

UNOLS FLEET IMPROVEMENT COMMITTEE MEETING

March 1-2, 2005, 8:30 am

Dakota Creek Industries

820 Fourth Street

Anacortes, WA 98221

Executive Summary:

The Fleet Improvement Committee (FIC) met on March 1 and 2, 2005 at the Dakota Creek Industries (DCI) in Anacortes, WA. A major focus of the meeting was on the FIC and FOFC long-range Fleet plans and Academic Fleet Renewal activities. A brief summary of these items and other issues addressed by FIC are provided in this Executive Summary:

Long-Range Fleet Renewal Plans – The FOFC Federal fleet renewal plan will be a coordinated agency plan spanning the years 2005 to 2025. It expands on the FOFC December 2001 plan and agencies represented include the Navy, USGS, EPA, USCG, NOAA, NASA, NSF, and MMS. The working group is developing an initial draft for completion by 31 March. They hope to have the draft available for NORLC approval by 31 July 2005. The report release is planned for 30 September 2005. The initial assumptions for the FOFC update are that ocean research and operations will continue to be a national priority in support of agency missions and special programs (Tsunami Warning System, OOI). Vessels will be available for a minimum 30-year service life. The plan only considers vessels greater than 40 meters. There are 43 Federal oceanographic ships in the plan. These include general-purpose ships, survey vessels, and USCG icebreakers.

The FIC spent considerable time reviewing their Fleet Improvement Plan outline. Charts showing Fleet utilization trends and projections were reviewed and discussed.

Fleet Renewal:

- Regional Class Acquisition Process –NSF continues to move forward with plans for acquisition of three Regional ships and if all proceeds on track construction would begin in FY07 with the lead ship. Ship operator selection could be done in parallel with Request for Proposals (RFP) for the Design/Build teams, but this is still under consideration. During Phase I, two selected teams would develop competing designs. The Performance Specifications will be an attachment to the RFP and are extremely important, as they are the basis for the designs. The community should be made aware that the performance specification review is the last opportunity that they will have to provide direct input into the project.
- Ocean Class Acquisition Process - A UNOLS letter has been drafted and will be delivered to RADM Cohen on 21 March that provides the recommendation that the Ocean Class be a monohull design. The Navy FY06 budget request includes \$4M for Ocean Class design. If the budget were approved, ONR would like to

select the operator, and issue the RFP for design/build teams early in the fiscal year.

- Global Class SMR Update and Mid-Life Refit Planning - The Global Class Steering Committee chaired by Bruce Howe (UW) are working to draft general-purpose Global Vessel SMRs. They will review past SMRs and other documentation and solicit input from the larger science and operator community throughout process. As a follow-on activity heavy lift considerations, and seismic capabilities will be addressed.
- Ship Design, Construction, and Conversion – Updates were provided on the status of the *Marcus Langseth* conversion and the Alaska Region Research Vessel (ARRV) design. Matt Hawkins guided the FIC on a tour of the *Cape Henlopen* Replacement Vessel under construction at DCI.

Other FIC Activities:

- ADA White Paper - Terry Whitledge has drafted a white paper that provides Americans with Disabilities Act (ADA) guidelines for research vessels. Terry has requested that FIC review the draft and provide him with any comments.
- Load Handling System Workshop – Matt Hawkins provided a summary of the preliminary findings of the Load Handling System Workshop report. The goal of the workshop was to develop a conceptual design for the “next-generation” over-the-side load handling system for the UNOLS Fleet.
- Kilo Moana discussion – The FIC will prepare a more focused set of debrief questions for Kilo Moana users. Select cruises will be chosen for debrief.
- 2005 FIC Membership Changes - Niall Slowey was nominated to a second term on FIC.

