



AOOS Board Meeting

Sept 17, 2014

Anchorage, Alaska

Board Members Present: Ed Page, Marine Exchange of AK; Amy Holman, NOAA; Chris Siddon, ADF&G; Denby Lloyd, NPRB; Paul Webb, Coast Guard (on the phone); Michael Castellini, UAF; Tara Riemer, ASLC; Margaret Williams, WWF (on the phone for planning session); Robert Raye, Shell Oil; Katrina Hoffman, PWSSC/OSRI; Jim Kendall, BOEM; Elizabeth Bluemink, on behalf of Ed Fogels, ADNR; Larry Hartig, ADEC; and Cheryl Rosa, USARC. Board members absent: Doug Demaster, Lyman Thorsteinson, Paula Cullenberg and Duncan Fields. Others Present: Josie Quintrell, IOOS Association; AOOS Staff Molly McCammon, Darcy Dugan and Ellen Tyler.

Approval of agenda and notes from last meeting - Ed Page

- Draft agenda approved (motion by Larry Hartig, second by Cheryl Rosa).
- March 14, 2014 Board Meeting and April 21, 2014 Executive Committee Meeting Summaries approved (motion by Tara Riemer, second by Jim Kendall).
- September 25, 2014 Data Management Advisory Committee summary accepted.

Update on AOOS activities - Molly McCammon

This past August, the 11 IOOS regions joined together for their first ever IOOS Regional Association Directors' retreat in Boulder, Colorado. AOOS director Molly McCammon was not able to attend, but IOOS Association Executive Director Josie Quintrell reported on the event later in the agenda.

The Ocean Research Advisory Panel (ORAP) has not been adequately supported by its host agency, the Office of Naval Research, and the last 3 meetings have been cancelled. This body is supposed to advise the National Ocean Council, whose director is former Alaska state legislator Beth Kerttula of Juneau. Molly has not yet had a chance to meet with her. Molly shared her view that the National Academy of Science's Polar Research Board is the more active group right now influencing ocean research.

Another active group is the Interagency Arctic Research Policy Committee (IARPC), which has numerous implementation teams; Molly serves on four of them. The national IOOS Federal Advisory Committee is soliciting new members. There are currently no Alaskans committee members.

In Alaska, AOOS has hosted several workshops since the last Board meeting. They include:

- A 2-day workshop held in April on community based monitoring, bringing over 100 practitioners, funders and interested resource managers together across the state. Over 50 of the participants received some kind of travel stipend through COSEE Alaska, and a handbook of best practices is forthcoming.
- STAMP project final stakeholder workshop in April. The Arctic Portal, which the project helped develop, will live within the AOOS' Ocean Data Explorer. Last year Darcy Dugan, Ellen Tyler and Molly gave around 40 presentations on the portal.
- A workshop on Ecological Forecasting, convening both Alaskans and some NOAA employees in DC working to develop a National Roadmap. This was held in Anchorage in September. See aoos.org/workshops-and-reports for more.
- A workshop in Unalaska for the Aleutian and Bering Climate Vulnerability Assessment (more info in "observing roundtable").
- The first stakeholder workshop held in Nome in October (more info in 5-year grant planning section).

The EVOS GulfWatch Alaska program will hold their Principal Investigator meeting in Anchorage in November. This group works closely with the North Pacific Research Board's Gulf of Alaska Integrated Ecosystem Research Program, has received additional funding from BOEM and is working with AOOS on a Gulf of Alaska ecosystem work session to be held in November.

Molly has been involved with the Northwest Arctic Borough's (NWAB) new Science Program. The borough's priority is completing its subsistence mapping project. Molly advocated for two projects in this current year of funding: Seth Danielson (University of Alaska Fairbanks) to deploy drifters in Kotzebue Sound and an AOOS/Axiom project scoping the development of an iPhone app. This year funding was determined through an internal process, but next year they are hoping to conduct a formal RFP. The group is still soliciting a Science Director position based in Kotzebue.

