

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

Sept 11, 2008
1:00 – 3:30 pm

NC State University McKimmon Center
Raleigh, NC

COMMITTEE MEMBERS

Ms. Christine Brayman, USACE Wilmington District
Mr. Pete Benjamin, USF&WS
Mr. Rick Caitlin, New Hanover County Ports and Waterways Commission
Sarah Hagedorn, Environmental Defense
Mr. Spencer Rogers, NC Sea Grant, CRC Science Panel
Mr. Ron Sechler, NOAA NMFS
Ms. Beth Smyre, NC DOT
Mr. Jim Stephenson, NC Coastal Federation

OTHER ATTENDEES

Mr. Mickey Sugg, USACE
Mr. Boyd Devane, DWQ
Mr. Peter Elkan, Moffatt & Nichol
Mr. Darren England, DWR
Mr. Jim Gregson, DCM
Mr. Howard Hall, USF&WS
Mr. Jeff Harbour, Environmental Services
Mr. Jamie Kritzer, DENR
Mr. Johnny Martin, Moffatt & Nichol
Mr. Ken Richardson, DCM
Mr. Jeff Shelden, Moffatt & Nichol
Mr. Guy Stefanski, DCM
Mr. John Sutherland, DWR
Dr. Paul Tschirky, Moffatt & Nichol
Mr. Steve Underwood, DCM
Ms. Michele Walker, DCM
Dr. Jeff Warren, DCM
Dr. Greg Williams, USACE

MEETING SUMMARY

John Sutherland opened the meeting at 1:15 and welcomed the attendees. Introductions were made around the room. Johnny Martin provided an overview of the meeting based on the agenda and introduced Greg Williams as the first presenter.

Williams' gave a presentation on Regional Sediment Management (RSM) and identified sediment not only as a resource but also as an asset. Williams gave a quick overview of the collaborative efforts between the USACE and other NC agencies that were a

testament to the State's commitment to the development of an overall beach and inlet management plan (BIMP) based on RSM concepts. Williams reviewed the USACE's RSM efforts for the current fiscal year with the \$590k congressional earmark awarded for RSM in the USACE Wilmington District. The three main areas of this RSM project are: 1) data mining, 2) Brunswick County, and 3) MHC/Bogue Banks.

The data mining effort includes developing an eCoastal enterprise GIS database that includes District survey data from 2000 to present (1st priority) and 1995-2000 (secondary priority), implementation of coastal GIS tools for both the District and State (NC DCM has adopted the eCoastal format for the BIMP GIS data). The data mining effort is using approximately one third of the \$590k RSM budget and is being heavily coordinated and prioritized with DCM and DWR. An enterprise GIS approach using eCoastal will help digitize and centralize coastal datasets and result in quicker data access. Currently, it takes a great deal of time to answer outside requests for coastal data because the datasets are not in one central location. Indeed, sometimes the datasets cannot be found because the employees who had them retired or resigned.

The Brunswick County portion of the RSM project was a priority because the area is data rich due to the Wilmington Harbor Deepening and the Brunswick County shore protection projects. The Field Research Facility at Duck has been involved with data collection (wave gauges, sediment sampling, beach profiling) in Brunswick County. Ocean and Coastal Technologies, Inc. is under contract through the RSM project to assist with spatial analysis and develop a conceptual sediment budget for coastal Brunswick County. Other funds were provided to USACE ERDC (Nick Kraus) to use the CASCADE model to then develop a detailed sediment budget. The CASCADE approach is a USACE computer model that looks at regional longshore transport and reach change and that incorporates offshore contours and how those contours change, sediment sources and sinks, navigation maintenance, storm protection projects, wave transformations, and longshore currents. It is essentially a mass balance approach to develop a quantifiable sediment budget.