Actions:

Task Description	Action
Regional Class Actions:	
<ul style="list-style-type: none"> • Review Regional Performance Specifications <ol style="list-style-type: none"> 1. Marc Willis – send message to RVTEC 2. Al Suchy – send message to FIC 3. Wilf Gardner – send message to RCAC 4. Dave Hebert and Peter Wiebe draft letter by 3/7 5. Request community Comment by 21 March 6. Submit to NSF by mid April 	Complete – Comments provided to NSF (2 iterations)
<ul style="list-style-type: none"> • UNOLS Regional Class Rep – Action revised at Council Meeting on March 29-30. Provide recommendations for 2-person Source Select Team and a Technical Advisory Team (6-8 people) 	Complete - Dave, Wilf, B. Martin, T. Askew,

	Office
<ul style="list-style-type: none"> • Stay engaged in acquisition process <ul style="list-style-type: none"> ▪ Provide feedback to NSF ▪ Insure community input 	FIC, RCAC
KILO MOANA Actions:	
<ul style="list-style-type: none"> • Continue Debrief Interviews with more focused set of questions. May interview assignments. 	Complete - Terry W. to revise Interview questions.
<ul style="list-style-type: none"> • Compile Debriefs for posting on the UNOLS website 	Office - Ongoing
<ul style="list-style-type: none"> • Draft Summary document 	Annette & Dave
FOFC Fleet Plan Update - Provide the Working Group information when requested.	Complete - FIC
Amend SMRs: <ul style="list-style-type: none"> • Amend Regional and Ocean Class SMR to include ADA requirements (Terry's white paper) • Carefully review the "Lessons Learned" and PCA comments. Incorporate as appropriate into the SMR documents 	RC and OC Steering Committees - ongoing
Design and Constructions Efforts - Stay engaged in ongoing design and construction efforts (ARRV, EWING replacement, CHRV, etc.)	FIC – Ongoing
Ocean Class Planning – Provided input as requested	FIC and OCSC – ongoing
Global Class: Update SMRs	Global Class Steering Committee – ongoing
ADA Guidelines draft White Paper – Terry has drafted an ADA White Paper for FIC comment. FIC should provide any comments to Terry.	FIC
Update Fleet Improvement Plan: Annette will revise outline and recirculate it to committee. <ul style="list-style-type: none"> • First draft – May 2005 • Final draft – 30 September 2005 	FIC – ongoing
Ocean Observatories – Stay in contact with ORION Office.	Dave Hebert – ongoing

Appendices:

- I. [Agenda](#)
- II. [Attendees](#)
- III. [UNOLS/FIC Chair Meeting Slides](#)
- IV. [NOAA Report](#)
- V. [Load Handling System Workshop - Report](#)
- VI. [FOFC Activity - Federal Oceanographic Fleet Renewal Plan](#)
- VII. [Fleet Improvement Plan - Fleet Statistics](#)

Meeting Minutes:

Day 1: Tuesday, March 1, 2005

The Fleet Improvement Committee (FIC) met on March 1 and 2, 2005 at the Dakota Creek Industries (DCI) in Anacortes, WA. Dave Hebert, FIC Chair, called the meeting to order at 0830 and provided an opportunity for introductions. The meeting agenda was followed in the order as recorded in these minutes. The meeting agenda is included as *Appendix I* and the meeting participants are listed in *Appendix II*. Dave thanked Matt Hawkins for hosting the meeting and inviting the FIC to tour the *Cape Henlopen* Replacement vessel under construction at DCI.

A motion was made and approved to accept the minutes of the [October 2004 FIC Meeting](#).

Dave reviewed the status of the FIC Action/Task List from the October meeting included in *Appendix III*. There was a brief discussion on the action to get feedback from the Captains of *Western Flyer* and *Kilo Moana*. Mike Prince reported that he has been in touch with Captain Ian Young of the *Western Flyer*. Dan Rolland has also contacted Capt. Gary Drewry. There are community concerns and some misconceptions regarding the capabilities of *Kilo Moana*. Accurate, factual information should be provided to the community. Debriefs in general have been favorable, but there are a few areas of concern.

Dave reported that he plans to stay in touch with the ORION office regarding the Ocean Observatories Initiative. He is keeping in touch with the new acting director, Rick Jahnke. Bob Detrick is the chair of the ORION executive steering committee.

