

**UNOLS Fleet Improvement Committee MEETING**  
**National Science Foundation, Stafford I, Room 375**  
**4201 Wilson Boulevard Arlington, VA**  
**March 8-9, 2011**

**Meeting Report/Minutes:**

**Day-1: 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 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 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).*

### **Action Item List – New and Continuing**

#### **Long Core Re-positioning:**

- Is there general agreement that the Long Core System would not have a detrimental effect on Langseth's seismic capability with the proposed Glosten design?
- Given the decrease in Global ships, is it worth negatively impacting the general-purpose capability (when LC is aboard) of either the Revelle or Thompson?
- What are the pro's and con's of a semi-permanent installation aboard Langseth? What issues should NSF be prepared to address?

**Projected Service Life End Dates:** Review Vessel Condition Memorandums from NSF:

- Does FIC agree with the recommended retirement dates?
- Given limited resources and the current states of both the RCRV and OCRV projects, which vessels should NSF focus on with regard to material investments?

**Develop process for revising UNOLS vessel retirement dates**

- Investigate whether it would be beneficial to relocate Oceanus as a replacement for either Endeavor or Wecoma. Status – consultation with current operators is near complete.

### **UNOLS Reclassification - Four Class System:**

- Does FIC agree with how NSF has divided the vessels between the four classes (Global, Ocean, Regional, and Local)?
- If not, which vessels would FIC recommend be moved to a different class?

**Early Career Chief Scientist Training** – Two training courses and cruises are planned. FIC is asked to contribute to the training curriculum.

**Lesson's Learned** – Review Marc Willis' recommendations made at the March 2011 meeting and provide feedback to NSF and ONR. FIC Guest Speakers – Identify special topics and potential speakers of interest to FIC.

**Multibeam Pool Proposal** – Sandy Shor suggested that FIC provide input on the proposal. [I don't think that a proposal has been submitted. Contact NSF for information/status]

### **Keeping Abreast of New Technologies:**

**WHOI Long-Coring System** – Clare has drafted Long Core Debrief questions for FIC review and comment. There are no LC Cruises in 2011 (I think).

### **RV *Hugh Sharp* Debriefs -**

- Review the *Sharp* schedule for candidate cruises and make FIC assignments –Clare
- Carry out Debriefs - FIC

**RV *Kilo Moana* Load handling system** – FIC Chair will contact U.H. (Sandy Shor) for periodic updates on the status of the system and feedback on its performance and capabilities.

**Fleet Improvement Plan (FIP)** – Dave Bradley has provided a draft Appendix on Ocean Acoustics. FIC review and comments are needed. Finalize and post on UNOLS website.

**Design and Construction Efforts** - Stay engaged in ongoing design and construction efforts (Regional Class, Ocean Class, *Sikuliaq*, etc.):

**Ocean Class Research Vessel (OCRV) - Form an Ocean Class Advisory Committee (OCAC) – Status:** Clare sent names to Council for endorsement

**Mock-up Facilities** – In light of the usefulness of the R/V *Sikuliaq* mock-up, should FIC recommend to the agencies that future ship design/construction efforts include mock-up facilities?

**Science Mission Requirements (SMRs) Update:**

- The OCSMR document requires an updated to be consistent with the table values.
- Identify general specifications and principles that apply to all SMR documents and compile these into a separate document.

**Greening the Fleet: Construction, life cycle, and recycling:** Stay engaged in plans for a Green Workshop in early 2012

**Ocean Observatory Initiative** - Stay in contact with the OOI Office. The FIC Chair contacts the OOI Office prior to each FIC meeting for the latest facility update.