.

The principal focus of the workshop will be to address the scientific problems and research needs, with regard to submergence work. Technological discussions will provide participants an opportunity to integrate scientific and engineering priorities. The workshop is open to all investigators who are interested in carrying out submergence research and/or who develop technology important to submergence systems. The workshop will be held over three days. The first day will be devoted to science discussions. Day 2 will be for technology and instrumentation discussions. The last day will be a wrap-up session. Participants are required to complete an on-line application form as well as submit an abstract in advance of the workshop. Information about DESCEND can be found at the Website:

<http://archive.unols.org/meetings/1999/199910dcd/199910dcdmi.htm>

The steering committee hopes to have a draft report from the workshop ready for distribution at the December DESSC meeting.

Research Vessel Safety Standards (RVSS) Update - Paul Ljunggren reported on the RVOC Safety Standards update. The Safety Committee has completed the update and forwarded it to the Council prior to the meeting for their endorsement. Paul reviewed some of the major revisions. The revised RVSS addresses Standards of Training, Certification and Watchkeeping (STCW), as well as, the International Management Code for the Safe Operations of Ships and for Pollution Prevention (ISM Code). Changes were made to Chapter 4 on Stability. Chapter 8 updated references to SOLAS and added information on rescue boats. Chapter 12 added information on portable vans. Chapter 14 discussed STCW requirements. Chapter 15 added information on weight handling gear. Additional information was included in Chapter 17 addressing chartering of non-UNOLS vessels. Lastly, Appendix B was added which provides a recommended checklist for shipboard vans.

The Council discussed the importance of the RVSS and ways to inform the scientific community that it is available. There is a need for scientists to refer to the RVSS early in their cruise planning so that they factor it into their budget. It was recommended that an index be added to the RVSS to make them more useful as a reference. It was also recommended to post them on the UNOLS website. There should be a link from the ship time request form to the RVSS. The white paper on responsibilities for PIs and chief scientists should also be linked to the RVSS.

The Council passed a motion to adopt the updated Research Vessel Safety Standards, subject to minor editing.

Public Outreach Activities and Plans - Jack Bash reported on UNOLS public outreach activities. In June, Annette attended the Undersea Exploration '99 Conference in Portland, OR. The UNOLS poster was on display at the conference. Jack Bash reported on his activities with Peter Betzer's group who are putting together an educational book on oceanography. He has been helping to match the science writers of the book with oceanographic experts. Jack will also be writing the sidebars on research vessels for each chapter. The UNOLS Office will have a booth at the fall AGU in San Francisco. Dennis Hansell recommended that the UNOLS Office support the DICO meeting. The meeting provides information to new researchers on how to conduct science programs. The UNOLS Office can provide the group with information on the Fleet and how to gain access to the ships.

Session on Aspects of Future Fleet Evolution:

Bob Knox lead the discussion on fleet evolution and began by reporting that there is a lot of activity on the horizon regarding fleet evolution and planning. At the last Council meeting, viewgraphs were provided by Pat Dennis regarding the aging of the National oceanographic fleet. Following that meeting, Bob Knox sent a letter to Dr. Saalfeld, FOFCC Chair, indicating UNOLS' concern on this matter. Dr. Saalfeld responded with a letter indicated that FOFCC would provide comments at the completion of the NSF Fleet Review. The National Ocean Research Leadership Council has also expressed a concern in this area. The Academic Fleet Review report listed as one of its recommendations a need for future fleet planning. Related to this issue is the uncertainty of the level of future NAVO ship time needs on UNOLS vessels. Bob reported that he plans to attend the CLIVAR-UOP/OOPC meeting in October on ocean climate observations. The future role of research ships in performing global observations will be addressed.

Bob continued by presenting the National fleet charts which had been compiled by Pat Dennis for the last Council meeting. These showed that the National fleet on the whole would be significantly downsized unless replacement plans are put into action. He then presented a series of graphics on the future attrition of UNOLS ships, see [Appendix IX](#). Dick Pittenger compiled these viewgraphs with assistance from the UNOLS Office. The first two charts show today's fleet and the fleet as it will look in 15 years if no replacement plans are carried out. In fifteen years, all of the small, Class IV ships will have been retired and there will only be two intermediate vessels left. Specific examples of the considerable length of time it takes to bring new ships on line were provided. Next Bob showed the estimated excess/shortage of UNOLS ship days by year. For the large ships, there will be excess ship days from the time AGOR 26 comes into service until KNORR/MELVILLE go off line in 2013. For the small, Class IV, ships the problem is now. Using the estimated retirement dates of the small ships, it appears that by 2002 there will be a shortage of available small ship days. The last viewgraph indicates that for a one-for-one ship replacement plan, an estimated \$540M would be needed by 2015 to replace the fleet. The message is clear that fleet planning needs immediate attention.