Agency Reports:

National Science Foundation (NSF) - Dolly Dieter provided the report for NSF. NSF Ocean Sciences is facing budget reductions. There was about a 5% cut for OCE in fiscal year (FY) 2005 and FY06 will likely see another 5% cut. The budget shortfalls will have a big impact on ship operations. Larry Clark (NSF) sent a letter in February to Peter Wiebe asking for UNOLS suggestions on how to address the budget shortfalls. It will be a very difficult time.

Funds for construction of the Alaska Region Research Vessel (ARRV) will not be requested until FY07 at the earliest. The ARRV is included in NSF's Major Research Equipment account.

Mike Prince commented that the letter from Larry Clark was just recently received and it has been distributed to the UNOLS Council for review. Peter Wiebe is drafting a message to forward Larry's letter to the rest of the UNOLS community.

Mike asked if the NOAA DART buoy needs would be addressed in the updated FOFC Fleet renewal plan. Mike stressed that unless NOAA DART facility needs are identified, there is the risk that UNOLS ships will be taken off line to meet budget shortfalls and the capability to meet potential new demand for programs like DART would be lost.

Terry Whitlege asked about the status of transferring USCG ice breaker support to NSF. Dolly replied that there have been no decisions regarding this issue.

Office of Naval Research (ONR) – John Freitag provided the report for ONR. He began by remarking that budget reductions are a long term problem. The ONR Research Facilities program had about a \$600K reduction this year and expects more next year. A large, multi-ship operation is planned in 2006 along the east coast. The Research Facilities base budget is about \$10M annually with additional funds from NRL, CNMOC, etc.

ONR is moving on April 10, 2005 to the building adjacent to its current building. They are also getting a new accounting system.

Funding in the amount of \$4M for Ocean Class acquisition is included in the FY06 budget request. This would support a one-year design effort. The request for next year, FY07 includes \$25M for construction. ONR is working to have a Request for Proposals (RFP) for design/build teams ready for release at the start of FY06. Ocean Class ship operators cannot be selected until the funds become available. The \$4M, if authorized, will come out of the ONR budget; it is not a plus up. The request at this time is just for one vessel. If the request is authorized, the shipyard would be incrementally funded.

National Oceanic and Atmospheric Administration – A NOAA representative could not attend the meeting, but sent a written report in advance. The report is included as *Appendix IV*. Mike Prince read the NOAA report. The written report addresses the FOFC Fleet plan, construction of the NOAA Fisheries Survey Vessels (FSVs), and the Ocean Exploration vessel conversion.

Mike also reported that NOAA held a buoy summit at the end of February 2005 (the day before the FIC). Peter Wiebe attended the meeting as a representative for UNOLS. Mike and Rose Dufour, Ship Scheduling Committee co-Chair, participated by phone.

The summit was held to discuss the new initiatives for tsunami response and warning system and the DART moorings. There is an emergency funding supplement for the system in Congress, but it has not passed yet. NOAA plans call for 39 moorings to cover the Pacific, Atlantic and Caribbean by mid 2007. There is a supplemental budget for

FY05/06 to support the buoys in Congress, but will not be funded until May or June. NOAA can't move forward until the funding is approved. There are currently six operational buoy sites in the Pacific and the proposal is to add 33 more. There is no prioritization for the mooring deployments and there is no budget. They would like to be able to take advantage of ships working in the area where the moorings are to be located. They are also hoping for international support. The NOAA scientists are still finalizing the mooring positions. They will try to make commitments for UNOLS ship time. NOAA doesn't have enough ships in their fleet to support this work. The global ships have the capabilities to support the work. UNOLS has requested that NOAA provide their DART requirements by the July Ship Scheduling meeting. DART support will be an important element of the updated FOFC plan. NOAA has indicated that they plan to develop a matrix of overall ship time requirements.

Fleet Renewal Activities:

NSF Facility Renewal Activities - Dolly Dieter (NSF) provided a brief background and status of the various renewal efforts underway and planned at NSF. Four years ago, when there were plans to double the NSF budget, NSF began developing plans for renewal. This included a replacement human occupied vehicle (HOV), acquisition of a modern seismic vessel, and construction of three Regional Vessels. The HOV replacement effort has been funded in a phased approach. Originally it was to be a four-year program, but it is more likely that it will span five plus years. Acquisition of a modern seismic vessel has moved forward with the purchase and conversion of R/V *Marcus Langseth*. NSF currently plans to support the acquisition over five years. They hope to have funds for construction of the ARRV in the FY07 budget.

