

MEETING MINUTES
CRC SCIENCE PANEL ON COASTAL HAZARDS
March 12, 2010

2728 Capital Blvd
Raleigh, NC
(notes compiled by Jeff Warren, DCM)

Panel Members in Attendance:

Steve Benton, DCM retired
Bill Berkemeier, USACE ERDC
Tom Jarrett, CP&E
Dave Mallinson, ECU
Margery Overton, NCSU (chair)
Tony Rodriguez, UNCCH IMS
Spencer Rogers, NC Sea Grant
Beth Sciaudone, NCSU adjunct / consultant

Panel Members not in Attendance:

Bill Cleary, UNCW
Pete Peterson, UNCCH IMS
Stan Riggs, ECU
Greg Williams, USACE
Rob Young, WCU

CRC members in attendance:

Joan Weld, CRC vice chair

DENR/DCM Staff in attendance:

Bonnie Bendell, DCM
Jim Gregson, DCM
Ken Richardson, DCM
Guy Stefanski, DCM
Steve Underwood, DCM
Michele Walker, DCM
Jeff Warren, DCM

Moffatt & Nichol Staff in attendance:

Johnny Martin
Jeff Sheldon
Paul Tschirky

MEETING SUMMARY

Margery Overton opened the meeting at 10:10 and started the discussion on the CRC terminal groin study report. The report is final at this point, so the Panel discussion today will be an opportunity to have some final discussions on the report and, pending the outcome of the discussions, input to the CRC before final adoption of the report and related recommendations on March 25th. Jarrett talked about his comments regarding the report's executive summary that he sent out earlier to the Panel. The summary needs to only address what is in the report's findings. For example, the mention about sand flats. While that may be true (regarding sand flat formation), there is no objective data or numerical analysis provided in the report.

Birkemeier noted he thought Jarrett's comments were good and he agreed with Jarrett's statement about not having items documented in the report that are in the executive summary. There was some additional concern about the report regarding cost estimates (e.g., price per linear foot for sheet piling). Can these numbers be fixed? Overton commented that the report was final.

Rogers noted that there was a similar issue with the CHPP final report (i.e., not everything could be fixed but the document itself was adopted as a flawed report noting that issues could continue to be addressed). For a variety of reasons, why worry about the TG report at this point. Note there are some errors but focus, rather, on the final recommendations that may come from it. Rodriguez felt the report was written in a biased way. Specifically, it puts caveats on the negative impacts that can/do occur and no caveats on potential positive impacts. Specific to the executive summary, modifiers such as "minimal" and "significant" are confusing. There are also caveats that could be placed on positive results of TG construction. Either don't put any caveats or make caveats applicable to both negative and positive outcomes. The current format biases the report.

Birkemeier also addressed the caveats in that they are new additions to the report. The data don't necessarily allow for concrete statements because there are no supporting data. The final document is better than the first draft in a lot of ways but there were a lot of things not addressed as recommended by the Panel. Benton noted the report was final and there would be no more comments. Rodriguez wondered why the Panel was listed in an advisory capacity when they couldn't change the report. Overton clarified that the Panel did meet and had input. While this is not a peer-reviewed process in the academic sense, the Panel input has been considered. Overton thought that the report had to be "accepted" because it was final, but additional reactionary comments to the report could be given to the CRC. Overton didn't want the discussion to get caught up in what could be changed in the report but look at the overall use of the report and how it might affect final recommendations from the CRC.

Gregson commented that next week's TG steering committee meeting (CRC and CRAC) would start finalizing comments to be presented to the CRC on March 25th. Jarrett wondered if comments from the Panel could be presented to the steering committee. Gregson said yes and that comments would also be provided to the full CRC in two

weeks. Rogers noted the question facing the CRC was to decide if the General Assembly should allow the CRC to allow terminal groins (or should the GA allow terminal groins without CRC involvement). Benton wondered if this study was designed to produce a certain answer. He also felt the real issue that the Panel could make is what is really needed to answer the questions from the legislature (e.g., was this report adequate, are there other studies/reports that could be done to address these questions). Rodriguez understood the limitations of the study and how it could only use data that existed. Rodriguez wasn't sure that if more time was allowed that any additional data/recommendations could be provided (short of a data-intensive study focused on actual locations where groins might be considered in NC).