The Council discussed ways to proceed with fleet planning. Many institutions are assuming this responsibility to meet their own replacement needs. The problem of institutions pursuing political means to get their replacements was noted. Without an established/endorsed fleet replacement plan it is difficult to avoid political interference. The need for a sponsor or sponsors for fleet replacement was suggested. There needs to be a planning structure. Based on trends, the fleet shortfalls for the next five to ten years can be predicted. It was recommended that based on this information, FIC could be tasked to develop design parameters to meet the shortfalls. It was suggested to have FIC establish a timeline that shows when ships will leave service and when new ships are expected to come on-line. The results of NSF's Futures workshop can be applied to estimate facility needs.

UNOLS Biennial Review of Sea Going Oceanographic Facilities - Larry Atkinson continued the discussion on Fleet evolution with a status report on FIC's Biennial Review report. FIC realized that with the changing environment for funding research vessels the existing mode of planning was not responsive to the realities. At the November 1998 FIC meeting it was decided to publish a Biennial Review that would attempt to illustrate where the fleet is going and what needs should be addressed. An outline for

the report was posted on OMNET and was available for comment.

The Review is being organized into Sections and Chapters. It will be a living document and most likely be published on the UNOLS website. Larry listed the potential chapters of the Review. He asked the Council members to volunteer to write chapters and/or make suggestions for people they think could contribute to the report. The report address the following topics:

- Future Research Requirements
- Future Observing Systems
- State of the Fleet and Trends in Fleet Use
- Historical Perspective of Fleet Replacement and New Assets -
- Trends in support of Research Vessels (New Sponsorship)
- New types of vessels/facilities
 - Icebreakers
 - Seismic Vessels
 - SWATH Vessels
 - ROV's/ AUV's
 - Ocean Observatories
- Fisheries Surveys
- Hydrographic Surveys
- New Regulations
- Shore Side Technical Support
- Ship Supported Technology

Larry plans to finalize the outline and recruit volunteers. The final outline will be posted on the UNOLS website.

AGOR 26 Construction Update - Pat Dennis reported that the AGOR 26 construction project is moving along with significant recent activity. He retraced the history of the AGOR 26 acquisition project, see *Appendix X*. In 1997, the appropriation of \$45M was made for design and construction of the vessel. However, the type of money had to be changed in order to comply with the procurement method desired. In October 1997 (FY98), the money was converted from SCN funds to R&D funding. Bids then went out to solicit a design/builder. In May 98, a contract was awarded to Lockheed/Martin with Ingalls as their contractor for construction. The Lockheed/Martin design was similar to the KAIYO design. In August 1998, the Ingalls construction estimate vastly exceeded the dollars available. The budgeted construction cost was \$36M. Lockheed/Martin rebid the construction and awarded it to American Marine, Inc (AMI) in December 1998. In March 1999, AMI came in with their construction cost estimate which would bring the total project cost to \$54M. Again this exceeded the total budgeted project cost of \$45M. The Navy decided that to reduce the design requirements of the vessel in order to stay within the budget would not satisfy the operator or the Navy. Therefore, the Senate has included \$9M in their appropriation bill.

Pat provided the AGOR 26 operational capabilities, see *Appendix X*. NAVSEA is negotiating with Lockheed/Martin on the design and cost. In the very near future (any day) the Navy will decide on whether to accept the negotiated cost. The Navy is not permitted to contract for more money than is in the budget. As a result, anything in excess of the \$45M total cost will need to be considered as options. The multibeam system for the ship is not included in the construction cost. There was an additional \$1.5M funded by the Navy and Hawaii for the system. Hawaii will select the bathymetry system.

If all proceeds along the latest acquisition timeline as planned, the ship will be available for science operations in August 2001.

New Ship Construction:

SAVANAH - Jack Bash reported that Skidaway's construction project of SAVANAH (*BLUE FIN* replacement) is on hold. There is not enough funding available from the state to issue a contract for construction.

CALANUS Replacement - Tom Lee reported that construction of the *CALANUS* replacement is underway at Eastern Shipyard. ABS and USCG have approved the ship's catamaran design. A January 23rd delivery date is expected.

RV CONNECTICUT - University of Connecticut's vessel, *RV CONNECTICUT*, is in operation. The ship is 86-feet long and is a capable, coastal vessel. They expect to work in the Long Island Sound as well as to the Gulf of Maine. They will not request UNOLS vessel status at this time.