Regional Class Acquisition Process – Dolly Dieter reported that NSF is proceeding with plans for the acquisition of three Regional ships. If all goes as planned construction would begin in FY07 with the lead ship, and an additional ship every two years. This is predicated on level budgets at a minimum. Ship operator selection would possibly be done in parallel with the RFP process. Pete Kilroy indicated that they would want the operator selected by the start of Phase II. During Phase I the two selected teams would develop competing designs. The initial call for operators may be for one or more operators, but they are still addressing this area.

Pete Kilroy provided additional details. NAVSEA hopes for release of the design/build team RFP in July 2005. The Performance Specifications will be an attachment to the RFP. The performance specifications are extremely important, as they are the basis for the designs. They would like to have UNOLS feedback on the draft specifications as soon as possible, but it should be thorough. A reasonable target date for a consolidated UNOLS response is 1 April. Pete indicated that input does not have to be submitted as one final response. It can be provided incrementally but should not include conflicting remarks. It is useful for NAVSEA to get any questions sooner, than later. Providing feedback using the spreadsheet as a tool would be useful. NSF would probably like to have the draft specs posted for community input. Mike Prince reported that the draft specifications have been circulated to the Council, FIC, Regional Class Advisory Committee (RCAC) and Marine Superintendents. Pete indicated that finalizing the performance specifications would likely be an iterative process.

Mike Prince asked Marc Willis to send the specifications to RVTEC for comment. He also asked Al Suchy to encourage the Marine Superintendents, ship captains, and chief engineers to provide input. Peter Wiebe can remind the Council and Dave will encourage feedback from FIC. Wilf will be asked to contact the RCAC. Mike asked that they submit comments as soon as they can, but no later than 21 March. Peter and Dave will draft a message requesting input. They will alert the community that this is the last opportunity that they will have to provide direct input into the project. Pete Kilroy indicated that by the early May timeframe they should have a final draft of the specifications for review. If needed, a group could meet for the final review.

NSF has not made vessel size a specification, but they will give a size range that should be adhered to. For guidance to the design/build teams, a crew size of 14 will likely be indicated.

Discussion on UNOLS input to the acquisition process followed. NSF is considering appointment of two UNOLS/community advisors; a scientist and an operator. These two individuals would advise on the selection of the two design/build teams for Phase I and the final selection of the desired design. These two people will not be able to discuss the project with the community and they must be available for meetings. It is a big commitment and there could be big issues for not maintaining confidentiality. NSF would ask UNOLS for suggestions regarding advisors. The advisors would need to be available for two to three weeks of dedicated time in VA for proposal reviews. After selection of the teams, the time commitment would be less and perhaps there may be a process where physical meetings are not required. During the final source selection of the shipyard a longer dedicated, closed door meeting would be held. This process could take a month. A comment was made that funding to support the time of the advisors would be required.

It is possible that operator selector might come at the end of the Phase I. At that time the ship design would be will be defined. During Phase II there is less need for confidentiality since the design is known and the competition Phase has past. The build/construct teams building the ship can hire consultants that include university representatives. There are many conflict issues that need to be resolved. A question was asked if there would there be a conflict if industry team includes representation from an operator that is bidding on the operations.

Matt Hawkins cautioned that it is important when selecting a yard to make arrangements to allow for a certain level of change to details. When University of Delaware was selecting a shipyard, they asked for a record of past change order history.

Tour of *Cape Henlopen* Replacement Vessel Construction, Dakota Creek Shipyard - Matt Hawkins guided the FIC on a tour of the *Cape Henlopen* Replacement Vessel under construction at DCI.

