



## **AOOS Board Meeting**

**March 14, 2014, 9 am - 3pm**

**Fairbanks, Alaska**

***Summary prepared by Molly McCammon***

**Attendees: Board:** Ed Page (Chair), Marine Exchange of AK; Robert Raye, Shell Oil; Tara Jones, Alaska SeaLife Center; Glenn Sheehan, Barrow Arctic Science Consortium; Chris Siddon, Alaska Department of Fish and Game; Amy Holman, NOAA Regional Collaboration Team; Jim Kendall, Bureau of Ocean Energy Management; Margaret Williams, World Wildlife Fund; Mike Castellini, University of Alaska; and Larry Hartig, Alaska Department of Environmental Conservation (by phone). **Board Alternates:** Rob Campbell for Katrina Hoffman, Prince William Sound Science Center/Oil Spill Recovery Institute; Lyman Thorsteinson (by phone) for Carl Markon; Paul Webb for Paul Gill, U.S. Coast Guard; and Phil Mundy for Doug Demaster, NOAA's Alaska Fishery Science Center. **AOOS staff:** Molly McCammon, Ellen Tyler, Darcy Dugan and Rob Bochenek. **Others:** Tom Heinrich, Steve Lewis.

### **Approval of agenda and meeting summaries**

- Draft agenda was approved.
- December 10, 2013 Board meeting summary was approved (motion by Amy Holman, second by Glenn Sheehan).
- February 18, 2014 Executive Committee meeting summary was approved with recognition an issue with the fiscal sponsorship agreement still remains (motion by Holman, second by Sheehan).

### **Update on AOOS & IOOS activities – Molly McCammon, AOOS Director**

Recent accomplishments:

- 5 proposals submitted: 3 to IOOS marine sensor technology program; 2 as partners to NPRB long-term monitoring.
- Historic sea ice atlas released; downscaled climate models nearly complete.
- Successful AMSS meeting – heavy involvement from AOOS and 2 presentations (AOOS & GWA); 3 workshops (modeling, COS, & ABSI climate vulnerability).
- Implementing communications audit recommendations.
- Joint AOOS Principal Investigator and Data Management Advisory Committee meeting held March 13, 2014 in Fairbanks

National activities:

- IOOS Association Spring meeting in DC.
- Hill briefings: Staff from Cantwell's office introduced Senate briefing; and Don Young introduced House briefing.
- Met with AK delegation and Appropriations Committee staff to discuss ICOOS

Act Reauthorization & IOOS funding.

- IOOS Association certification issue is progressing.
- There is emphasis from the National Ocean Service (NOS) on coastal intelligence, ocean acidification, ecological forecasting and extreme events.
- Participation in Ocean Research Advisory Panel (ORAP) is frustrating. The panel is Navy-led, and actions are limited to only those requested by the National Ocean Council and approved by the Secretary of the Navy.
- AOS is providing input to the Arctic Observing Network. McCammon will participate in data panel at Arctic Observing Summit in Finland in April 2014.
- NAS Gulf Program: McCammon attended a work session in Houston, TX and the next meeting is in June in Tampa, FL. There appears to be little support to expand activities beyond the Gulf of Mexico, even though the new program is supposed to benefit entire U.S. OCS. It might be helpful if AOS Board members contacted the program's staff to urge group to consider programs that also benefit areas outside the Gulf.
- National Budget – IOOS is proposed in President's 2015 budget for level funding.

Current Activities:

- Planning for Community Based Monitoring and STAMP Workshops.
- AOS 10<sup>th</sup> Anniversary.
- EVOS Gulf Watch Alaska Program – if questions about program status, ask McCammon directly.
- Preparing for next 5-year cooperative agreement.
- Continuing to assess ADF&G partnership and AOS modeling strategy.

General thoughts from PI/Data Management Advisory Committee meeting:

- AOS is “on the right track” with project activities.
- AOS is the “glue,” the “instigator,” the “facilitator,” ties the pieces together.
- Several participants urged AOS to take a stronger role with “citizen science.”
- The AOS program is growing but we should acknowledge growth takes time and requires patience.
- The data portal is successful and a great way to provide information. AOS should consider developing a “lite” version of the data portal as well as a “pro” version.

Further Board discussion: Amy Holman challenged the board to consider how to increase funding for AOS, outside of the IOOS/NOAA line in Federal Budget.