Since the March Board Meeting, board members Mike Castellini and Jim Kendall met with Molly to brainstorm about possible new board members representing tribal interests. They identified the Indigenous People's Council for Marine Mammals as a good organization to have on the AOOS Board. Molly has spoken with their director Mike Miller (who also serves on the North Pacific Research Board) and he is supportive. Molly will address their board meeting in December. We are still looking for a Local Traditional Knowledge (LTK) expert to join the AOOS Data Management Advisory Committee.

Molly has also discussed with Board Member Mike Castellini how best to follow up on the discussions begun in March with the University of Alaska. The recommendation is to reach out to all three major campuses separately: Fairbanks, Anchorage and Juneau, to build relations. We have engaged with the new UAA Department of Homeland Security (DHS) Center Of Excellence (COE) and see potential to partner on some of their data management and communications issues, possibly even building a satellite AOOs data shop on the UAA campus. Molly will also pursue discussions with UAS.

The “Out of the world” supergroup, tasked with looking at additional opportunities to grow and sustain AOOs, has yet to meet.

AOOs continues to regularly share notes and resources with the Alaska Department of Fish and Game and the Arctic ERMA (Emergency Response Management Application) team to leverage efforts.

Recently funded proposals include: two IOOS marine sensor technology program projects (freeze-up detection and ocean acidification); two as partners to NPRB’s long-term monitoring program (Seward Line & Chukchi sentinel mooring); Kenai Peninsula Fish Habitat (CIRT tool enhancements); and participation by the AOOs data team in the Arctic Marine Biodiversity Network, MARES, and Arctic Eis

Molly’s presentation lists several recent observing system highlights and accomplishments. Her ppt is available on the AOOs website page: <http://www.aos.org/aos-governance>.

On December 2-3 AOOs will co-host a workshop to bring concerned and/or interested individuals together to hear the latest Ocean Acidification research results, policy implications, community perspectives, and potential impacts along Alaska’s coast and oceans. More information can be found at: <http://www.aos.org/ocean-acidification>. It is hoped that this workshop will launch statewide action, possibly including a legislative initiative now under development.

Update on national IOOS activities – Josie Quintrell

Josie is executive director of the national IOOS Association and joined the Board in person for a special presentation about the IOOS Association and the 10 other Regional Associations throughout the Nation. Her ppt is available at <http://www.aos.org/aos-governance>.

The IOOS Association represents the regions and the national IOOS office to legislative, agency and interagency offices primarily in Washington, DC and also throughout the country. Her job is to show how issues – like Ocean Acidification - manifest similarly and differently across geographies. She partners with many groups including environmental and industry groups. She also works with the IOOS

Federal Advisory Committee and on the reauthorization of the ICOOS (Integrated Coastal Ocean Observing System) Act, the federal legislation that established the program. That bill expired last year and Don Young introduced the reauthorization in the House of Representatives. Unfortunately, while the IOOS Association would like to increase the base by \$5 Million, the legislation put forward by Young would cap the program at the 5-year average appropriation.

At the directors retreat in Boulder, the conversation focused on similarities and differences across the RAs, especially in organizational structure and efforts to achieve more funding and funding stability. While sustained funding of the type required for observing systems is the role of government, non-profit foundations have a role supporting and testing new technologies and methods. One idea for securing long-term funding outside of government is to accept environmental offsets for development, such as port development. Over the next year, most RAs are pursuing certification by the national office. The Pacific Islands regional association is submitting a draft certification package. Most of the regions will be looking to that effort before submitting their own.