Lunch

Ocean Class Acquisition Process - Over the course of the winter months, FIC and the Ocean Class Steering Committee evaluated various hull variants as potential Ocean Class designs. They posted the results of their evaluation on the UNOLS website for community review and comment. In general, the community agreed and reinforced the findings. A UNOLS letter has been drafted that provides their recommendation that the Ocean Class be a monohull design. Peter Wiebe will present the letter to RADM Cohen on March 21st. The letter gives the recommendation and reviews the process used for the evaluation. The appendices include about 140 pages of everything on the project. It is available at <http://www.unols.org/projects/fic_ocean/xcraft/xcraft_documents.html>.

John Freitag continued with a report on the Ocean Class acquisition process status. One difference between the NSF process and the ONR process for acquisition is that ONR favors selecting the Operator early in the process so that they can participate in the design phase. Initially, they would probably only select the first ship's operator. The timeline depends on when funding is approved. ONR would like to be able to move forward as soon as the funding becomes reality. The solicitation for ship operator will not be restricted by area. If the budget were approved, ONR would like to select the operator, and issue the RFP design/build teams early in the fiscal year.

Load Handling System Workshop – Matt Hawkins provided a summary of the preliminary findings of the Load Handling System Workshop report. The presentation is included as *Appendix V*. The goal of the workshop was to develop a conceptual design for the “next-generation” over-the-side load handling system for the UNOLS Fleet. Committee members included Matt Hawkins, Chair, Tom Althouse, Andy Bowen, Marc Willis, and Jim Holik. It was a one-year effort joint-funded by NSF and ONR. It focused on ship visits and field evaluations of existing systems. The locations and systems visited are listed in the Appendix. They were tasked to address:

- Loading Handling System design standards
- Incorporation of “Next-generation” UNOLS wire
- “Next-generation” science packages
- Motion compensation
- “Hands-free” deployment and recovery
- Size/Weight: “Scale-able” to different vessel classes

The report describes the handling apparatus and winch systems. The handling apparatus in general is an articulated crane. There are three different arrangements: “Aft Deck,” “Side,” and “Overhead.” They should be able to reach very near the water surface. The winch may be electric or hydraulic depending on vessel. It may be direct pull or traction depending on vessel and use. The winch should be co-located with the handling apparatus to simplify the cable path. Details are provided in *Appendix V*. Animations of the handling system in operation were presented. As part of the workshop, institutions looking to acquire a handling system can contact Matt for a copy of the guidelines, which they in turn can provide to the winch manufacturers.

U. Hawaii worked with Matt on handling system recommendations for *Kilo Moana*. A winch doesn't exist that could reach the water for use on *Kilo Moana*.

The workshop report and findings will be provided to NSF and ONR. Once accepted, the handling system guidelines could be incorporated into the UNOLS SMRs.

Pete Kilroy commented that to pass Subchapter U, the handling system would need to be approved by the Marine Safety Center. It is good to get this done earlier than later.

Ship Design and Construction Efforts:

Marcus Langseth Conversion Status - Jim Cochran of Lamont-Doherty Earth Observatory reported on the status of the *Marcus Langseth* conversion effort. They will convert the ship to bring it from an eight streamer platform to a four streamer ship. They are also converting it to have a more general-purpose research capability.

The *Ewing* has completed its final cruise and is transiting to Rhode Island for cross-decking. There appears to be a market for single-streamer seismic vessels and LDEO has had some offers on the sale of *Ewing*.

The *Marcus Langseth* reflagging effort is going slowly. The USCG doesn't handle many of these cases and it is taking longer than expected.

LDEO has found a vendor that can build an A-frame for the ship and stay within budget. The A-Frame is a bit smaller than originally desired, 15-ft wide.

LDEO has invited a group from Woods Hole Oceanographic Institution (WHOI) to advise on the general-purpose capabilities that the ship should be capable of. This is useful since LDEO's expertise is with seismic support. WHOI will advise on issues such as:

- Over-the-side operation requirements
- Winch control
- Adequacy of A-frame for moorings deployments/recoveries
- Communication to the sea floor.
- Coring – how can longer core lengths be accommodated

Jim reported that a meeting is planned for March 8th to review shipyard plans. Dolly replied that NSF must be involved and that they should have any specifications well in advance.

