Alaska Ocean Observing System
1007 W. Third Avenue, Suite 100
Anchorage, AK 99501
907.644.6703 – phone
907.644.6780 – fax
www.aoos.org

AOOS Board Meeting
October 30, 2012
Meeting Summary

Board Members Present: Ed Page (AK Marine Exchange), James Kendall (BOEM), Paul Gill (USCG), Amy Holman (NOAA), Dave Christie (Sea Grant), Ed Fogels (ADNR), Tara Jones (ASLC), Cynthia Suchman (NPRB), Cheryl Rosa (USARC, by phone), Larry Hartig (ADEC), Phil Mundy (representing AFSC for Doug DeMaster), Mike Castellini (UAF), Lyman Thorsteinson (USGS for Leslie Holland-Bartels), Katrina Hoffman (PWSSC/OSRI) and Chris Siddons (representing ADFG for Cora Campbell). Also present were AOOS Executive Director Molly McCammon, Program Managers Darcy Dugan and Rosa Meehan, Data Manager Rob Bochenek consultant Carl Schoch, Dave Easter (IOOS Program Office by phone), and Josie Quintrell (NFRA by phone). Aaron Poe (Bering Sea and Aleutian Islands LCC), Larry Hinzman (IARC) and Sharon Warren (BOEM) observed the meeting.

Vice-chair Ed Fogels called the meeting to order at 8:30am. Ed Page arrived at 9 and chaired the meeting thereafter.

The Board unanimously approved the meeting summaries from the February 15, 2012 Board meeting and the May 24, 2012 Executive Committee meeting.

Update from Executive Director
Molly McCammon reported on recent accomplishments, current activities, upcoming events and national issues.

Recent Accomplishments:

- Co-hosted Coastal Hazards Workshop
- Received funding for 5 new grants: NPRB's GOAIERP, UAF RUSALCA, PACMARS & 2 LCC projects
- Submitted 2 proposals to NSF
- Visits by NOAA seniors: Kathy Sullivan, Holly Bamford, David Kennedy & Margaret Spring
- NMEA Conference in Anchorage June 24-28

Highlights of Current Activities

- Extending asset inventory and mapping statewide: intern

- Industry data sharing agreements – archive historical met ocean data; environmental studies soon
- Cook Inlet CIRT – partnership with Arctic ERMA
- ADF&G Data Partnership
- AK Marine Policy Forum
- EVOS Gulf Watch Alaska (Long Term Monitoring) and Herring projects
- Proposals: BOEM environmental studies
- AMSS: abstract review, keynotes, town halls/workshops
- Plan to implement Begich Arctic Science Endowment
- Arctic Animal Tagging Network workshop

Upcoming Events:

- IOOS summit in DC Nov 13-15, 2012
- AK Marine Policy Forum Nov 27
- ORAP: January 14-16
- EVOS LTM & HRM PI meetings Nov 27-30
- Polar Research Board & OSB Arctic Oil Spills Committee's first meeting: Dec. 17-19
- PacMARS data meeting: Dec. 10-11

National Issues:

- IOOS summit will be Nov. 13-15, 2012 and still space for additional AOOS Board member to attend (McCammon and Holman will be attending).
- ICOOS Act (organic legislation for the observing systems) up for reauthorization in 2013.
- The National Federation of Regional Associations for Coastal and Ocean Observing (NFRA) is considering a name change and possible extension of their mission.
- National certification is pending; no issues anticipated for AOOS as all requirements have been met or exceeded.
- Still participating on Polar Research Board, ORAP, and planning for Arctic Observing Summit in May 2012.
- Presented at Hydrographic Service Review Panel in June and Marine Board's Bering Strait Shipping Workshop in October.