Highlights from the regions:

- CaRA (Caribbean) had no assets to begin with, and now have several high frequency radars, buoys and forecasts.
- CeNCOOS (Central and Northern California) has a new data system led by Axiom and a transition in leadership. They are also developing some HAB forecasts.
- GCOOS (Gulf of Mexico) has been heavily involved in the Restore Act. They are working on their build out plan now, and they are also transitioning their leadership.
- MARACOOS (Mid-Atlantic) focuses on HFR and surface currents tracking the impact of hurricanes, and was recently involved in a Gliderpalooza to demonstrate how “if there’s a storm, we can respond quickly.”
- NANOOS (Pacific Northwest) continues to enjoy returns/support from the \$10K initial IOOS investment to figure out what was causing the oyster die off. The resulting ocean acidification program has greatly benefitted shellfish growers. They are also doing significant work on HAB monitoring.
- NERACOOS (Northeast Atlantic) got money from EPA for new nutrient sensor buoy.
- PacIOOS (Pacific Islands) is also having a transition in leadership. They have lots of developments recently with animal tracking and wave observations for surfers.
- SCCOOS (Southern California) has developed an inshore prediction of El Niño.
- SECOORA (Southeast) has partnered with the Southeast Governors’ Alliance on a data portal. They have done a great job of capturing the ways in which we/IOOS make a difference and who is using their services.
- GLOS (Great Lakes) is also experiencing a transition in leadership.

- AOS (Alaska) has 4 regions including the US-Arctic and she sometimes demonstrates the AOS Ocean Data Explorer

10th Anniversary & Outreach Update - Darcy Dugan

Website traffic since last October has included: nearly 20,000 users, 41,500 sessions (2.5 page views per session) and 25 submissions of feedback on the data tools. We have also been active on Facebook, posting three or more times a week. This has been a shared staff responsibility.

The 10th anniversary homepage corner has been updated weekly and we received 32 entries to our short film contest. Come to the AOS 10th Anniversary event November 19 at the Anchorage Museum to see the winning films. Winners are listed in Darcy's ppt posted at <http://www.aos.org/aos-governance>.

Business issues – Molly McCammon

- 1) AOS Board member: tribal - Molly spoke with Mike Miller about his organization – the Indigenous People's Council on Marine Mammals - joining the AOS Board as a representative of tribal interests. Mike has a resolution drafted to his board for their next meeting in early December. Molly will be giving a presentation on AOS at that meeting. If IPCOMM agrees, the Executive Committee could approve their membership.
- 2) AOS DMAC Committee members - The Board suggested that AOS solicit participation from one of the other RA data managers.
3. AOS Officer elections - The Nominating Committee (consisting of Katrina Hoffman, Doug Demaster and Tara Riemer) met and developed a recommended slate of candidates. Tara shared that the committee wanted to ensure that the Executive Committee represented the makeup of the board in terms of federal agencies, state agencies, research entities, and private sector/non-profits. The Committee recommended that both Ed Page and Ed Fogels continue to serve in their current capacity for an additional 2 years and Cheryl Rosa and Jim Kendall join as Secretary and Treasurer, respectively. The Board approved the slate of candidates (motion by Denby Lloyd, second by Tara Riemer).

Mike Castellini shared that after 26 years at University of Alaska Fairbanks School of Fisheries and Ocean Sciences (SFOS), he will be leaving his position as dean to serve in a wider University level position. He will be working with the Provost's office on graduate school programs, with one of the Vice Chancellors on enhancing the University's Arctic presence and with Marketing and Communications on enhancing the public presence of science and research. This move will take place on January 1, 2015 and he asked if this move will impact his role on the AOS Board. Since his appointment on the Board is as a representative of the University of Alaska, it is likely that he will stay. Molly will contact the

UA president and UAF chancellor to solicit their advice on the university representative to the board.

4) Acceptance of new grant awards – AOS policy permits staff to submit proposals without board approval. However, the board must vote to accept funding if a proposal is successful. Three funding grants were approved by the Board:

- \$70k from BOEM to NOAA AFSC to AOS for Arctic integrated ecosystem (motion by Amy Holman, second by Jim Kendall);
- \$24,750 from Kenai Peninsula Fish Habitat Partnership for CIRT tool enhancements (motion by Castellini, second by Cheryl Rosa);
- and
- \$10k from National Weather Service to AOS for ADNR to develop a color-indexed elevation maps for coastal communities (motion by Larry Hartig, second by Denby Lloyd).