Jarrett noted that one thing the report brought out was there was no smoking gun – there was no clear issue. As a result of multiple actions associated with inlets (terminal groins, nourishment on adjacent beaches, dredging of inlets), there has been no catastrophic failure. You can twist the data how you want, but if you really look at some of the data (Oregon Inlet specifically), things are better than what they were prior to the TG. Overton agreed that Jarrett's "no smoking gun" comment pointed out that it made it even more difficult to address the situation in the study. Rogers thought that adverse impacts to the system would have turned up in the data studied for the report. However, there was no distinct signal of something bad. It's not absolute, though. Benton thought that the application of this report could be used to justify TGs and change the rules/laws (i.e., Benton feels the study was done by those who want TGs). There is an interest in building TGs in NC so that led to the eventual completion of this study/report. The study areas that were analyzed masked the effect of the TG because of the massive other processes happening at the inlets (dredging and beach fill). Overton wanted Benton to take that idea and turn it into a recommendation. Benton felt the report missed the intention to identify what is needed by not looking at the specific areas where these TGs may be considered in NC.

Overton noted that in doing this study, M&N had to look at places where TGs already existed. Overton thought that what Benton was talking about is what might be needed. Rogers wondered if that study was worth doing or was there enough information in the report to make conclusions. Benton felt that if data were needed to come up with an analysis, than go get the data. The study needs to be carefully planned and designed, data need to be collected, and specific inlets need to be addressed. Get the baseline data and then do the modeling to see how these processes would/could be affected by construction of a TG. Birkemeier thought that one thing the report did get across is that all of these processes to be considered at an inlet is a complex array of factors. This is clear in the executive summary.

Jarrett wanted to not dance around the issue and stated that Rich Inlet was one of the inlets that people were discussing (because F8 Island wants a TG at Rich). A lot of data exist there to get baseline and the question to be answered in the EIS, are the impacts of constructing a TG better or worse than continuing to pump sand on the end of the island. Rogers noted that nobody is going to spend the million dollars necessary to do such a detailed inlet-specific study if TGs are against the rules/laws. Benton thought his

recommendation goes well beyond the efforts of an EIS (which can focus just on existing data). Sciaudone and Jarrett didn't agree with Benton that the EIS process can be lax. Sciaudone said that we have all this information, and with the question before the legislature and CRC, the TG study shows there are no great successes and things might also not be perfect. Overton felt that the Oregon Inlet TG design should be considered as a success in that it was designed to stop inlet migration and save the bridge. Certainly there are other factors, but it behaved as designed. Sciaudone wasn't sure that any new study would philosophically answer the question of whether additional TGs were appropriate for NC. If this is an option being considered, though, maybe that's when you can take the study to the next level.

Birekemeier did note that a lot of effort was made to find the existing data around these five study sites, so future studies could easily use these data (because that's probably all that exists). If you had another year, the report might be a little nicer but there's not much more you can throw at the effort. A recommendation the Panel could make is that they might like some additional data on certain parameters. For example, the Oregon Inlet study has been ongoing for a long time so maybe there could be additional data gathered during future monitoring of the TG's effects. Overton did note that modification of the monitoring program has occurred as new data and analytical techniques have become available. Jarrett thought that one thing that could be look into using historical data (particularly aerial orthos) would be trying to look at habitat type identification and look at changes to those habitats through time.

Overton was asked if comments were winding down. Overton also asked Gregson if recommendations would exist prior to the TG meeting. Gregson noted that some initial scenarios for recommendations presented at the CRC meeting in February (the list of options). Rogers reviewed the suite of options discussed at that meeting (tighter restrictions, status quo, lifting the ban, etc.). Walker went to get a copy of those recommendations to assist the Panel's discussions.