- Insert IOOS funding in other agency budgets?
- Have partner agencies advocate for additional NOAA funding for IOOS?
- Get state to buy AOS a headquarters building and rent out for revenue?
- Support Begich Arctic Science Bill which would use Dinkum Sands escrow \$ to direct some funding to AOS?
- Include AOS in upcoming Arctic exhibits at Anchorage museum? Form an “out of this world” subgroup to strategize additional funding possibilities: Rob Raye, Jim Kendall, Mike Castellini and Holman.

## **10<sup>th</sup> Anniversary Update**

Darcy Dugan updated the Board on anniversary activities, including video contest; anniversary factoids on website and Facebook; celebration event at museum on November 19, 2014.

## **Overview of new statewide portal**

Rob Bochenek demonstrated progress on the new AOS statewide portal.

- Data flows into the AOS system in a number of ways. The AOS system has been fairly good at dealing with machine-generated data, but now the question is how to deal with non-machine generated data. The Research Workspace can be an avenue to address project-based data flows.
- Cyber infrastructure progress: All search catalogs and major applications have been transitioned to HTML5 (iPad and iPhone friendly). Integrated statewide portal will be launched very soon.
- Upcoming: AOS will be using high performance computing to display more models and run model-to-model comparisons. AOS is also being requested to provide more support for “on-the-fly” synthetic secondary analyses.

Statewide portal name

- Darcy Dugan asked for help in naming the new portal.
- Recommended criteria: Someone who has never heard of AOS must be able to find it through a Google search; needs to make sense to the regular fisherman in Homer.
- Decision: AOS Ocean Data Explorer or “AOS Ocean Explorer” for short.

## **Special AOS Board discussion with University of Alaska: Strategic thinking for increasing ocean observing in Alaska**

UAF participants: Brian Rogers, UAF Chancellor; Mark Myers, UAF Vice-Chancellor for Research; John Walsh (on behalf of Larry Hinzman, Director of the International Arctic Research Center at UAF); and Mike Castellini, Dean, UAF School of Fisheries and Ocean Sciences and University of Alaska representative to AOS Board.

Mark Myers opening remarks:

- A more collaborative and formal relationship between the University and AOS is a great idea. A MOU could be drafted.
- Dr. Lubchenco’s advice (at a breakfast meeting with AOS earlier in the week) was to look to the state to provide support and funding. The number one challenge is a lack of understanding at the state level about how critical the services that AOS provides are. We need an educational campaign, highlighting the value of connections between observational data and derived products. We need a storytelling piece, and need to use a simpler and more coordinated message. The Moore Foundation’s proposed Center for Salmon Excellence is a good example. Also, the tourism industry touches and connects to a lot of issues AOS works on.

- Mapping data across land and sea should be a seamless process, and it should be clear to consumers of this information where there is and isn't adequate data. If we are entering into the business of these "on-the-fly" analytics there is an opportunity to develop tools to communicate uncertainty and data quality. Who is responsible for establishing QAQC and/or determining the level of trust in a dataset continues to be a question.
- There are data and storage capacities within the University (e.g., GINA has nodes on other campuses). Looking at the funding landscape, we won't get enough money for big infrastructure investments, but by focusing on modular and collaborative opportunities, we can build on the existing cyberinfrastructure in a positive and deliberate way. The Arctic Council could play a larger and more supportive role in and for this work.
- AOOS could participate in AK Geospatial Council, which does not currently address marine data.
- UAF has strength in unmanned aerial vehicles and gliders.

Mike Castellini comments:

- AOOS thinks about big data all the time.
- How do we integrate the work of the university and the work of AOOS?
- How can we collaborate to answer this question about non machine-generated data and take advantage of Research Workspace?
- Is there a role for interns at AOOS and/or Axiom?
- Perhaps a dedicated class through the university could be formed to develop some application of the AOOS data system, similar to NCEAS.

Brian Rogers comments:

- There is significant and impressive brainpower between AOOS partners and the university and there should absolutely be a formal relationship between the two.
- There should also be a relationship with the University of the Arctic (Rogers is current board chair). One of the driving forces behind the University of the Arctic is the desire to share technology, such as ice breakers and oil spill response technologies. There are issues around licenses and commercializing information technologies. UAF has the supercomputing center, but the University is about to begin operating at 100 FTE less capacity.
- How do we support Arctic Council as well as influence it?

John Walsh comments:

- IARC could act as a conduit to get more international data into AOOS. IARC could also perform synthetic analyses on AOOS data.
- IARC has been funded by the Arctic Monitoring and Assessment Program (AMAP) to do an assessment of adaptation and climate change in Bering, Beaufort and Chukchi Seas.

