

**NC BEACH AND INLET MANAGEMENT PLAN
ADVISORY COMMITTEE MEETING**

Nov 27, 2007

1:00 pm

Archdale Building, Ground Floor Hearing Room
Raleigh, NC

COMMITTEE MEMBERS

Ms. Christine Brayman, USACE Wilmington District
Mr. Pete Benjamin, USF&WS
Dr. David Mallinson, ECU
Dr. Margery Overton, NC State University, CRC Science Panel Chair
Mayor Butch Parrish, Topsail Beach (outgoing mayor)
Mr. Spencer Rogers, NC Sea Grant, CRC Science Panel
Mr. Greg “Rudi” Rudolph, Carteret County Shore Protection Office
Mayor Harry Simmons, Caswell Beach
Ms. Beth Smyre, NC DOT
Mr. Jim Stephenson, Coastal Federation
Mayor Ray Sturza, Kill Devil Hills

OTHER ATTENDEES

Mayor Howard Braxton, Topsail Beach (incoming mayor)
Mr. Coleman Long, USACE
Mr. Boyd Devane, DWQ
Mr. Peter Elkan, Moffatt & Nichol
Mr. Darren England, DWR
Mr. Frank Folger, Helms, Mullis & Wicker
Ms. Ann Green, NC Sea Grant
Mr. Jim Gregson, DCM
Mr. Howard Hall, USF&WS
Ms. Leanne Madre, DENR
Mr. Johnny Martin, Moffatt & Nichol
Mr. John Morris, DWR
Mr. Jeff Shelden, Moffatt & Nichol
Mr. Guy Stefanski, DCM
Mr. John Sutherland, DWR
Ms. Lauren Theodore, DCM
Dr. Paul Tschirky, Moffatt & Nichol
Mr. Steve Underwood, DCM
Mr. Steve Wall, DENR
Dr. Jeff Warren, DCM
Mr. Matt Willoughby, NC News Network

MEETING SUMMARY

John Morris introduced himself and opened the meeting at 1:10 by welcoming the attendees. He provided a brief overview of the NC Beach and Inlet Management Plan (BIMP) and addressed “Why we are all here.” DWR and DCM formed a partnership to prepare one plan to fulfill legislative mandates to develop a BIMP. Funding has been obtained and the engineering firm Moffatt & Nichol has been contracted to assist DCM and DWR with the initial phase of the BIMP. Morris introduced Jim Gregson who also welcomed the attendees and thanked them for their participation. Gregson asked the participants to introduce themselves.

Johnny Martin first gave an overview of Moffatt & Nichol as well as the M&N management team. He then provided a status report of the work to date. The original 13 legislative mandates were boiled down to a few major issues: characterize vulnerability, develop a conceptual regional sediment budget, foster a transparent process (stakeholder involvement), and prioritize sediment management regions. The five tasks to achieve these goals were also defined (data ID, define mgmt regions, stakeholders, mgmt strategies, final report). Martin provided examples of rich data sources already in existence such as the US Army Corps of Engineers (USACE) and Bogue Banks (Carteret County Shore Protection Office). Socioeconomic and political variables will also be considered among the scientific data used to define the sediment budgets (sediment volumes, coastal processes, fish habitat) and the prioritization of future beach fill projects. This portion of the BIMP will reflect current NC coastal policy (i.e., only consider management options available under current NC rules and laws). The strategies offered will meet the following standards: physics-based, environmentally responsible, politically viable, financially feasible and fundable and constructible. The strategies will also understand the importance of CHPP integration. Martin summarized by reminding the Committee that this is intended to be a living document that should be improved upon in the years to come.