The third part of the FY 2008 RSM project focuses on the Morehead City and Bogue Banks region. The study area encompasses the area between Cape Lookout and Bogue Inlet. The USACE would like to employ the CASCADE model as was done for Brunswick County. A survey contract with Geodynamics will be awarded for bathymetric surveys of Bogue, Beaufort and Barden Inlets in order to help with the CASCADE model input. Similar to Brunswick County, the MHC area is data rich.

The FY 09 budget has \$600k allocated for the USACE Wilmington RSM efforts (at least in the Senate version of the appropriations bill). The USACE would like to use these monies to continue coordination with DCM and DWR with the BIMP, continue to support eCoastal, expand the project to other regions and fill many of the data gaps needed to eventually develop sediment budgets to understand the system.

Rick Caitlin wondered how easily it would be to capture the data collection efforts of private consulting firms and other state and federal resource agencies. Williams agreed

that the eCoastal database needed to eventually incorporate data beyond what the USACE (and in some cases DCM) collected.

Johnny Martin then described the status of Moffatt & Nichol's efforts on the BIMP contract. Martin identified the project team (M&N, Environmental Services, Geodynamics, Dr. Bill Cleary for coastal geology, and Dr. Chris Dumas for socioeconomics). Martin reviewed the legislative mandate to develop a beach management plan as well as the CHPP directive to prepare a comprehensive beach and inlet management plan to address fisheries habitat protection. Martin reviewed the M&N project work plan (data ID and acquisition, define beach and inlet mgmt regions, develop preliminary beach and inlet mgmt strategies, hold stakeholder meetings, and develop draft and final plan).

Martin introduced Paul Tschirky from M&N who spoke about spatial coastal data and the development of a GIS platform and database. Tschirky summarized the detailed activities that went into the first service of the work plan (data ID and acquisition). Datasets that have been acquired include beach profiles, USGS erosion rate data, sea level rise data, wave data, storm surge / flood data (ADCIRC models updating those data), and tidal data as well as a history of dredging / navigation maintenance projects, and beach nourishment projects along with locations and histories of temporary and permanent coastal structures. Tschirky also reviewed the socioeconomic data that can be used to quantify the determination of assigning values to beaches. Values can be classified by beach business economic output, beach property value, inlet and waterway use, and nature preservation value.

Tschirky introduced Jeff Harbour from Environmental Services who was sub-contracted to work with M&N on the BIMP contract. Harbour talked about the identification and acquisition of data on ecological habitats. These data primarily focused on the six habitats identified by the CHPP: 1) water column, 2) shell bottom, 3) submerged aquatic vegetation (SAV), 4) wetlands, 5) soft bottom, and 6) hard bottom. In addition, Harbour's group is also collecting information on endangered and threatened species found in NC such as the five marine sea turtles found in NC, manatees, shortnose sturgeon, and birds (wood stork, piping plover, roseate tern).

Martin resumed his presentation on the BIMP project by discussing how the management regions were defined (numerous datasets were used such as geologic features, developed/undeveloped reaches, and erosion/accretion patterns). Four regions were identified (SC to Cape Fear, Cape Fear to Cape Lookout, Cape Lookout to Cape Hatteras, and Cape Hatteras to VA). Region 1 (SC to Cape Fear) was not subdivided into subregions but the rest of the regions were. Region 2 (Cape Fear to Cape Lookout) was divided into three subregions (2a, 2b, 2c), Region 3 (Cape Lookout to Cape Hatteras) was subdivided into two subregions (3a and 3b), and Region 4 (Cape Hatteras to VA) was divided into three subregions (4a, 4b, 4c). After showing images of each of the regions and subregions and explaining why the boundaries were placed where they were, Martin reviewed the general criteria to be used in the development of draft management strategies. First the strategies must be allowable within the State's current coastal

policies. Then the draft strategies for each of the sub-regions will be based upon knowledge of local sediment movement, vulnerability, socioeconomic issues, likelihood of sustainable shoreline management, possibility of federal funding (past, present and future), and local environmental issues and constraints (strategies to be compatible with CHPP to maximum extent practicable). The suite of alternative strategies will be physics based, environmentally responsible, politically viable, and financially feasible. Funding strategies will also be incorporated into the strategy alternatives.