Jim indicated that modeling of the arrays is ongoing. LDEO is working to stay on the timeline.

Alaska Region Research Vessel (ARRV) – Terry Whitledge reported that the ARRV contract design is complete. They have requested a one-year no-cost extension. All drawings are on the ARRV website at <<http://www.sfos.uaf.edu/arrv/>>.

Major out-standing items on the project include:

- Propulsion and electronics
- Over-the-side handling
- Multibeam

- Lab design
- ADA accommodations
- MAST – for instrumentation

Funding for construction of the ship has been delayed a year. They will work on the outstanding items and hope to have everything ready when funds are authorized.

Science Mission Requirements (SMRs):

Global Class SMR Update and Mid-Life Refit Planning - Dave reviewed the status of plans to draft general-purpose Global Vessel SMRs. The slides are included in *Appendix III*. The Global Class Steering Committee chaired by Bruce Howe (UW) met during the Fall AGU meeting and have had a couple phone/web conferences. The task items for the committee include:

- Review the past SMRs and other documentation to form the basis of the SMRs.
- Solicit input and feedback from the larger science and operator community throughout process
- Produce the SMR document.
- As a follow-on activity incorporate Heavy Lift considerations, and Seismic Capabilities

A website has been posted that contains information about the project: <http://www.unols.org/committees/fic/global/global_smr.html>.

The committee has taken on a variety of activities. They will review past SMRs and evaluate construction projects under development in other countries (UK ship, GOSars vessel). They plan to identify modifications that have been made to the current Global Vessels since they entered service. Past workshop recommendations as well as the ORION requirements will be considered. They plan to investigate technology developments in new commercial ship construction. Large ship utilization trends and ship demand have been reviewed. A community survey is being drafted and will be post for community input regarding Global Vessel SMRs. It will be modeled after the one conducted during the Ocean Class SMR process.

The agencies will be contacted to determine if there are any new requirements that are not already being addressed by the Global ships. This issue arose as we recently learned of new Navy requirements for the Ocean Class ships.

ADA White Paper - Handicap Accessibility and New Regulatory Requirement considerations in new SMRs and updates - Terry Whitledge reported that the University Alaska and Glosten have attempted to accommodate the Americans with Disabilities Act (ADA) requirements for mobility, hearing and vision impairments in the design of the ARR.V. Terry has drafted a white paper that provides ADA guidelines for research vessels. He provided a draft just prior to the meeting and they in turn were sent to FIC and FIC plus, Lorena Castro (NAVSEA) and Matt Hawkins. Terry asked FIC to review the draft and let him know of any changes or if anything is missing.

Terry reviewed the document's Table of Contents. It includes information on:

- A. General Description of ADA

- B. Comments on Applicability of ADAAG to UNOLS Vessels
- C. Definition of Scientific Personnel on Research Vessels
- D. Conceptual Guidelines to Implement ADA Accessibility Guidelines (ADAAG) on UNOLS Vessels
 - Existing Vessels
 - Refitting of Vessels
 - New Vessels
 - Size Class of Vessels
 - Special Purpose Research Vessels
- E. General Recommendations for Hearing Impaired
- F. General Recommendations for Visual Impaired
- G. General Recommendations for Mobility Impaired
- H. Specific Recommendations for UNOLS Vessels to Become ADA Friendly

Draft Passenger Vessel Accessibility Guidelines and Supplementary Information are available at <<http://www.access-board.gov/pvaac/guidelines.htm>>. These may be difficult to implement and expensive.

Terry is looking for guidance on how to proceed. General discussion followed:

- Marc Willis commented that the Supreme Court heard a case this week regarding whether or not a passenger vessel was ADA accommodating enough. Their decision will be of interest.
- Toby Garfield indicated that Amy Bower could probably address the vision issues.
- Evacuation plans should be implemented and practiced. These guidelines should include reference to evacuation procedures
- Matt Hawkins suggested that specialized wheel chairs for operations on ships be considered. They have these for the aircraft industry.

