**AOOS Cook Inlet Working Group Teleconference, Friday May 7th**

**Participants:** Guarav Singhal, Carl Schoch, David Oliver, Dave Musgrave, Steve Okkonen, Kris Holderied, Yi Chao, Megan Murphy, Peter Olsson, Carter Ohlman, Scott Pegau, Deanne Hargrove, Tal Ezer, Molly McCammon, Darcy Dugan

*This teleconference focused on updates from the three modeling working groups, as well as initial discussion of developing a science framework for Cook Inlet. Summary notes prepared by Darcy Dugan.*

**Meteorological Working Group** (update from Peter Olsson):

Peter Olsson (Alaska Experimental Forecast Facility, UAA) and Jim Nelson (National Weather Service) recently met to discuss how to integrate or collaborate on their two modeling systems. Both are running WRF models but the two models are considerably different – Peter’s is the research version and Jim’s is the operational version. The NWS model is 2.5 times faster, runs on a different coordinate system, and has fewer bells and whistles than the AEFF model. They have figured out a way to get the NWS model to run on Peter’s AEFF system and would ultimately like for Peter to be able to ship data to the NWS, but this requires the files to be reformatted. Peter and Jim believe they can work around this, and are developing a way to transfer data back and forth quickly. The NWS does have model verification tools.

One topic of discussion was how to fit collaborative research into the NWS’s strict forecasting mandate. Yi Chao noted that this exact topic has been an ongoing national discussion – who is doing research and who is focusing on operational modeling. Molly suggested organizing a meeting with Peter, Frank Kelly, Jim Nelson, and Carven Scott to discuss how to move this collaboration forward, including additional NWS collaboration on research with AEFF.

**Update from Wave Working Group**

Gaurav Singhal (Texas A&M) reported on the work being done by he and Vijay Panchang with wave hindcasts using available data from previous years. Once the hindcasts have been completed, they will move to forecasting mode, similar to PWS. One of their goals right now is to add water levels and surface currents into the wave models, and to try to improve the resolution of the forecast with WRF winds when they’re available. There is good 2005 data for some components, but the buoy data for that year is not good. There was a question about whether the model could identify riptide action, and Carl Schoch observed that wave models typically are not designed to resolve the spatial scale of rips.

Carl also emphasized that we are lacking realtime wave data for Cook Inlet, as NDBC has had real trouble keeping buoys alive. AOOS has funding for a WaveRider buoy and there is currently discussion about where to place it. NDBC would like it to be at the Kennedy Entrance to replace a non-functioning NDBC buoy, so that there is a long time series and a charted location for ship traffic. On the other hand, data is also needed in the upper inlet. Carl is hoping Mike Burdette at NDBC will be willing to move one of the smaller NDBC buoys northward in the ice-free season and replace the one in Kennedy Entrance with the new WaveRider from AOOS which is better equipped for deep water.

Carter Ohlmann mentioned the usefulness of plotting the range of winds vs. range of currents to provide an idea of the range of uncertainty. There was wide agreement on the value of this – as an educational tool and also from a research standpoint – to show where existing models perform adequately or poorly. It’s also an example that theoretical work can still take place when wave data is lacking. Guarav mentioned that TAMU has already been producing these types of plots, looking at how the tidal flux affects waves in hypothetical situations. It was agreed that Carter would provide Guarav with a written description of the type of plot he’s looking for, and Carl will come up with several locations and wind directions where it would be most useful.

**Circulation Model Working Group (update from Yi Chao)**

The Circulation group has more members than the other groups and is still getting organized. There are several different models and no dedicated operational system. Before the next teleconference, they will coordinate the modeling PIs and try to come up with metrics to compare models using historical data.

Kris Holderied reported that the Kachemak Bay tidal energy project was funded in full by the state legislature, and the appropriation is now awaiting the signature of the governor. This is positive. The project would fund a full current meter ADCP, and round out funding for Rich Patchen of NOAA to complete a full Cook Inlet circulation model.

**Next Steps**

There was brief discussion about the broader vision for this group, and the need for a science plan or framework to guide next steps in Cook Inlet and the efforts of the working group. It was agreed that it would be very valuable to have a document explaining what it is we are doing, what existing models and data we have, and the goals for the group. This will help leverage funding when the opportunities arise, and could ultimately lead to a more detailed science plan. Completion of this initial “framework” would optimally be late summer so it can go into the upcoming AOOS grant proposal. Carl Schoch agreed to take on the initial development of this framework.

**Next Teleconference**

Due to time constraints, the ancillary data set collecting groups did not get a chance to report to the larger group. This will happen at the next teleconference which will be scheduled for early June. Please indicate your availability for this meeting on the Doodle poll if you haven’t already done so: <http://www.doodle.com/3esx6k6frgqcqanq>