Discussion:

- Whereas science previously relied on individually collected observations there is now more research using "big data" including remotely sensed

information, and continuous high-res observations coupled with model data. In this shift from hypothesis-driven science to synthesis and data mining, AOOs can be and is becoming a critical player in the staging and discovery of data. AOOs' role is to collect and integrate disparate data types.

- Chris Siddon (ADFG) and Mike Castellini agreed to look into forming a class within the School of Fisheries that would focus on using the AOOs data system.
- McCammon commented that the Exxon Valdez Oil Spill showed that in the absence of good baseline data we will always point the finger at industry or human activities when there is a problem or hazard in the environment. She suggested thinking about a process to increase observations.
- Ideas to consider: Use of the new Sikuliaq research vessel for state use. Phil Mundy asked about the planning process. Rogers and UAF would be happy to seek funding from Alaska Legislature. Lots of interest in a mapping effort/initiative. We currently have maps based on poor baseline information, for example the errors in coastal elevation are greater than the variability of predicted sea level rise.
- We need better examples of instances where data is helping solve problems.
- Question: How do we influence the Arctic Council agenda?
- There is confusion about what is the responsibility of government vs the private sector when it comes to monitoring and data collection.
- Relevance is a key element. What is 2 min elevator speech? We need to be more strategic. What questions need to be answered? What kind of data is useful? What is it contributing?

#### **Presentations by AOOs PIs:**

- Peter Winsor: marine mammal detection w/gliders
- Seth Danielson, Chukchi Sea mooring
- John Walsh and Sarah Trainor: downscaled climate models and sea ice atlas
- Nicole Kinsman: water level & coastal elevation profiles

#### **Business issues – Molly McCammon**

- **AOOs Board still needs a tribal member.** Kendall and Sheehan will work with McCammon to identify a candidate.
- **New AOOs Data Management Advisory Committee members** were approved: Cathy Tide, ADF&G, and Christopher Hamilton, ADNDR (motion by Tara Jones, second by Holman). The committee still needs someone familiar with local/traditional knowledge. Williams suggested Stephen Braund. McCammon suggested Maryann Fidel from the Aleut International Association. Someone from the Yukon River Inter-Tribal Watershed Coalition was also suggested. McCammon will follow up.
- **FY 2014 Budget & work plan.** The Board discussed and approved proposed continuing projects (motion by Mundy, second by Kendall). They also discussed and approved the following new projects: \$125k for whale glider (Winsor); \$50k for sea level activities; \$60k for new Deputy Director/senior

staff position; \$15k for Kenai River webcam; and remaining funds (approximately \$50k) for equipment category to be used as needed (motion by Jones, second by Holman).

- With McCammon planning to leave AOS by end of her current contract (April 2017 at latest), the Board requested that she and staff think more about that transition and what staffing is needed to cultivate the next ED.

**Follow-up:**

- Send Communications Audit to board members.
- Include AOS in upcoming Arctic exhibits at Anchorage museum that WWF is part of focusing on pioneers in marine research and exploration, and sea ice. Contact Julie Decker.
- Form an “out of this world” subgroup to strategize future funding possibilities: Rob Raye, Jim Kendall, Mike Castellini and Holman.
- Provide information for those AOS Board members interested in contacting staff at the National Research Council’s new Gulf Research Program about importance of considering programs that also benefit areas outside the Gulf of Mexico.
- Establish a group to develop AOS/UA MOU: Castellini, McCammon, who else?
- Follow-up with Siddon and Castellini about developing a university class involving AOS data.
- Find out how AOS might participate in AK Geospatial Council, which does not address marine data.
- Kendall and Sheehan will work with McCammon to identify a tribal Board Member candidate.
- Identify TEK expert for DMAC.
- Develop an executive director transition plan in next year
- Budget activities: develop details for the \$50k water level activities; Kenai River webcam.
- Set up ADF&G meeting.

**Upcoming Events:**

- April 1-2: CBM Workshop, Anchorage
- April 7-11: Arctic Observing Summit, Helsinki
- April 16: STAMP Workshop, Anchorage
- April 22-24, Kodiak Science Conference
- April 22-25, Western AK Science Conference, Kotzebue
- April 22-23, Ocean Research Advisory Panel, WA DC
- Nov 19: AOS 10<sup>th</sup> Anniversary Event