5) Job description for new position - The Board reviewed the draft job description for a new deputy director (or chief of operations) position and made several suggested changes. The new position was approved in March and funded in this year's work plan. A revised position description will be circulated to the board and reviewed by the Alaska SeaLife Center's personnel director.

AOS data management contract – The Board met in Executive Session to discuss issues relating to the current data management services contract with Axiom Consulting and Design (five year grant which expires August 31, 2015) since it was a confidential financial matter. Following the executive session, the AOS Board met in public session. The board approved a motion to extend the current data management contract with Axiom for 3 additional years (from September 1, 2015 until Aug 31, 2018) subject to the same parameters as the original language, which included annual review and approval by the board (motion by Denby Lloyd, second by Mike Castellini). Although not part of the official motion, the board's intent is that the contract be re-competed after three years, knowing that the current board cannot mandate future board action. Board discussion also reflected that the renewal was an expression of positive support for Axiom. A three-year extension would allow for a competitive process to be held at a different time than the process for AOS' competitive re-submittal to NOAA for its base five-year funding grant, thus staggering internal staff responsibilities.

Planning for NOAA 2016-2020 grant submission – Molly McCammon

AOS' core NOAA funding ends May 31, 2016. A Federal Funding Opportunity for an additional five-year award will be released in January 2015, with proposals likely due in June. In preparation for the last 5-year grant, AOS held three stakeholder workshops and developed a 5-year proposal requesting \$20 million for observing activities over that period. While the plan was written for more than AOS has

received over that period, it has benefited the organization to have approval for the larger dollar amount, allowing us to accept additional Federal dollars up to that planned amount and to seek additional funding sources for those needs.

Molly outlined an approach leading up to this next proposal submission that will

- look at the past planning workshops to identify what is currently being done to meet identified needs and how needs have changed;
- update the cost/benefit qualitative analysis (developed by ISER) for individual observing activities;
- look at existing state and national priority plans for input;
- solicit public input through “expressions of interest” (similar to CenCOOS) and an on-line survey (similar to SECOORA); and
- hold several stakeholder workshops as needed. The first of these was held on October 6 in Nome as part of the Institute of the North’s Week of the Arctic and focused on Marine Navigation issues.

Molly shared that the original proposal had a statewide focus and included a large modeling component. Due to reduced funding, AOS has focused on observations and data management for the Arctic and for Southcentral Gulf of Alaska.

Discussion of AOS certification

Molly provided new information about the ability of AOS to be “certified” by the national IOOS program. Certification is an opportunity provided by the IOOS Act and recent regulations. One of its primary benefits is that it allows regional association employees to be treated as federal employees for insurance tort liability. Being certified allows the RA to demonstrate that it meets high standards for good governance and organization. The most challenging requirement for certification is demonstrating that all real-time data being served to the public on the regional data portal is QA/QC’d. There are exemptions for federal data and instruments and models and forecasts. Project level data is still a question. The Pacific Islands RA recently submitted a draft certification application as a trial test of the new rules.

Molly and Josie were asked to describe the advantages of being certified. Liability could eventually be tied to funding (although it won’t for now) and a regional association has more credibility if it is officially certified. It could also be helpful for the staff transition that will occur in the next 2-3 years. Amy shared that in the observations world, QA/QC is an essential requirement from the National Weather Service forecast perspective. She felt that it would be good for AOS to position itself now as the certified RA while we’re a relatively simple organization and this will benefit us organizationally as we get more complex.

Molly distributed a table she developed identifying the requirements and the documentation needed to meet them. The Board asked if development of the application package would be done by existing staff or contracted out. Molly answered that it depends on filling the new position.