Jeff Warren spoke about collaborative efforts between DCM and the USACE. He started by giving a brief overview of the relationship between the US Army Corps of Engineers (USACE) and the BIMP project. An initial collaboration dealing with regional sediment management (RSM) began in 2005 when the Wilmington District was developing a RSM demonstration project for the Morehead City region. DCM contributed almost \$120,000 for high-resolution bathymetric surveys at Bogue and Beaufort inlets to assist with the USACE’s modeling efforts to better understand the active coastal processes and determine a quantifiable sediment budget. DCM and DWR continue to have meetings with the USACE about RSM and beach and inlet management; however, the USACE (Wilmington District) has been without available resources to direct towards the efforts. Warren recounted the trip that DCM and Moffatt & Nichol recently made to the Mobile District to talk about RSM and the eCoastal enterprise GIS as part of the data gathering effort of the NC BIMP. The Mobile District was the first to develop a comprehensive RSM plan and program for the Gulf Coast states. As part of the process, the eCoastal

platform was developed and is a combination of database architecture, data formatting and labeling as well as an interface into ArcGIS with additional software tools. DCM and Moffatt & Nichol decided that it would be appropriate to adopt the USACE's eCoastal framework for numerous reasons, including efficiency of fiscal and human resources as well as cross-platform compatibility with the USACE. From these talks, DCM worked with the USACE in Mobile and Wilmington to prepare a RSM proposal for funding that will allow personnel from Mobile to come to Wilmington and start collecting and digitizing priority data as the first steps in getting Wilmington online with eCoastal. The proposal requests \$72,000 for 12 weeks of data mining as well as work back in Mobile to format and create the Wilmington database. Warren pointed out that although 12 weeks and \$72,000 may not seem like a lot, it represents successful leveraging of resources that is making NC the poster child for RSM and beach and inlet management. In addition, 12 weeks of having USACE personnel work in the Wilmington office probably translates to six months of an outside contractor trying to gain access to files, maps and computer data. Similarly, the \$72,000 likely translates to \$200,000 to \$300,000 worth of work if performed by non-USACE personnel. Warren thinks this proposal is likely to be funded in early 2008 by USACE's RSM program.

Warren introduced Lauren Theodore, DCM's NOAA Coastal Services Center Fellow, who will be working with DCM from August 2007 to 2009 primarily on the BIMP. Warren mentioned that this Fellowship was another example of trying to pull together as many resources as possible to assist with the BIMP. Theodore briefed the Committee on her literature review. All the documents to which she has copyright access are available on DCM's BIMP website (www.nccoastalmanagement.net/bimp.htm). Eventually, Theodore will prepare a final report that will discuss all of the documents found in the literature review. Theodore also mentioned the other states working on similar efforts (TX, FL, CA and ME) in order to understand the hurdles they faced as well as the accomplishments. Simmons asked if there was information that was needed but currently was not accessible. Theodore felt that there was a lot of documentation out there that wasn't published and not a lot of peer-reviewed documents had been published. Theodore confirmed that she was still able to access many online resources through the University of Michigan.

Paul Tschirky briefed the Committee on data ID and acquisition. The focus was on datasets that would help to understand how sediment moves in order to establish the sediment budget. How the sediment is being used is also helpful (i.e., dredging volumes and locations, etc.). The eCoastal database hopefully will provide a lot of these records online at some point in the future. The sediment budget is the sum of the losses and gains of sediment in the cross-shore and alongshore littoral system (sediment "accounting"). No new modeling is being done for this sediment budget but it is more of a statewide conceptual budget that will use data already in existence.

Peter Elkan expanded on the sediment budget update by adding that vulnerability classifications were also a goal of the BIMP and, similarly, such analyses would use existing data rather than new modeling efforts (e.g., literature review). Characterization of physical risks as well as socioeconomic considerations will be included. Results will

be used to help prioritize funding and beach fill projects in the future. Howard Hall asked about how long-term sea level rise would be included in the vulnerability analyses and if the extremes of the models (best- and worst-case scenarios) would be included. Elkan responded that they will be considered and Martin also added that recommendations of management strategies likely will also include a discussion on how these strategies may need to be adjusted in the future based on sea level rise.

Steve Underwood discussed the prioritization of beach projects. He stressed that this first 18-month effort was only the first phase of a long-term project. Therefore, the final methods of how prioritizations would occur were currently unknown, although variables such as habitat and socioeconomic factors would be necessary. Underwood commented that stakeholder involvement is crucial to this effort. In the end, whatever methods are developed to prioritize projects, they need to be flexible (i.e., a set of guidelines and/or a list that may change in the future).

