**Coastal Workshop Agenda**

**Day 2**

***Original Objective*:**

Develop a conceptual model of coastal processes that ties together those near-shore and appropriate marine processes and stressors that form and may affect coastal landforms and human and biological use of this region and their resources. The intent is to develop a model(s) with utility in
- *identifying characteristics of locations* and *weather events* (with particular emphasis on coastal storms) that can have a major impact on coastal stability and near-shore function,
- delineate the gaps in current research and monitoring efforts necessary to better inform management decision making regarding coastal resources.

***Proposed Revised Objectives for Thursday*:**

The fundamental stakeholder question that we want this model to address is to understand *how the coast of western Alaska will (may) change over the next 25 years, particularly as it relates to communities and to key habitats (e.g. estuaries and river deltas, eelgrass areas etc…).* To do this, we will look at the most immediate climate/system drivers of change: flooding/inundation, erosion, and changes in the nearshore marine conditions.

1. Develop a conceptual model that summarizes current understanding of the factors controlling:
*coastal flooding and inundation*,
*coastal erosion*, and *nearshore marine conditions* (chemistry, temperature, coastal currents, etc.)
with respect to the types of Stakeholder Information Needs and Decisions summarized yesterday (i.e., questions about now-casting at particular community locations, questions about back- or fore-casting at regional scale for planning, etc.).
2. Capture the state of knowledge regarding the components and linkages in the model using the ‘coding’ scheme provided. Identify gaps and information needs.
3. Considering the conceptual model, identify the highest priority science activities for improving our ability to make the sorts of predictions required to answer the Stakeholder Information Needs regarding these processes and how their characteristics might change under the expected changes in western Alaska’s climate (earlier and longer annual period of no sea ice, increases in SST, ocean acidification, etc.).
E.g., what should be the priorities among
(i) acquiring better near-shore bathymetry (priority areas? Minimum vertical resolution?),
(ii) developing coastal DEMs (priority areas? Minimum vertical resolution?), (iii) acquiring tide information (priority areas? Minimum temporal duration?),
(iv) improving spatial resolution of available surge models,
(v) expanding sea state monitoring buoy network,
(vi) analyzing historic or hindcast data to assess changes in key drivers (e.g., coastal storm frequency, magnitude, seasonality, track, etc.),
(vii) etc.

**Proposed Sequence of Activities:**

Establish Breakout Group Composition (self select group, recorder w/in each group)

 Marine Ice Component– Amy Holman (NOAA)

Marine Open Water Component– Orson Smith (UAA)

Terrestrial Component – Scott Rupp (UAF)

Breakout Session I:
Each group develops model capturing relationship of their Component to *coastal flooding/inundation, coastal erosion,* and *nearshore condition.*(i.e., revised objectives)

Breakouts Report back
(make triplicates of each components’ model)

Establish new Breakout Group Composition

Coastal flooding / inundation
Coastal Erosion
Nearshore Condition

Breakout Session II:
Create ‘unified’ model integrating across the three components (Marine Ice, Marine Open Water, Terrestrial)
[produce ‘Coastal flooding/Inundation’ model, ‘Coastal Erosion’ model, ‘Nearshore Condition’ model]
Prioritize science information gaps for group’s model

Session III: Report back priority information gaps
 Integrate/Synthesize to single list of priorities

**Other tasks** Individuals should also record:

Additions to Table 1 of the WALCC Stakeholder Needs summary (Decision Types). Additions to AOOS inventory of coastal studies (provide contact information & general location on sticky on map on wall).

8 – 8:30 Coffee, pastries

8:30 – 3:00 Conceptual model development (Catherine Coon, BOEM)

 Identify model components and linkages (Rosa Meehan, AOOS)

Establish Breakout Group Composition (self select group, recorder w/in each group)

 Marine Ice Component– Amy Holman (NOAA)

Marine Open Water Component– Orson Smith (UAA)

Terrestrial Component – Scott Rupp (UAF)

Breakout Session I:
Each group develops model capturing relationship of their Component to *coastal flooding/inundation, coastal erosion,* and *nearshore condition.*(i.e., revised objectives)

Breakouts Report back
(make triplicates of each components’ model)

Establish new Breakout Group Composition

Coastal flooding / inundation
Coastal Erosion
Nearshore Condition

Breakout Session II:
Create ‘unified’ model integrating across the three components (Marine Ice, Marine Open Water, Terrestrial)
[produce ‘Coastal flooding/Inundation’ model, ‘Coastal Erosion’ model, ‘Nearshore Condition’ model]
Prioritize science information gaps for group’s model

Session III: Report back priority information gaps
 Integrate/Synthesize to single list of priorities

12 – 1 Lunch provided

3 – 3:30 Break

3:30 – 4:30 Closing Summary

 Priorities for AOOS Build-out Plan (Molly McCammon, AOOS)

 Priorities for WALCC (Joel Reynolds, WALCC)

 ID potential partnerships to address needs (to extent possible)