Rogers said not to worry about the procedural details of recommendations. The bottom line was the overall options – leave things the way they are or allow changes to rules/law. Jarrett wondered if legislature allowed consideration of TGs would include pre-assumed permit conditions (post-project monitoring, mitigation, TG removal, etc.). Gregson said one thing that could be finalized was how the comments from the Panel would be transmitted to the steering committee and full CRC. Overton said written comments could be sent electronically to the committee (and she would also make it known which comments were individual Panel member comments versus collective Panel comments). Overton could then present the final Panel comments to the full CRC at the March 25th meeting.

Rodriguez noted that to make extraordinary change you need extraordinary evidence, and it is not there. Jarrett noted that these recommendations were specific to TGs and not other structures. Other Panel members were concerned allowing TGs was opening up the option for other structures down the road. Rogers thought that, based on his experience, TGs are a potential tool worth looking at (to be used in conjunction with other tools).

Rogers was not saying that every inlet needed one, but it would another tool to be considered by the CRC. The CRC had the authority to consider these structures for 22 years (before the hard structure ban became law) and nothing went through. There are other TGs that were permitted (Oregon Inlet, Ft. Macon), but they could still be constructed today under the present law/rules. Benton noted in late 1980s that Topsail Island brought forward proposals for a groin and it was denied by the CRC. Jarrett noted that structures like that could be considered in an inlet hazard area if it was part of a larger beach management project. The town was still denied these structures.

Overton wanted to get the discussion back on target. The CRC Possible Recommendations were on the screen:

1. Retain the Ban with Existing Exceptions (status quo)
2. Retain ban and get rid of exceptions
3. Retain the ban with existing and new exceptions (only dredged inlets?)
4. Restore the CRC's former authority and handle TGs with a variance procedure (e.g., standard variance criteria, special variance criteria)
5. Retain the ban but Legislature gives CRC authority to develop procedures for permitting TGs (no variance required, law changed to allow new permit procedure specific to TGs - applicant to come straight to DCM/CRC for TG permit)
6. Do more study

Birkemeier (referring to the CRC recommendations considered at the last meeting) wanted the exceptions explained (for allowing hard structures). Rogers noted that the exceptions in the law were as follows: one related to historical structures, one for federal navigation projects (Oregon Inlet and Masonboro Inlet), and one for bridges (specific for Bonner Bridge over Oregon Inlet). Gregson explained the scenarios 4 and 5 after Birkemeier asked for additional information. Benton asked if Panel understood the distinction between the CRC's rules addressing shoreline structures versus the language that changed in 2003 when the Basnight bill made the hard structures ban law. Benton offered a brief explanation. Benton noted that recommendation number 4 returned the CRC's authority (specific to TGs) that existed prior to the law.

Rogers felt that, if the CRC gets the authority to consider TGs, they should get the opportunity to have 3rd-party review and they need a monitoring and removal plan. Rogers also suggested that the Panel may not need to support individual recommendations but could offer some assistance on "if you recommend X, then Y should be put in place."

Benton mentioned the Outer Banks Erosion Task Force recommendations from 1984 that provided recommendations to the CRC on what should be considered for permitting issues. Benton thought this would be a good document to use as a go-by. Mallinson wanted to look at it, too. Rogers noted the first prohibition on shoreline hardening occurred in 1979 and only applied to new buildings thinking that if you can't get a seawall you might do a better job building the structure. That didn't work so in 1985 it was banned outright in the CRC rules. Sciaudone wondered if anybody thought that