Morris asked if there should be a break and the Committee seemed to want to press on, ask questions and discuss the BIMP. Dave Mallinson wondered about the development of a sediment budget and how such a budget would be developed for large expanses where data were either scant or non-existent. Martin stated that there might be some techniques that could be used to come up with best-guess approximations to fill in the gap. (NOTE: It is also a goal of the BIMP to identify data gaps and potentially prioritize future work or funding for future work to fill these gaps). Underwood commented that it would be easy to spend all 18 months of this initial phase solely on data acquisition, but in absence of these more detailed efforts (and more detailed data) there are still some general conclusions that can be developed for a conceptual sediment budget. Mallinson also wondered how the existing vulnerability data may be improved upon. Margery Overton also wondered what “vulnerability” would mean (i.e., Vulnerability to storm surge? Erosion? Wind?). Elkan stated that the initial phase would be vulnerability to erosion. Martin stated that the focus would be on the beach face. Elkan also commented that the challenge is to come up with a uniform methodology for vulnerability definition. Underwood referenced the DOT “hot spots” along the Outer Banks as one method of characterizing vulnerability. Harry Simmons wondered if there would be more efforts put on lower magnitude storms with higher frequencies (categories 1 and 2) rather than high magnitude storms with low frequency (category 4 or 5). Better management of category 1-3 storms might be better than worrying about the high storms that are so strong and infrequent that everything is vulnerable. Butch Parrish wondered if it would be easy to look at something as simple as the distance of a structure to the high tide line and its vulnerability to erosion in the future. Complex analyses including economic analysis of beach fill is complex; stick to simple.

Simmons wondered if it would be more effective to call this an inlet and beach mgmt plan. Underwood mentioned that FL had removed their inlets from the entire system and the NC approach was to understand the entire system (how the inlets interacted with the oceanfront). Howard Braxton voiced his concern about the complexities of trying to achieve the goals of the BIMP. Morris commented that the first round of this effort was reliance on existing data and analyses. In addition, the BIMP will create a coast-wide

picture to put the controversial, coastal management issues that society is discussing and facing into context. Mallinson commented that it also can't be so simple as to be useless as a management tool.

Simmons stated that the BIMP needs to be helpful to local elected officials as well as the academics that will run with it and continue to add to it. Jeff Sheldon commented that another important point is that a lot of these data are so fragmented that a BIMP can help bring it all together. Ray Sturza mentioned that he was concerned that the stated goal was to have all BIMP strategies conform to existing coastal policy in NC. Given the challenges of the complex issues facing NC and the country, Sturza is concerned that some of the benefits of engineered solutions that might be helpful in NC won't be available for discussion in the BIMP and, therefore, won't be available for elected officials to discuss when they reference the BIMP for information. Sturza wanted to make sure that he was not suggesting a confrontation between these issues that currently were being discussed, but there should at least be a section of the BIMP that talks about other alternatives. Without the whole range of perspectives, the document would not really be viable to future decisions makers. Pete Benjamin commented that the BIMP can build off of the CHPP in order to address what the stakeholders want the future beaches of NC to look like. The CHPP did a good job at providing some general desired outcomes related to habitats, however, something needs to be done to come up with more specific ways to achieve sustainability (e.g., How much habitat must be preserved?). If the BIMP can set a similar goal then the BIMP can address how to get where the State wants to go. Morris commented about this issue and gave an example of some projects that might be introduced by the General Assembly that could answer the questions as to other options for coastal management. However, Morris felt that the issues between hard structures versus soft structures were so complex, this document didn't want to set up a tug-of-war on what's right and what's wrong. Hopefully, the BIMP can provide a tool that will be useful to all parties who are trying to grapple with future coastal management issues.

Dave Mallinson commented that the literature review by Lauren Theodore was going to be very helpful. Knowing what other states are doing can provide a lot of information on results of numerous coastal management approaches. Theodore commented that what she noticed most in other states' plans was how to do regional sediment management and balance RSM with an array of coastal management tools (beach fill, engineered structures, etc.). Jim Gregson felt that, because it was a DENR project, the BIMP should not spend a lot of time looking at structures that were banned by law.