Amend SMRs – As a continuing activities, the FIC will amend the Regional and Ocean Class SMR to include ADA requirements (Terry’s white paper). They will also carefully review the “Lessons Learned” and PCA comments and incorporate as appropriate into the SMR documents.

***Kilo Moana* discussion** – The FIC discussed the need for additional debriefs for *Kilo Moana*. Terry indicated that he felt that the job of assessing the ship and how it handles in rough seas has not been completed. The ship has had very little operation in rough seas. Additionally, new issues have been arisen; station keeping, dredging, and vehicle tracking. There are other issues that need further evaluation include station holding and stern to operations. There are upcoming cruises that might be of interest for additional debriefs. It was agreed that a more focused set of debrief questions is needed. Terry Whitley volunteered to draft a set of more focused debrief questions.

A cruise of particular interest is Charlie Langmuir’s cruise that included ABE operations. Al Suchy indicated that he would try to get concise words from Dana regarding the *Kilo Moana* cruise and ABE operations.

There is no new news on the motion study being conducted by Curt Collins.

Day one adjourned

Adjourn Day 1 at 1700

Day 2: Wednesday, March 2, 2005

Open Day Two Meeting – Dave Hebert re-open Day-two of the meeting at 0830.

Long-Range Fleet Renewal Plans:

Status of FOFC Long-Range Fleet Renewal Plan - Bob Houtman reported that Bob Winokur regrets that he cannot attend. He stresses the importance of UNOLS and FOFC working together on a coordinated Fleet Renewal Plan. The FOFC group has been meeting regularly at about every two weeks to work on their plan. Bob Houtman reported that Bob Winokur has used the slides he will present for the NOLC meetings. The slides are included as *Appendix VI*.

The updated Federal fleet renewal plan will be a coordinated agency plan spanning the years 2005 to 2025. It expands the FOFC December 2001 National Academic Research Fleet Plan. Agencies represented include the Navy, USGS, EPA, USCG, NOAA, NASA, NSF, and MMS. They will coordinate with UNOLS. The working group is developing an initial draft for completion by 31 March. They hope to have a technical writer by mid April and have a draft available for NORLC approval by 31 July 2005. The report release is planned for 30 September 2005.

The initial assumptions for the FOFC update are that ocean research and operations will continue to be a national priority in support of agency missions and special programs (Tsunami Warning System, OOI). Vessels will be available for a minimum 30-year service life. As in the last report, the plan only considers vessels greater than 40 meters. Requirements for heavy lift capability, such as those required by ocean observatories will be contracted to industry.

The FY05 science funding levels resulted in overcapacity. FOFC is projecting that FY06 and outyear science funding levels will be less than FY05. The Fleet identified in the FOFC plan will have fewer but more efficient ships with greater capability. Compliance with complex regulations will increase operational costs. National icebreaker renewal issues will be resolved by 2006.

Bob reviewed the plan outline, which includes Fleet requirements and gaps, concept designs and technology infusion, and implementation. Bob presented charts showing fleet costs by agency and percentage of fleet operating costs by class. The FOFC update will focus on the requirements for the next five to ten years.

Bob indicated that there are 43 Federal oceanographic ships in the plan. He presented a chart showing all of the Federal Global Class ships included in the FOFC plan. These include general-purpose ships, survey vessels, and USCG icebreakers. The Plan will

indicate no replacements for *Knorr* and *Melville*, which will both reach their retirement age by 2014.

For the Ocean/Intermediate class the FOFC plan includes six NOAA fisheries survey vessels. One Alaska Region Research Vessel (ARRV) is planned for 2007 construction and the Navy proposes four additional ships. Five UNOLS ships will be at/beyond retirement age by 2010 and two more by 2015.

For the Regional Class, three ships will reach their retirement age by 2011 and NSF has planned for three new Regional vessels.

The floor was open to questions and discussion:

Question: What is the message from the updated plan? Answer: FOFC feels that if they can acquire the ships that are planned, they will be in good shape based on the funding level. If they can move forward with these ships, then they would be able to support the funded science.