more general study would help decisions to be formed (to narrow down the six options listed above). There appeared to be consensus that additional study, in general, would allow further illumination on the issue. However, some thought that site-specific studies would be helpful. Sciaudone had to leave but made one final comment in support of Rogers' viewpoint – there was no reason not to consider a TG on a site-specific basis if the information there warranted using a TG as an option for shoreline management. Rogers also got Sciaudone to support a third-party review to be required in any consideration of using a TG (a third-party expert paid for by applicant that reviews data, findings, recommendation). It has been used in FL in some cases to remove structures. It is not routine in NC, although it has been used at Mason Inlet (the inlet relocation). Benton wanted further definition of what a third party review would involve and who could/would do it as well sort of data could/would be required. Florida routinely uses the process (the complicated permits) where it is deemed necessary. Rodriguez said he could back Rogers' recommendation if a TG definition was clear. Rodriguez felt, and Jarrett agreed, that a better definition was used (i.e., remove the “end of a littoral cell” clause from earlier definitions – use only at inlets). Rodriguez felt that, if the Panel wasn't sure what a TG was, then the policy should stick with the status quo. Sciaudone thought that they were only allowing for the opportunity to study a site and consider the TG as an option. Rodriguez thought the current wholesale ban was great. Overton noted that options (existed prior to the 2003 ban) and structures were not permitted up and down the coast. Mallinson wondered who paid for TGs. Jarrett responded it depended on who the applicant was. Rogers noted the State paid for Oregon Inlet and Ft. Macon. Jarrett noted that Bald Head Island paid for their radial groin field with no public assistance.

Benton thought there might be an opportunity here to change requirements for consideration of TGs and similar projects where the management would be dynamic – require monitoring, actively analyze data, change project parameters if data indicate mitigation is necessary. Overton and Jarrett thought this was already being done following the EIS process. Currently, you have to look at current impacts and then analyze what would/could happen by proposed projects. Rogers wanted to know if there was a consensus on his recommendation. To those that have reservations giving the CRC the ability to consider TGs as an option, is there a chance to debate this or are the positions immovable. Overton noted sometimes there is a consensus, and that is reported, and sometimes there is not a consensus, and that is reported, too.

Rodriguez wondered what the benefits of changing the status quo. Rogers noted that it makes beach fill a viable option at inlets. Rodriguez asked that this effort would be taking an inherently unstable environment and making it stable? Benton thought this gave people a false sense of security. Jarrett felt that “ultimately will fail” is inappropriate for TGs because none have. Overton noted there were still a lot of issues with development and coastal hazards with or without TGs. Rodriguez wondered if the Panel was sending a mixed message by increasing inlet hazard areas but also allowing TGs?

Rogers restated his recommendation as “If the CRC gets the authority to consider TGs, then they should require the caveats such as third-party review and other conditions.” A

few Panel members were fine with something like that but no formal proposal or vote was made. (Overton stated earlier her comments would reflect the discussion of the Panel). With no further discussion, Overton ended the TG discussion and took a brief break.

Overton began discussion on the Panel's Sea Level Rise (SLR) report by reviewing the effort that had been undertaken by the Panel. Overton took the lead on writing the report and thanked Miller for assisting in getting the report to the point it was today. Overton had several issues that she wanted to be addressed in the report, but that the report overall was not flawed and come move forward. One issue was the graph synthesizing the results and the acceleration values necessary to get the curve to the end points. Additional concerns focused on getting the actual tide gauge data from Duck instead of a straight line. Birkemeier was going to provide the raw data. Overton also discussed that the paragraph on why the Panel just used one rate for the entire state needed to be strengthened. One thing Overton hoped the Panel could advocate was better and more data relating to SLR.

Overton broke for lunch at 12:25 and reconvened at 1:30. Overton remarked about the graphing changes they did over the lunch break. Miller will choose the final graph of the options addressed. Overton noted that Miller needs all comments on the report by Sunday afternoon so he can finalize and print the report to bring to the Legislature's Climate Change Commission per their request.

Overton then moved the discussion to focus on the inlet hazard project. At this time, only six Panel members remained at the meeting (Overton, Rodriguez, Benton, Rogers, Jarrett, and Birkemeier). Overton reviewed the history of the IHA subcommittee's work (subcommittee composed of Overton, Sciaudone, Benton, Williams, Rogers, Jarrett, and Cleary). Richardson showed numerous images from different inlets along with GIS data. The group opted to continue discussion amongst the IHA subcommittee and try to finalize their recommendations in April and follow up with a full Panel meeting in May.

With no further discussion, the meeting was adjourned at 3:00 pm