BREAK from 2:23 until 2:48

John Morris reconvened the meeting at 2:48 by restating the purpose: answer the Committee's questions and continue the dialogue about beach and inlet management issues. One thing DCM and DWR need to do is stay in synch with other agencies. Christine Brayman provided a brief update on USACE activities related to the BIMP. Brayman commented that Col. Pulliam still gives his total support towards the BIMP. However, the USACE is operating under a lot of constraints, one of them being financial.

Hopefully a funding bill will be passed by Congress before their Christmas break is scheduled to begin (December 14th). For now, the USACE is operating under a continuing resolution. Brayman mentioned that a few line-item funds exist. For example, there is \$1 million plus in the President's budget allocated for RSM. Warren and Greg Williams (USACE) have worked with the RSM program manager at the national level (Dr. Jeff Waters) to obtain funds to support the NC BIMP endeavor (NOTE: proposal for data mining in Wilmington is \$72k). In addition, there is additional money in the energy bill (\$1 million for NC) but this bill is only in the early conference reports stage. WRDA 2007 was enacted last month and allows beneficial use of sediment from navigation channels in order to provide storm damage protection to property through placement of "suitable" sediment on the beach (i.e., sand). If you've got sand but don't have ecosystem justification or economic justification, funding will be provided (not at 100%) to place that sediment on an adjacent beach (65 to 35 cost split). There is a limit of \$5 million for these efforts but they could make a big difference through a series of baby steps towards RSM.

Morris thanked Brayman and requested that she keep the group posted on funding. Beth Smyre asked about how specific this final BIMP document would be. Would this be a full plan for implementation or just a partial plan? How complete will this (18-month effort) be? Morris stated that the goal was for every coastal community to be able to find something in the BIMP about its beaches and inlets; every coastal community should have had a chance to make comments about beach and inlet management. However, the BIMP would not be a plan that would tell everyone what to do. There is a lively debate at the local level on what to do about beach and inlet issues and that is a very significant part of the process. John Sutherland mentioned that DENR is authorized by state law to provide cost-sharing money for beach projects. DWR would hope that the BIMP would provide some direction on funding of projects that currently do not have federal funding. Also, DWR is directed by law to prepare a water resources development plan (including navigation and nourishment projects) so DWR would hope that guidelines in the BIMP will help with those decisions. It would be nice to have a prioritized list for such projects, but the BIMP may or may not get that detailed (NOTE: at least in this first phase). Butch Parrish felt that it would be interesting to know what the cost of maintaining the beaches would/could be.

Morris joked that no meeting would be complete without hearing from Greg Rudolph. Rudi passed on making comments. Mallinson asked what the plan was for extending this project beyond 18 months (knowing that 18 months was not enough time to achieve all of the goals). Morris responded that the coastal issues are only getting more complex and the issues are huge. It was not hard to get the General Assembly to provide the funds to get the BIMP going. We have to use these funds to produce a first product. As we approach that horizon, we can reassess what needs to be done and funding could/would be pursued accordingly. Simmons asked what fiscal year this would be. Morris felt that the next fiscal year would probably be appropriate for such a request. Underwood commented that DCM/DWR were not trying to build an empire but it would be a shame if DCM/DWR couldn't further the effort for at least another 18 months to ensure we are meeting the needs of the communities and the habitats. If the BIMP could be fashioned

in such a way that it can provide assistance in making other coastal management decisions more efficient (such as the permitting and reporting processes because all of the data were included in one location). By being open and getting feedback (from the stakeholders), there will be more positives than negatives and we can keep the effort going. Overton had some questions about the adoption of the eCoastal framework, notably that if it were available on the DCM website at the end of 18 months there would be a lot of interested users. Warren commented that there was some uncertainty as far as the location of the database server due to DENR's IT consolidation discussions; however, regardless of where the server existed, the data would either be housed on it or on other servers to which links would be provided. The eCoastal modules run on an ArcGIS framework but Ken Richardson at DCM is also playing around with a Google Maps interface for easier accessibility for the general public. Warren also mentioned that Rudi Rudolph was developing a coastal data website for Carteret County that would be up and running and similar to what DCM is trying to achieve. Rudi commented that it would go live sometime in March and that the datasets would be eCoastal compatible (and reminded the group that eCoastal was more than just a program or group of programs but rather a database architecture and naming convention).

With no further comments, Morris adjourned the meeting at 3:20.