Comment: Terry Whitledge commented that he understands FOFC's approach to the update, but it becomes a self-fulfilling prophecy. He is uncomfortable about developing a plan that is based on budget projections, as opposed to science justification. The ocean science community should identify future needs. The fundamental task is to bring the scientific demand to the attention of the nation.

Question – How will the OE ship fit into the mix? Answer: There will be an Ocean Class ship dedicated for the Ocean Exploration program.

Question: Al Suchy asked if the plan still includes an ice capable Ocean Class ship as was indicated in the original 2001 FOFC plan. Answer: Dolly indicated that an ice capable ship would likely be included.

Question: Will Ocean Observatories be included in the FOFC update? Answer: Ocean Observatories will not be included in the FOFC plan. At this time there is no money identified to support the OOI facility needs.

Fleet Improvement Plan (FIP) Update - Dave Hebert reviewed the FIP Outline and status of draft text. The outline and charts showing Fleet statistics are included as **Appendix VII**. Dave reviewed the future science initiatives that are included in the outline.

One item on the outline that will need additional thought is ship scheduling and operating modes. There will need to be some thought into how facilities are scheduled and a new process may be needed to address new needs such as event response.

Dave reviewed the project timeline. The Ocean Class hull evaluation consumed a lot of our time and efforts over the winter. To keep the FIP project moving, Dave proposed bi-weekly reports or phone conferences.

Next, the Fleet utilization trends and projections were reviewed. These charts are included in **Appendix VII**. Discussion and comments followed:

- The total amount of money available for science/ship time would be of interest.
- It would be interesting to estimate what the ship time demand has been.
- Separate *Kilo Moana* from the Intermediate vessels
- Include technician support in the total Fleet Costs.
- Use the following schedule for the Regional Class entering service dates: first ship = 2009, second ship = 2011, and third ship 2012.
- A revised day rate is needed for Marcus Langseth
- For new Ocean Class vessels, use the *Kilo Moana* day rate
- The Regional Ships day rate should be \$12K
- Correct *Walton Smith* days
- Split the Fleet into two categories, >40m and <40m.
- On the cost chart – show year of dollar

Break

Review FIC Action Items and Assignments - Dave reviewed the FIC actions items. A summary of the action items is included on page 2 and 3 of these minutes.

FIC was asked to provide Terry with any revisions to the ADA white paper so that a draft could be available for the Council meeting on March 29-30.

Other business:

2005 FIC Membership Changes - Niall Slowey is completing his first term on the FIC. He would like to continue for a second term. Toby nominated Niall for a second term. It is good to have representation from the Gulf of Mexico region as well as G&G expertise.

Fall Meeting Dates – **The meeting will likely be held during the** first two weeks of October and if possible coincide with the Council and Annual meetings.

The FIC indicated that having joint meetings with the Council is useful and that the interaction is good. This will be kept in mind when planning the spring FIC meeting.

Finalize SLEP and Vessel Retirement Dates – There was discussion on whether or not the SLEP and Vessel Retirement Date report could be considered final <http://www.unols.org/committees/fic/FIP05/retire_date_report_Oct04.PDF>. There had been concern that the input provided for *Knorr* and *Melville* should not conflict. Al Suchy and Tom Althouse have provided additional input that clarifies these concerns. Annette will confirm that the revisions have been incorporated. If so, the report will be considered final.

Adjourn - The general meeting adjourned at 1130, but FIC members were asked to stay for further discussion on the Fleet Improvement Plan Update.

FIC Session on Fleet Improvement Plan Update

FIC members were asked to complete writing assignments and provide their input by March 11th. A phone/web conference was scheduled for March 16th at 10:30 am Pacific time. Annette will work to update the charts and compile new statistics.

The Plan outline was revisited and the following comments were suggested:

- Additional text is needed in the Education and Public Outreach section
- There should be a section that addresses Large Program Initiatives such as IODP, RIDGE, MARGINS, CLIVAR, GOOS, etc. Toby Garfield volunteered to draft this section.
- Remove the section on Ocean Engineering
- Dedicate the plan to Marcus Langseth, past FIC Chair

FIC Adjourned at 12:30 pm.