Follow-up: *Board member Holman asked for an assessment of how the IOOS regional associations contributed to preparation for and response to Hurricane Sandy event.*

Board Review of Governance and Administrative Issues *(with Josie Quintrell, NFRA Executive Director)*

AOOS is currently operating under the guidance of a Memorandum of Agreement (MOA) first adopted in 2005 and later revised in 2009, and a set of Standard Operating Procedures. Two issues discussed by the Board related to Structure (MOA construct versus incorporation as private, non-profit 501(c)(3)) and membership. Membership is limited to entities supporting the AOOS mission (primarily state and federal government agencies and research organizations) and

not individuals. Nationally, the regional ocean observing systems are divided between those incorporated as a 501(c)(3) (largely on the East Coast serving multiple states), versus those organized under an MOA as is AOOS. The 501(c)(3) corporate structure provides an avenue for accepting charitable donations and also could provide an additional liability protection to board members (who could not be sued as individuals). The Board could decide separately how to address fiscal responsibility and associated costs, whether to assume those responsibilities directly or to contract them out. AOOS currently has the Alaska SeaLife Center serving as its fiscal agent, and already has separate liability insurance and financial audit. The North Pacific Research Board (NPRB), which also contracts with ASLC for administrative services, is pursuing a legal review of liability, audit and staffing issues. AOOS will be looking to the results of that review for further guidance.

Structure: AOOS originally organized as a loose consortium under an MOA due to the desire to ensure participation by Federal Agencies on the AOOS board. A potential limitation of a 501(c)(3) is that Federal Agency personnel might not be able to serve as board members, although language was inserted in the national Integrated Coastal Ocean Observing System Act legislation in 2009 to clarify that federal agencies could participate in all aspects of the regional ocean observing systems, including governance. There continues to be mixed legal interpretation of that language. Federal agency participation is considered important to AOOS' long-term effectiveness. A new concern of the Alaska SeaLife Center appears to center on how staff is legally described in a contract and if there is a clear "firewall" between AOOS and the ASLC. The intent is to establish clear roles but the tradeoff could be a potential loss of flexibility. In sum, 501(c)(3) establishment may affect board membership (Federal participation), and result in less flexibility in staffing and potential additional costs if AOOS becomes its own fiscal agent.

Follow-up: *Direction was given by the Board to the Executive Director to further evaluate governance and fiscal responsibility options based on the pending NPRB legal evaluation, a new draft fiscal agent agreement with the SeaLife Center, and review of other regional ocean observing systems organized as a 501(c)(3). Results of the evaluation are to be presented to the Board at the next meeting, tentatively scheduled for February 2013.*

The Board also requested copies of the recent AOOS audit be provided via email.

Membership: AOOS Board membership currently is limited to organizations (private, government or NGO), and consists of the original 16 founding members. The Board discussed the merits of expanding membership and whether new members should be board members or part of a larger support network. Some other Regional Associations collects dues, which can be used to lobby. In the past, AOOS board members have had concerns about the ability of government agencies to pay dues. AOOS has the option to levy dues, but has chosen not to at this time. Based on the size and regional diversity of state, additional membership could be useful. These entities should be considered for possible membership: BESSE; AON and SAON, which are programs under NSF (could consider NSF program manager – Erica Keyes); NGOs such as The Nature Conservancy, Oceana, and World Wildlife Fund; industry groups such as Shell, the Norton Sound Economic Development Corporation, and other commercial fishing organizations.

Follow-up: *Direction was given by the Board to the AOOS Executive Director to develop recruitment material that would describe membership criteria and expectations to be used by AOOS staff and Board members to conduct a short-term campaign to solicit potential new members. Based on the response, the Board would then decide at the new Board meeting whether new interests become full board members or some other type of member.*

Board Review of Outreach and Communication Issues *(presentation by AOOS Program Manager Darcy Dugan)*

The goals of AOOS outreach and communication are to generally raise awareness about AOOS resources and partner resources and improve overall communication. AOOS audiences are broad and have varied interests. Avenues for reaching audiences include presentations, list-serves, e-news, and Facebook. The AOOS website is a primary avenue for outreach and has elements that feature news, highlights, special projects, regional pages, data portals, a calendar of upcoming events, as well as other resources. Printed material includes a pop-up, newsletter, and some one-page handouts.