WHOI SWATH - The WHOI SWATH design is complete and is proceeding through the WHOI review cycle. Currently there are not enough funds to cover the entire construction project. WHOI does not plan to go to bid until all funding is available. A decision to apply for UNOLS status for the SWATH will be on hold until WHOI decides to build the vessel.

MTS SWATH Session - Jack Bash reported that he will chair a session on SWATH vessels at the fall MTS Conference in Seattle. Originally there were four SWATH papers planned. For a variety of reasons, they are down two; one on the WHOI SWATH and the other on *WESTERN FLYER*.

SEACLIFF Report - Annette DeSilva reported that WHOI's SEACLIFF engineering study is ongoing. They are examining the submersible technologies of the other countries; Russia, France, Finland and Japan. They have also been surveying potential sphere materials such as light weight strong steel and titanium. As part of the study, WHOI is examining ways to modify the SEACLIFF sphere to improve visibility as well as increase the vehicle's comfort factor. Pat Dennis added that a letter request has been made from the Office of the Oceanographer for the transfer of the SEACLIFF spares/equipment from the Navy to WHOI. It had been the original intent to transfer SEACLIFF with all of its spares.

End of Session on Future Fleet Evolution

UNOLS Charter Revision - Bob Knox reported that a UNOLS Charter revision has been proposed to clarify the definition of UNOLS membership in terms of consortium and individual institution. The Council passed a motion to accept the revision with editorial corrections and present the revisions to the full UNOLS membership at the annual meeting for vote.

UNOLS Office Transfer - Jack Bash reported that the current UNOLS Office grant with the University of Rhode Island will expire on April 30, 2000. MLML (with Mike Prince as Executive Secretary) was submitted the only proposal to host the office. The appointed committee of Garry Brass, Dennis Hansell and Rachel Haymon reviewed the proposal. They requested clarification on the employment status of Annette DeSilva in the proposal. It was indicated that Annette DeSilva would work as a subcontractor to MLML. The committee then recommended approval of the proposal to the Council. The Council concurred with the committee's recommendation.

Jack suggested two ways to obtain the concurrence from the UNOLS membership: 1) present the recommendation for approval of MLML's proposal to the UNOLS membership at the Annual meeting in September, or 2) Send a letter to members asking for concurrence with 30 days to respond. Option 2 would provide a quicker response.

The Council passed a motion to send letter to the UNOLS membership requesting concurrence of the MLML proposal to host the UNOLS Office.

White Paper on Ship Scheduling - Jack Bash reviewed the revised White Paper on Ship Scheduling. The revision incorporates comments received at the last Council meeting. The revised paper is condensed from three pages to one page. It provides guidelines for sea-going scientists on how to request UNOLS ship time. It also provides the necessary website addresses for obtaining information on ships as well as the on-line forms. It was recommended that additional information is needed regarding part one and part two of the ship time request. It was also recommended to expand on how PIs can look for potential collaborations through use of the web map. Jack will add links on the White Paper to the RVSS and Safety Training Manual.

UNOLS Website Upgrades - Jack Bash discussed potential plans for an electronic database system for collecting and summarizing Post Cruise Assessments. Cruise assessment feedback is presently at 65%. It is difficult to get a larger response without making the forms mandatory. There is no way to enforce 100% feedback unless they are made mandatory. Dolly indicated that the Fleet Review Committee seemed to be very interested in having better reporting and fleet operations assessment. The Council discussed the pros and cons of mandatory post cruise assessment reporting. It was indicated that candid responses could sometimes be much more meaningful and useful. It was suggested that a reminder to chief scientists one week after their cruise to submit the assessment form could be the best time to get a useful response.

It is important to remember that the purpose of the assessment reports is to improve the fleet. The reports should be easy to complete. It was recommended to make the answers digital for easy completion and compilation. A numeric grade system should be considered. The operator must make responses to low grades. The goal of the assessments needs to be clearly stated and conveyed to the community.

Mike Prince reported that the RVOC debated this topic over a couple of years. They decided that it was beneficial to have a written dialog on any problems encountered. The operators wanted to specifically hear the problems so that they could respond appropriately. After considerable discussion, Bob Knox requested that the Council think about this issue overnight and that the discussion would be continued on Day 2 of the meeting.

