

DRAFT

**NC Coastal Resources Commission Science Panel
August 28, 2014
New Bern/Craven County Public Library
New Bern, NC
Meeting Summary**

Follow-Up Action Items

Action	Responsible Party	Due Date
Prepare and distribute writing & review schedule	Bill Birkemeier	
Invite Larry Atkinson to speak with panel	Bill Birkemeier	
Invite Gary Thompson to speak with panel	Tancred Miller	
Invite Chris Zervas/NOAA to speak with panel	Bill Birkemeier	

Attendance

Bill Birkemeier (Vice Chair)	Spencer Rogers
Steve Benton	Greg Rudolph
Tom Jarrett	Beth Sciaudone
Stan Riggs	Rob Young

Absent: Bill Cleary, Margery Overton, Charles Peterson

8 of 11 duly appointed members present.

Other attendees: Braxton Davis (DCM); Frank Jennings (DCM); Mike Lopazanski (DCM); Tancred Miller (DCM); Ken Richardson (DCM); Michele Walker (DCM); Dave Burton (NC-20); James Early; David Duane; Daniel Tuman (N. Topsail Beach); Tyler Newman (BASE); Mike Shutak (Tideland News).

Call to order

Bill Birkemeier called the meeting to order at 11 a.m. Birkemeier announced that the meeting is being voice recorded by DCM staff and reminded members and guests to sign in. Birkemeier said that the panel has elected him vice chair and he would be chairing the meeting in Margery Overton's absence.

Minutes and announcements

The panel discussed the level of detail that is appropriate for meeting minutes; some members prefer a meeting summary while others like more detail. The panel suggested using a summary format and keeping digital files with greater detail that can be accessed as needed. The panel also suggested putting the follow-up action items at the top of the meeting summary. The panel approved the July meeting minutes without amendment.

Birkemeier said that the goals of this meeting are to 1. Define the methodology; 2. Draft an outline; 3. Get writing commitments; and 4. Create a schedule.

Study charge & writing plan

The panel reviewed the study charge from the CRC, and Session Law 2012-202, focusing on their responsibilities. The panel clarified that they are not conducting any modeling, but just reporting on work that already exists, and they should also clarify in the report that they did not in 2010 and are not now relying solely on tide gauge data.

The panel began to draft a writing and review schedule, including the finalization of drafts and desired reviews. The first draft would need to be completed by October 24th and reviewed by November 7th, and the second draft would need to be completed by November 21st and reviewed by December 12th. The third draft needs to be completed and submitted to the CRC by December 31st. Birkemeier will compile a clean schedule based on the discussions.

The panel reviewed the meeting dates suggested by their Doodle poll for the remainder of the year. The dates are:

- September 24th
- October 20th
- November 19th
- December 15th

Report outline

The panel began to develop a working outline for the draft report. There should be information showing how the global eustatic rate is estimated, and a section that combines the global eustatic rate with state-specific data to produce the state projections. The panel wants to include information about changes in meso-scale oceanic circulation patterns. Even within a 30-year period there can be major excursions in the circulation patterns, although they might be temporary. There is a need to point out again that sea-level change is not linear, there can be sudden, major changes. The panel's curves are meant to depict a long-term trend, not a year-by-year projection. Other states' projections can be included as a simple bar graph.

The panel wants Rick Luettich to be one of the reviewers. Luettich has done good work isolating dredging impacts in Beaufort Inlet, and is still working on doing that for the Cape Fear River/Wilmington Harbor Shipping Channel. Dr. Casey Dietrich at NCSU has a suggestion for identifying tidal range changes that is worth examining.

The panel discussed the need to identify and be transparent about what information and data is being used and why—what is the standard for what goes into the report? This needs to be up front in the report. One of the challenges with the 2010 report was that most of the writing was done by a few individuals and not all panel members felt comfortable talking about the report.

IPCC report discussion

Beth Sciaudone and Greg Rudolph led a discussion about the IPCC's SLR chapter. The panel looked at IPCC projections under a number of different scenarios, focusing on the timeframe that most closely matched the CRC's 30-year directive. The panel also looked at the Army Corps' project guidance for SLR, including their formulas. The Corps has been using this guidance for a few years and can determine project cost changes under different sea-level scenarios. The panel talked about presenting the USACE guidance and the National Climate Assessment as well-accepted methods.

The panel said that because of the IPCC process there would have to be a very compelling reason not to use the IPCC's report.

Regional delineation

Stan Riggs went through a PowerPoint presentation and talked about the different sources of sea-level change data available for the NC coast. Riggs showed the panel one way of dividing up the coast into sections that was different from the BIMP regions called for in H819. There was a suggestion about performing the NC analysis under the regions that Riggs presented, and then transferring the results to the corresponding BIMP regions.

Data sources for regional delineation

The panel looked at a presentation about NOAA's tide gauges and trend data, as well as some of the Continuously Operating Reference Station (CORS) locations along the coast. There was a lot of discussion about the individual NOAA tide gauge stations, including length of operation, periods of interruption, and dredging impacts. The panel discussed presenting a comparison of the Duck and Sewells Point tide gauges as a way to address some of the questions about the Duck gauge. The panel talked about how the NOAA gauges handle water levels from storms, and questioned whether NOAA's reported SL trends are consistent across gauges.

The panel wants land movement data for the different regions, but decided it is not necessary to attribute the land movement to GIA, tectonics, or other causes.

The panel decided to invite Larry Atkinson (ODU) and Gary Thompson (NC Geodetic Survey) to speak with the group.

Discussion & writing assignments

Panel members volunteered for lead and supporting writing responsibilities for the draft report. Rob Young announced that for personal reasons he is resigning from the panel after this meeting, but is willing to review the draft if the panel would like.

Public comments

David Duane is a professional geologist who worked in the 1970s on a sand inventory project off the NC coast, identifying potential sources of sand for beach nourishment. He has worked from the Gulf of Maine to Key West and found virtually no sand from Cape Lookout to Florida. His work corroborates what Stan Riggs said about sediment supply along the NC coast. If future SLR is slow, offshore sources will track with the shoreline as it recedes and be a source of sediment for future nourishment projects.

Dave Burton said that Stan Riggs' presentation was fascinating, but changes will be essentially linear over a 30-year timeframe. It might not be necessary to segregate the coast as Riggs proposed. Burton was a Working Group I expert reviewer for the IPCC's 5th Assessment Report, and the review process was pretty much a sham. There was no dialogue between lead authors and reviewers, and we were not allowed to see their responses. We did not know who the other reviewers were and were not allowed to see their comments. The authors rejected most of my comments, sometimes with contradictory reasoning. It is a mistake to rely too heavily on the IPCC, or equal weight should be given to the Nongovernmental International Panel on Climate Change (NIPCC). Similarly, the National Climate Assessment should be balanced by information from the U.S. Senate Committee on Environment & Public Works' Minority Report: Critical Thinking on Climate Change.