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**AOOS Board Meeting**

**September 8, 2010**

***Meeting summary prepared by Molly McCammon and Darcy Dugan***

***Approved by Board 9/23/11 with amendment***

Attending in person were Board members: John Goll (BOEMRE), Clarence Pautzke (NPRB), Shane Montoya (Coast Guard), Michelle Longo Eder (Arctic Research Commission), Frank Kelly (NOAA), Carl Borash (USACE), Larry Hartig (ADEC), and Mike Castellini (UAF). Attending by teleconference were Board members: Doug Woodby for Denby Lloyd (ADF&G), Ed Page (Marine Exchange), Glenn Sheehan (BASC), Doug DeMaster (NOAA AFSC), and Nancy Bird. Also participating were Bob Pawlowski (Alaska Legislature detailee to Denali Commission), Phil Mundy (NOAA ASFC and AOOS DMAC committee chair), Molly McCammon (AOOS Executive Director), Darcy Dugan (AOOS Program Manager), and Rob Bochenek (AOOS Data Manager). Yi Chao (AOOS PI) and Amy Holman (NOAA) joined around 9:30am and Cheryl Rosa (Arctic Research Commission) joined at 10:30am.

The meeting was called to order at 9am by Vice-Chair Glenn Sheehan.

**1. Executive Director Report**

AOOS director Molly McCammon gave a brief overview of how the meeting would proceed. She also introduced the new data management team lead, Rob Bochenek, from Axiom Consulting and Design. Rob and his team have begun working to launch a transition data portal for AOOS. There will soon be statistics and metrics on user patterns. The Arctic Research Assets map will be updated this spring as well. John Goll asked what relationship the Board should have with Axiom and whether they should contact the data management team directly with issues. The Board requested a memo stating how this interaction should be structured.

**2. Public Comment**

Scott Pegau, Science Director for the Oil Spill Recovery Institute, spoke in support of continuing the OSRI/Prince William Sound Science Center partnership with AOOS in Prince William Sound, and working together to determine future support for the existing infrastructure, especially the Snotel weather stations.

**3. AOOS FY11-15 Proposal**

The Board reviewed the draft proposal components and discussed the following:

Program Development, Implementation and Outreach

The Board discussed the need for an additional AOOS staff member – a new position of Program Manager for Operations and Scientific Implementation. The Board asked to see a draft job description for the proposed position before proceeding with the hire. Nancy Bird asked if there was a need for a science director if the AOOS annual budget was only $2 million a year. McCammon responded that it was necessary if AOOS is going to grow to $4 million or more using non-NOAA funding. The Board concurred.

Data Portal

Clarence Pautzke asked if there was a way to track (in an automated fashion) the usage of particular web pages, such as the Arctic Assets map. Bochenek said yes, there will soon be statistics on patterns and metrics available through Google Analytics. John Goll asked that the Arctic Assets map reflect the funding entity, with the deployment entity less highlighted. Accreditation is very important to the funding agencies, he noted.

Bochenek said they were focusing on web applications and that the transitional data portal with transitional web applications would be available in late September. He described their approach as following a “rapid development cycle” with quick releases, feedback, and revisions. Goll requested that detailed descriptions be provided for the new products and what they do.

Mike Castellini noted that parts A and B of the proposed budget total $1 million, and asked if we would spend these under any funding scenario. The answer was yes – this is part of the base program funding.

Clarence Pautzke asked if the AOOS data system would be a distributed system, and if so, there would need to be someone available to provide QA/QC. The new science-operations staff position might be able to assist with this. Phil Mundy wanted staff to provide more detail on of the new hire position. He noted that the additional position would be good so that Molly and Darcy would have freed-up time to grow the program.

Products

There was some discussion regarding specific products listed in the proposal.

Sea Ice Atlas: Frank Kelly mentioned that the NWS is increasing its capabilities in sea ice monitoring and forecasting – they have added an additional person at the ice desk and are working closely with National Ice Center to increase the number of days of forecast and analysis. NWS is becoming part of the North American Ice Service. Kelly confirmed they don’t have a current ice atlas and it would be a high priority for NOAA.

Pautzke also emphasized the importance of completing the atlas. If more money was available, perhaps there could be some thematic chapters. Goll said he has heard his staff at BOEMRE are going to be working on something similar but with less detail and would not include the hand-drawn NOAA maps. Amy Holman mentioned there is no new money for this in the NOAA Arctic strategy. Pawlowski asked if this would be developing or serving the ice atlas. The answer was both – there would be a product delivered at the end. This is the only sea ice product under the $2 million scenario. Under the $4 million scenario, there would be funding to hire another UAF grad student to assist Hajo Eicken in support of obtaining local sea ice observations.

Arctic Obs Synthesis & Reporting: This is currently designed to have the first year conducted by staff in house, and the second year externally under contract. It includes working with data from the Distributed Biological Observatory (DBO) currently in development. The money would help fund a staff position since currently no one has had time to talk about how to integrate and pull together data that’s being collected. Goll said that MMS is planning to organize their data into a synthesis in 2011 or 2012. McCammon noted that what’s missing is the data collected by other programs besides BOEMRE. There are multiple players (NSF, non-agency researchers, Navy, NASA). Glenn Sheehan agreed, saying that many agencies were working in the Arctic and there were a lot of meetings for high level collaborations, but not much emphasis on coordinating the day to day activities or data.