Ship Scheduling Procedures - Mike Prince reported on the status of changes to the ship scheduling procedures which were being tried this year. As part of the changes, schedulers were asked to submit letters of intent in place of ship schedules until funding decisions were known. Mike asked for agency feedback. Agency representatives indicated that all of the information on the letters of intents was useful, especially the grant number. It was commented that ship schedules are probably a bit more useful to the program managers. Also, some of the schedulers indicated they preferred the schedules to the letters of intent. However, it is difficult for the large ship operators to put together schedules with limited funding information. It was commented that links to the ship time requests from the letter of interests and schedules were very useful and should be encouraged.

The other change to the scheduling process was moving the scheduling meeting back. The reason for this change was so that most of the funding decisions would be known by the time of the meeting. Since this is a trial year for the revised scheduling process, there will be additional feedback after the September meeting. It is expected that most ship schedules will be firm by September.

Discussion of Scheduling Problems - Bob Knox reported that most of the ship scheduling problems involving actual or potential withdrawal of "funded" programs from schedules as discussed at the last Council meeting have been addressed. Hopefully this year's scheduling process will go smoothly.

Moorings as a Facility - Dennis Hansell lead a discussion on the concept of running deep-sea moorings as facilities. These facilities would be accessible to scientists outside of the operating institution in a scenario similar to that of a UNOLS ship. The responsibility of operating and maintaining a mooring by individuals can be a daunting task. To maintain moorings, engineering support as well as ship support is required. Global ocean observations require moorings and interest continues to grow in this area. It is a struggle for scientists to get access to time on a mooring wire. Moorings need to be available in both deep water and shallow water. They can be institutionally supported in much the same way as institutions operate ships. PIs would be able to request time on the mooring in a manner similar to the ship time requesting. Dennis reported that he has been in touch with NSF on this issue and they seem supportive of the concept.

The Council discussed the role of UNOLS in this area. The Council members were in general supportive of the need and concept; however, the exact role of UNOLS could not be decided until additional information is available. Some of the questions on this issue included how would the mooring facilities be supported? How would they be scheduled? Would there be standards for mooring equipment/instrumentation and installation? How would mooring placement be decided? What would be the status of UNOLS institutions that operate moorings – would they become UNOLS Operator

Institutions?

A subcommittee of Dennis Hansell (Chair), Larry Atkinson, Clare Reimers, Tom Lee and Tom Royer was formed to coordinate a moorings workshop. They will identify other persons who should be included in the group and plan a meeting to be held at NSF following the UNOLS Annual meeting. Program managers should also be contacted about the September meeting. The September meeting could be used to organize a community workshop. It was recommended to hold the workshop during an evening session at the winter Ocean Sciences meeting in San Antonio, TX.

Two-Year Review of the NOAA/OAR and UNOLS Memorandum of Understanding (MOU) - The current NOAA/OAR MOU with UNOLS requires that it be reviewed every two years, see *Appendix XI*. John Freitag pointed out that the MOU has had a positive effect on technician support. NOAA has shared their data acquisition program with the UNOLS community through RVTEC. An annual users meeting is planned. The MOU was cited as the vehicle which allowed this process. Beth White also noted that NOAA appreciates its involvement with UNOLS. OAR leaders plan to attend the September UNOLS meeting. The Council passed a motion to readopt the MOU.

NOAA Fishery Needs - Bob Knox reported that the SIO/WHOI proposal to provide ship support for NOAA's AMLR work off the Antarctic has been submitted. The matter will likely be decided over the summer. There were also a few commercial bidders. If selected, the proposal calls for modifying KNORR/MELVILLE to be able to accommodate fisheries research. This would have the overall benefit of adding a fisheries capability to the UNOLS fleet. The work would add roughly 100 days of ship time a year to support AMLR.

UNOLS/NMFS MOU - Jack Bash reported that a MOU has been drafted to provide a more formalized relationship between UNOLS and NOAA/NMFS. There had been some discussion on whether to revise the current MOU with OAR to include the NMFS. However, since the NMFS has a very different mission from OAR, it was decided to write a separate MOU for NMFS. This would allow for more flexibility. Also, as our relationships mature, the documents may be able to be merged in the future. NMFS has not received the draft MOU officially.

After discussion by the Council, it was recommended to modify Section IV, Parts "c" and "d" to read "advisory role." A motion was made and approved to accept the MOU as modified and pass to NOAA/NMFS for their consideration and comment.

Status of Hawaii as a UNOLS Operator - The status of the University of Hawaii as a UNOLS operator institution was discussed as a result of the recent retirement of their ship, MOANA WAVE. AGOR 26 will not come on line for a couple of years and Hawaii will be without a UNOLS ship during this period. If their status were changed to non-ship operator institution they would not be allowed to participate in the ship scheduling process. It was noted that there is precedence in non-operator institutions participating in the ship scheduling process. USC participated in ship scheduling although their vessel VICKERS had not received UNOLS status. The Council decided to make no change in the status of University of Hawaii as an operator institution.

