Maine Ocean and Coastal Acidification Partnership

March 14, 2016 Meeting Notes

The meeting began showing the newly developed Youtube video on ocean and coastal acidification in the Gulf of Maine:
https://www.youtube.com/watch?v=ZimEBFw1Q7c&feature=youtu.be

Updates from meeting participants

Mick Devin legislative update:
Unable to get support for OA Council bill; stakeholders took initiative. Unique opportunity here that involves stakeholders, government (DEP, DMR and Maine Coastal Program), fishermen and researchers. Status of monitoring bond bill: No idea what is going on in Gulf. Sponsored by Wayne Parry; written by Mick Devin. Likely to be bond package this session; little bit of room for other bonds. Need to raise awareness on this issue. Think our bond bill will be stronger if can tie into culvert bond. Lydia thinks he bill should stand on its own. Culverts could tie into transportation. Trying to get letter of support from MRC to Appropriations Committee, needs to be unanimous to come from committee chairs o/b/o the committee. Otherwise will get individual members to sign. Consideration of whether to support letter will occur this Wednesday before MRC. Then goes to Appropriations at undetermined date for review. Science subgroup came up with 1.3 million in equipment. Bond at $3 million. Leyden asks who will host equipment and do groups fundraise to do the research. Devin thinks can get federal dollars. Who will give oversight—MOCA? DMR? Can you use the remaining 1.7 to address problem areas identified during first data set? Should we include infrastructure to mount, maintenance and parts? How long and how store? Our science subcommittee needs to do more work.
ME Constitution: can use for capital but not for current expenditures.

Send brief email to Marine Resources Committee in support of bond bill.

Hannah Webber/Schoodic Institute: SeapHOx was installed in late April or May in 10 meters of water off Schoodic Island.

Anne Farrell, Jane Disney/MT Desert Island: Eel grass restoration. Repeating carbon assessment – investigating role eelgrass plays in carbon sequestration.

Ivy Frignoca
Friends of Casco Bay-- has kicked off our 24th year of water quality monitoring, through both volunteer and staff programs. The volunteer program monitors surface water at thirty seven sites around the bay on ten Saturdays between April and October. Volunteers sample at 7:00 am and again at 3:00 pm on the same day, providing a synoptic look at conditions as well as how parameters change on a diurnal basis. Staff collect samples and take measurements by boat throughout the water column at three sites monthly. Both water quality programs collect data on temperature, salinity, dissolved oxygen, water clarity and pH. In addition, the staff program also collects chlorophyll fluorescence measurements, and samples for total nitrogen and dissolved inorganic nutrient samples.

This year Friends of Casco Bay will add a new staff water quality monitoring program and a new volunteer effort. Staff will establish a monitoring station accessible by land that will collect temperature, salinity, dissolved oxygen, chlorophyll fluorescence, pH and PC02 measurements every hour, and

samples for TN and DIN biweekly. There are plans to expand this continuous data collection program to as many as three stations in the near future.

Our new volunteer effort is a "nitrogen mapping" initiative in July. Over 100 volunteers will collect water samples at the same time at sites throughout Portland Harbor. The samples will be analyzed for Total Nitrogen, and this data will allow for determination of "hot spots" for nitrogen pollution in the harbor, as well as providing additional input for DEP's nitrogen models.

Chris Peterson/Frenchman's Bay: using similar protocol to FOCB.

Susie Arnold and Nichole Price/Chebeague Island: CO2 and SeapHOx sensors – rise of aragonite detected in kelp farm. Need to QC data but exciting preliminary results between Chebeague and Little Chebeague.

Jesica Waller/UMaine graduate student at Darling Marine Center: looking at today vs 2100- comparing results on larval lobster. Higher temperatures have more of an effect. But high PCO2 and higher temp seems to lead to higher swim rates/potential respiration issues.

Mick Kuhns/DEP: working very slowly on nitrogen criteria due to resources; getting a new person in the marine unit.

Damian Brady/UMaine /SEANET: monitoring in Damariscotta and Saco River. Hoping to conduct monitoring in Casco Bay next year.

Joe Salisbury/UNH: Fishermen's Forum. UNH led major cruise last summer and analyzing data. Preliminary data shows how different Casco Bay is from other waters monitored. Monitoring off Appledore Island (not seeing signal to degree seeing in open ocean; not sure why). Monitoring shellfish hatcheries in VA and Bill Mook's hatchery in the Damariscotta. Monitoring station at SMCC pier; going back in April.

(Deep cold corals: Reed Waller from Darling looked at. Greg Turner? Lobstermen have noted two locations and tree-like appearance.)

Rep. Lydia Blume: Not enough studies being done on lobsters. Regional Sea Grant went out; hoping a lobster study may come out of that proposal.

David E Myslabodski/Rockland, ME Sea Vegetable Expert: Has plan for natural gas electrical power plant. Questions impact of increased carbon emissions.

Larry Mayer, University of Maine
Besides participation in the OA Commission, I help the Maine Coastal Observing Alliance (MCOA, not MOCAP) to interpret their citizen monitoring data. Over two years (2014-15), their findings show riverine sources of acidity in estuaries having larger river inputs. They show an even stronger source of low-pH water from the deep Gulf of Maine. These deepwater intrusions need deep channels at the estuary mouths to enter the systems, so estuary shape matters. Last, this source was much stronger in 2014 than in 2015, so that estuarine acidification may vary among years. Maine estuaries may thus similar to west coast estuaries.
See - https://dmc.umaine.edu/research/data-sets/

Aubrey Strauss/ Stormwater Program Manager and District Engineer at Cumberland County Soil & Water Conservation District: would like to pencil in an OA session at their annual meeting in September.

Ron Huber/Friends of Penobscot Bay: former acid plant pH 2. Putting in crushed lime and boulders to try to buffer OA impacts.

Kathleen Leyden/ME Coastal Program: didn't get NOAA grant, some money to Island Institute for work off Chebeague Island. CBEP has OA as part of their plan. Received a grant to use plants instead of riprap; living shoreline treatments with mitigation of acidification.

Michelle Lavigne/Bowdoin: Monitoring Platform at coastal site in Harpswell Sound. Upgrade of culturing in marine lab; provides a more sophisticated way of testing.

Bill Coppersmith/Lobstermen/MLU: seen changes over years. Pesticides, dredging/CAD cell, OA. Can be eyes and ears. Coppersmithbill@gmail.com.

Next Meeting topics:

Jon Hare see if he will present. Other speakers? What topics?

Need partnership.

Other states? New Brunswick? Talk from NECAN? Julie Ekstrom- OA and Coastal Communities Across US Lisa Suatoni? Sarah Cooley?

Track implementation—how do this? Roundtable updates—checklist; go through six goals. Should we work on an implementation plan. NECAN has a technical document on implementation. Also Aaron Strong wrote paper on implementation of OA solutions. Members and grad student presentations?

CBEP focus group on OA/nutrients.

Proposal for subcommittee on land based impacts. Coastal acidification subgroup?

Esperanza will post our materials on ME Sea Grant web page with MOCA purpose where members and the public can get information. NECAN has completely revamped their website.