Castellini was concerned that this could be seen as AOOS doing in-house science and asked if a science advisory board was needed. McCammon clarified that AOOS would not be providing in-house scientific interpretation, but would be facilitating and convening others to provide interpretation. The position description would help clarify this.

Bob Pawlowski made a general comment that the proposal doesn’t currently show scenarios for what you get for extra investment. It was confirmed that these would be broken out in the next few weeks to reflect the priorities of the Board.

Forecasts and Models

The AOOS proposal includes contracting with UAF to downscale IPCC climate models for offshore Alaska. The proposed PI is John Walsh at IARC who already has some funding to start.

McCammon explained the WRF winds modeling project. AOOS has been spending more than what’s currently in the proposed 5-year plan starting in FY11 ($112K this year). It’s hard to continue at that level since it takes up most of the modeling budget, so this year the proposal is to see what we can get for $50K. Peter Olsson, the PI, in the past has said that $100K is required to keep one person employed on the model. It’s unclear if this project can move forward with less than this amount – potentially a half time person if Olsson has other resources. Winds produced by this model are integral to circulation, waves, and other modeling efforts.

ROMS circulation modeling has been contracted to Yi Chao at NASA JPL for Prince William Sound. In the past, Chao has been funded $100K per year. A NOAA project with PI Rich Patchen in Cook Inlet will also be leveraged to improve ROMS modeling in the Gulf of Alaska.

Funding for the D7 (hydro model) for Prince William Sound is also included in the proposal, and will greatly improve circulation modeling. Bird mentioned the funding for the hydro model needed to be moved up one year.

AOOS also proposes to fund a statewide circulation model synthesis initiative to assess, validate, and develop some common tools. Phil Mundy mentioned that the NCEP model can produce sea surface temp since 1960 and has historical data to develop concepts (water column stability, sea surface skin temp, etc). Those models are not accessible to people not really specialized in using NCEP reanalysis. There are a growing number of physical models that can be run retrospectively to replicate physical models where we don’t have current data. This could become part of the AOOS model visualization system.

Observations

McCammon explained the observing projects proposed for funding, including AIS Weather Stations, SnoTel stations in Prince William Sound (a subset of the current stations will be maintained), new buoys, current meters, and water level sensors. Sheehan asked what the chances were of AOOS collaborating with the offshore oil and gas industry. Boats up in the Arctic now can be leveraged to collect data at very little cost, and Shell is studying the Chukchi coastline for storm surge. McCammon said this could be written into the proposal. Pawlowski thought the State Legislature could be asked to contribute to observation equipment as a capital project. McCammon said the Army Corps is also interested in partnering/leveraging.

McCammon clarified that the $2 million proposal doesn’t include funding for the Seward Line monitoring project every year. The program is funded by a consortium of entities in years 1 and 3 but not year 2. The entire cost of the program is around $400K/year.

Frank Kelly noted that buying equipment comes with lots of maintenance/operational costs, but data products are unique. Perhaps AOOS should place emphasis on products and be better known for those.

Mundy noted the proposal so far was lacking explanation on what projects were cut under $2 million scenario. The Board needs to know why these decisions were made since all projects look like they should be eligible. Choosing among them and establishing priorities is unclear.

McCammon said that given the funding level, the goal was to figure out how to keep together a bare bones PWS system and then diversify into the Bering/Chukchi/Beaufort. We are limited by funding because doing work up there is very expensive. At this point in time, it is okay to be general and then pare things down in February when the funding level has been announced.

McCammon asked for approval to move forward with some form of the spreadsheet, acknowledging there will be tweaks and the executive committee can approve tweaks before the proposal is submitted. In Year 1 we need to be as close as possible to the targets. Years 2-5 can be less specific.

***11:45am John Goll made a motion for McCammon to go forward with spreadsheet as presented as basis for proposal submission to NOAA. Woodby seconded.***

Discussion
Pautzke suggested that AOOS should not start funding marine mammal tagging since other entities are already doing that. He noted that getting down to $4 million was going to take a major tweak in the draft budget.

Bird said she would rather take money out of big ticket items like gliders rather than $10K projects like animal tagging, and she would prefer to leave modeling and products alone.

Mundy suggested reducing lines E15-18 proportionately to get to reach the $4m target, and the same thing for the $2 million target so the numbers add up. They can be rounded to avoid getting odd numbers.

Castellini noted that the tools used for ocean monitoring are going to change in the future. AOOS needs to start thinking about concepts for 10-20-30 year theoretical models to build off. Projects and technologies come and go but the core theories remain the same. We will never have enough ships, so instead of thinking about that, focus on new technologies. It is not realistic to think we will have 20 new Seward lines since Alaska would never be able to afford it.

***Restated Motion: The Board would like to move forward with the 5-year funding proposal as enumerated, with a friendly amendment of proportionally de-scoping items E15-18.***

***The motion passed with no objections at 12:03pm.***

The Board adjourned at 12:05pm.