UNOLS Council Slate - Barbara Prezelin presented the 1999 UNOLS Council slate. Two positions were open for election, one from any UNOLS member institution and one from a UNOLS Operator institution. The call for nominations was announced in the UNOLS Newsletter. Additionally each UNOLS member institution was notified by e-mail and by letter through postal mail. There was a strong response and as a result not all nominees could be selected for the slate. Only those nominations which were received prior to the announced deadline were considered. The nominating committee worked to maintain a disciplinary balance when developing the slate. The suggested slate was as follows:

Member-at-Large representative:

- James Bauer, biogeochemistry (College of William and Mary, VIMs)
- David Naar, marine geology (Univ. of South Florida)
- Denis Wiesenburg, geochemistry (Univ. of Southern Miss)

UNOLS Operator Institution representative:

- Dennis Hansell, biogeochemistry (BBRS)
- Will Sager, marine geology, geophysics (TAMU)
- Marsh Youngbluth, geochemistry (HBOI)

After considerable discussion on how to handle nominations from the floor, the Council moved to approve the 1999 slate as presented. The nominating committee will notify the nominees who did not get selected for the slate.

Application for UNOLS Vessel Status - The Council discussed the application by University of Minnesota, Duluth for UNOLS status of their vessel *BLUE HERON*, see [Appendix XII](#). They considered how this vessel would match the ship needs of that area. This year and next year, *LAURENTIAN*'s schedule is very demanding with many CoOP programs. As a result, it would have been difficult if not impossible for *LAURENTIAN* to accommodate the programs scheduled on *BLUE HERON*. *LAURENTIAN* and *BLUE HERON* are separated by a considerable distance. The Council discussed the cost implications of bringing another ship into the UNOLS system. Every two years the ship will be required to have an inspection paid for by NSF. As a UNOLS vessel they will also be eligible for funding for equipment upgrades, etc. Overall, it was decided that the ship meets the UNOLS vessel criteria. *BLUE HERON* compares quite well with the other small ships in the UNOLS Fleet. A motion was made and passed to approve the application and designation of *BLUE HERON* as a UNOLS vessel.

1999 Annual Meeting Plans - The Annual Meeting will be held on 21 October at NSF headquarters. Peter Brewer has agreed to be the keynote speaker. The council elections will be held. The agency reports will only be scheduled for the Annual meeting and will be included on the Council Meeting agenda.

SeaNet Update - A written report prepared by SeaNet personnel updating the SeaNet project was provided to the Council prior to the meeting and is included as [Appendix XIII](#). Since the system has been available for a relatively short time, the Council suggested that its operation continue to be observed over a longer period. Concern over the security of the system was noted.

UNOLS Brochure - A review copy of the updated UNOLS Brochure has been sent to the review team. The review copy includes only the text of the document. Selection of the graphics is on going. The brochure is expected to go to print in the next couple of months. NSF funded the update. The previous issue of the UNOLS brochure was printed in 1991 with 10,000 copies. The UNOLS Office is down to the last box of brochures; it has been a popular document.

Other Business:

Underway Data Collection - Jim Swift introduced a discussion on underway data collection. There is an issue over what should be collected and what should be done with the data after it is collected. This is an issue which has been debated over the years. It has been argued that if the PI is using the ship he/she gets full access to all data for two years. It is difficult for ship operators to know what equipment should be kept on and what should be turned off while underway. Some data is automatically turned over to the science party. There are already established places to send a lot of the data such as meteorology data and ADCP data. AICC has recommended to the USCG to collect underway data. There was no action by the Council at this time.

Post Cruise Assessments (revisited) - This discussion is continued from Day 1. Jack Bash noted that some of the goals of the post cruise assessment process are being met, but not all. The statistical analysis of compiling the assessments is not being met. NSF has indicated in the past that they need the statistical analysis. Dolly Dieter suggested that a report indicating where the shortfalls exist might be more useful. Bob Knox recommended establishing a small group to address this problem and report back to the Council in September. Charlie Flagg suggested consulting with a professional on how to best design an assessment form. The question of making the assessment mandatory is still debatable. A small group was formed and includes Jack Bash, Paul Ljunggren, Mike Prince, and John Freitag. They will contact the ship operators who get 100% return of the assessment reports to find out what methods are being used.

The meeting was adjourned at 11:45 am.