Moving forward, AOOS is developing a strategy that addresses strategic geographic coverage of the state. The strategy also includes developing focus groups for data tool development and improving mechanisms for soliciting feedback.

One issue continues to be the ability to describe AOOS in simple, easy to understand terms. The Board made the following suggestions for staff consideration:

- Post products for recreational fishermen (e.g., daily run counts at weirs; Kenai information for dip-netters including run timing, tides, and timing of openings).
- Another messaging technique could be "how can AOOS be useful to me (example of recreational users)" and spread this around.
- Create an avenue into AOOS web products defined by user group.
- Highlight current events on the homepage and produce a pathway into the data portal so that relevant data can be accessed obviously and easily.
- Develop an AOOS "QR code" that can be scanned by a smart phone and send viewers to the AOOS website.
- Customized notifications to users when a particular real-time sensor or model forecast reaches a threshold of their interest. (The data team is developing this concept.)
- NOAA Weather Service does a piece on weather channel – AOOS could do a piece in the spring and post the video.
- Present to the UFA and then work with them to identify how their membership could most effectively access and use this information.
- "Brand" AOOS as owner of the data portal; the data portal could be considered an environmental Google.
- Include the AOOS link on the Alaska Fishery Science Center website and on other relevant websites.
- Present at Coast Guard Search and Rescue conference next year.

- Develop regional views, so that users can quickly get a local view. These links could be posted by other organizations (e.g., SeaLife Center would post for Seward).
- Incorporate ocean observing into school curriculum.
- Board members need to look for opportunities to be emissaries and promote AOOS – in meetings and also on their organization's websites as links.
- Present at the State's Search and Rescue conference next year.

Follow-up: *The Board requested an "elevator speech" and talking points that Board members could have in their back pocket and include a link to the AOOS website as this is the most direct demonstration of AOOS resources. Pursue adding AOOS link to board member organization websites and programs.*

Board Review of Work Plan

Current Work Plan: Current AOOS funding is level compared to year 1 of the latest NOAA 5-year cooperative agreement, with two directed add-ons: $82k for national data management support and $156k to support O&M costs of existing High Frequency radars in the Arctic that were originally funded by BOEM. This is less than half of the original request included in the AOOS 5-year proposal to NOAA. AOOS has 3 full-time staff plus a student intern; in January we will have 2 ½ FTEs plus an intern, supplemented with some contractual help. Travel, supplies, and other expenses remain about the same as last year and the current building lease has been renewed for an additional five years with a modest increase. The fiscal agent fee with the ASLC is the same as last year as an interim measure; AOOS will have a draft formal agreement for Board review at the upcoming February meeting.

This is year 3 of a 5-year contract with Axiom for data management services. The focus in year 1 was on establishing architecture and warehouse capabilities, and the real-time sensor map and model explorer. The focus in year 2 was on adding Ocean Portal and Research Workspace capabilities. The focus this year (year 3) is fine-tuning existing capabilities, adding datasets, producing tailored products, and transitioning to IPAD friendly software. AOOS received additional funding of $82k to provide national IOOS support.

Current sub-awards include: ADF&G partnership, to make state fishery data more accessible and provide greater access to ADF&G of ocean data; Prince William Sound Science Center to support Snotel weather stations in Prince William Sound, POST acoustic monitoring, hydrological model validation, and data integration; Kasitsna Bay Lab for monthly boat surveys in Cook Inlet; Yi Chao to run ROMS ocean modeling in PWS and Cook Inlet and work to consolidate ROMS models; AK Marine Exchange to integrate AIS and weather stations & reports; UAA Peter Olsson to continue WRF wind/weather forecasts for PWS & Cook Inlet, expanding to Southeast Alaska; University of Maryland for 1 day of ship support for the Distributed Biological Observatory.

UAF sub-awards include: IARC (Walsh) to complete an electronic Sea Ice Atlas; SFOS (Mathis) to conduct OA sampling along Seward Line and contribute to a consortium supporting three OA moorings; SFOS (Hopcroft) to support the bi-annual Seward Line consortium; SFOS (Winsor) to

use the AOOS glider to establish a glider track climate time series in Chukchi; and SFOS (Weingartner) to support the O&M costs of HF radars in the Arctic.