Molly also mentioned that right now our governance is a loose structure (a Memorandum of Agreement signed by members) because we want federal participation. New language in the ICOOS Act reauthorization would clarify federal participation. If that passes, AOS may want to consider incorporating as a 501c3 non-profit.

The Board approved a motion directing the AOS Executive Director to prepare and submit an application for certification within 1.5 years and no later than March 2016 (motion by Denby Lloyd, second by Amy Holman). It was noted that it behooves the Board to take advantage of the historical knowledge of the current ED and ensure the certification application is completed before any transition in staff leadership occurs.

Ocean Observing Roundtable - Status reports from board members and staff.

Ellen Tyler shared a brief update on an Aleutian and Bering Climate Vulnerability Assessment funded with \$50k each from USFWS and USGS (AK CSC). The project's kick-off was last year at the Alaska Marine Science Symposium, although the project actually started around October 2014 with data ingestion and building of a network of 30 volunteers to participate in the project. The project has 4 objectives:

- 1) Integrate projections from two climate downscaling approaches and visualize them through the AOS Ocean Data Explorer;
- 2) Assess the vulnerabilities of key resources and ecosystem services in the Aleutian Islands and Bering Sea region via 5 teams (fish, birds, humans, vegetation, marine mammals);
- 3) Engage managers and stakeholders; and
- 4) help AOS, AK CSC and ABSI LCC prioritize future research and information syntheses.

Four of the 5 groups have produced written chapters, which are now going out for peer review. The Seabird group got an additional \$70K from the IOOS office to do additional statistical analyses. Across the 5 groups a synthesis table of impacts, priority research and potential adaptations is organized by 6 physical processes (warming ocean temperature, sea ice extent and seasonality, cold pool extent and seasonality, ocean acidification, shifting wind and storms, and freshwater discharge). This table is the basis for community input and engagement and an upcoming "Capstone Workshop" Dec 10-11, which will feature a Structured Decision Making process facilitated by Tuula Hollman to prioritize research needs and recommendations. Three slides are posted at: <http://www.aos.org/aos-governance>.

Elizabeth Bluemink, on behalf of Ed Fogels, shared that the State is establishing a Geospatial Data Council to leverage state funding to further advance geospatial mapping initiatives. Chris Hamilton, ADNR representative on the AOS DMAC, has suggested that AOS participate in this initiative.

Tara Riemer shared that the Alaska SeaLife Center's Ocean Leadership Awards are now open for nominations with a November 8 deadline. The Ocean Research award is co-funded by UAF and AOOS. The winner is announced at the AMSS and is provided the opportunity to deliver a keynote address there.

Ed Page shared that the Marine Exchange of AK partnered with the Coast Guard to test transmission of weather information via the ATON stations in Barrow and Unalaska to the Coast Guard's Healy.

Amy Holman shared that NOAA is intending to have 4 ships in the Arctic next summer. They are also working on developing observing priorities for weather forecasting.

Denby Lloyd shared that NPRB just released their annual RFP and they are working on their Arctic Program RFP.

Follow-up Items:

- Circulate to the Board the summary of the needs and progress on maritime navigation and safety compiled for the Nome stakeholder meeting.
- Revise the draft Deputy Director position description and circulate again to the Board.
- If the Indigenous People's Council on Marine Mammals requests membership in AOOS, seek approval from the AOOS Executive Committee.
- Solicit two additional members for the AOOS DMAC: one of the other RA data managers and a Local Traditional Knowledge (LTK) expert.
- Extend the data management services contract with Axiom for three additional years, until August 31, 2018.
- Prepare an AOOS application for IOOS Certification within 1.5 years, no later than March 2016.
- Initiate communication with the three major University of Alaska campuses (Fairbanks, Anchorage and Southeast) to formalize relationships.
- Contact the University of Alaska president and University of Alaska Fairbanks chancellor to request clarification on university representation on AOOS Board.
- Convene "Out of the world" supergroup as directed during March meeting.