Data Portal and Products: Data Manager Rob Bochenek described and then demonstrated the current suite of AOOS data products. These included the current assets: Real-time Sensor Map, Model Explorer and virtual sensor, Arctic Assets Map, and Research Workspace. New products under development include the Arctic Portal and the Cook Inlet Response Tool, both soon to be publicly available. A new AOOS search interface is currently under development to access the entire AOOS Ocean Portal. All of the programs are currently being transitioned to html5 (iphone and ipad friendly). The data team is currently working to implement an automatic archive link to the National Ocean Data Center (NODC).

Conceptual Arctic Observing System build-out: Consultant Carl Schoch presented a review of Arctic regional products and services, primarily using data collected by government and industry entities. The review is helping to identify data gaps and areas for future AOOS focus. A suggestion was made that a primary AOOS role could be the collection and integration of existing data. Schoch said one obvious gap was an observing transect in the Beaufort Sea; he provided a conceptual example of such a transect.

Board Discussion of future AOOS activities and priorities: The Board reviewed the table of projects initially planned for the $4M per year AOOS proposal, and what projects are actually funded for Years 1 and 2. From a broad perspective, AOOS's primary function is serving as a data and information broker. A broad budget breakdown shows $370K for administrative and staff support; $500k for data management; and $100k a year for fiscal agent fees. This leaves about $1M a year for observation and modeling support. The current list of projects was developed in 2009 through an assessment of stakeholder needs, an evaluation of risk and sustainability and costs and benefits in supporting them, and potential for partnership support. It may be time to review and update this assessment.

The Board asked for McCammon's standard elevator speech on what makes AOOS unique: 1) Collecting and integrating data from multiple sources and "serving" it to stakeholders; and 2) facilitating interested stakeholder groups to find a way forward in addressing specific observing and information needs.

Other Board observations:

- Need to link to NPRB's proposed long-term monitoring program;
- This is a list of worthy projects but it's not clear how it all fits into a long-term system.
- Long-term observations work together with data management. The Board supports long-term data collection.
- Geographic focus: there is a lot of activity in the Arctic so we need to keep a focus there and not be left behind. Caution was raised that existing long-term funding obligations in PWS need to be maintained.
- A number of entities are collecting ocean observations. AOOS is unique in bringing information together and developing tools for use by multiple stakeholders.
- The AOOS build out plan provides a road map; note that it has lots of gaps.
- Previously the Board identified that AOOS should own something, and this directive is related to branding. Again, the data management and tools are specific things that AOOS

owns, and having specific tools or apps for smart phones would be useful and demonstrate the value of AOOS.

- Strengthen and augment what AOOS is good at, particularly in face of potential funding reductions.
- Question of how well oil spill response community is prepared for potential spill – OSRI depends on ROMS ocean circulation model, which depends on high-resolution winds. Some other entities are developing this capability and all potential sources need to be evaluated. There is concern that experience in PWS demonstrated that models are not effective without adequate real-time information to feed them. *Prevention* needs to be the primary objective as this is most cost effective return on investment (compared to any type of post spill clean-up).
- We need to acknowledge AOOS' use of small amounts of money to augment observations and cover critical holes. This is a critical AOOS function.
- For branding, AOOS should have clear name recognition tied to a long-term data stream. Monitoring is critical to addressing climate change and AOOS should be associated with that effort.
- Branding remains important; utilize the website.
- The vetting or evaluation of projects should consider long versus short-term projects with long-term being better. Don't discount the value of providing a small amount of consistent funding to leverage other funding.
- Sikuliaq – it's time to start thinking about potential uses of the new research vessel, which will arrive in Alaska in January 2014.
- Unmanned aerial vehicles could be potential new tools.

Follow-up: *Review current and proposed list of work plan activities based on a new review using 2009 criteria. Re-order or re-prioritize current list and bring back to Board in February for further discussion.*

The meeting adjourned at 5 pm. The next Board meeting will be held in late February/March.