Martin stated that stakeholder meetings would be occurring concurrently over the next 3-4 months with the development of beach and inlet management strategies. Two meetings will be held in each management region defined earlier as well as a central meeting (perhaps in Raleigh). The first set of meetings will take place in Oct/Nov and the second set in Jan/Feb. The final report will be finished by April 2009.

Mickey Sugg asked if the management strategies were to be limited to nearshore within the State's 3-mile limit or out into federal waters. If the latter, the Minerals Management Service would have interests in resource allocation and use (primarily sand for nourishment). Martin responded that M&N had not limited the offshore extent but, rather, took the data where they could find it.

Caitlin asked about how private islands within the regions would be handled within the BIMP. Sutherland responded that beach access would be an issue and that it might be a situation where private use of public sand sources would require some type of public access component to the private island.

Sutherland asked about Region 1 (Brunswick County) and wondered if that region should be subdivided any further. There are three main areas between the three inlets although the whole region was only about 30 miles. Martin commented that M&N discussed this but one reason they didn't was that there was little sand offshore and the inlets were being used as the primary sand sources in that area. Therefore, all the islands would be very interested in what all the other islands were doing. Williams commented that Jay Bird shoals was the original borrow source for Caswell Beach, Oak Island and Holden Beach. It may not be economical today to take sand from Jay Bird to all of these locations. Economics drives USACE projects. However, it might be economically viable in 15 years because the resource protection might justify that type of cost. With regard to not subdividing the region, Williams felt that all the parties would want to be in the same subregion and for the most part they already are (that's how the USACE is handling the county-wide project).

Sechler commented on sand sources related to inlets. Was that dredged material from navigation maintenance of inlet channels or mining of the ebb delta? Martin responded that the BIMP report will not be detailed enough to answer the question, "How much sand can be mined out of a specific inlet without causing environmental impacts?" At this point, we're looking at all potential sand resources and strategies rather than identifying the best strategy for a particular area. Instead, the data and analysis provided by the BIMP will help assemble future EIS and EA documents that can help determine

acceptable environmental impact. Underwood commented that inlet mining was a huge issue and potentially there was a percentage or a location that might be utilized but if you start mining the inlet there could be major issues. At this point, it would be a huge (and inappropriate) leap to have a BIMP that says you can use the inlets for all your sand resource needs.

Rogers noted that Williams mentioned grabbing low-hanging fruit for data acquisition. Rogers wondered if M&N had acquired the survey reports and datasets from the Mason Inlet relocation project. M&N stated that they had the reports and had requests into New Hanover County to get copies of the data. Rogers noted that he probably had most of the data.

Hall mentioned the CoBRA zones because, in general, there has been a position that you would not go into the CoBRA unit and dredge and remove the sand from the zone. Hall said there had been some legal disputes that likely were not yet resolved that dealt with sand in the areas around Lea/Hutaff Island and Rich Inlet (as far as removing sand from a CoBRA zone). Hall asked Sugg if the USACE followed that no-removal policy? Brayman responded that federal dollars couldn't be used on a project in CoBRA zones (such as using inlet sediments for a source). A comment was made that this CoBRA policy wouldn't apply to private funds. Martin reminded folks that the BIMP was not going to be a policy document but, rather, would recommend management strategies. Underwood wasn't sure if a CoBRA zone extended offshore. Hall thought ~~stated~~ that it extended offshore to -30 feet. Sugg thought the zone was the island itself (landward of MHW). Brayman noted that the CoBRA zones don't migrate but the islands do and that has created problems at North Topsail. Hall wondered if the federal CoBRA zone policy would be factored into suggested management strategies. Brayman noted that the CoBRA zone boundaries should be a dataset that is included in the database. Williams wondered if upland sand sources had been considered in the datasets? It would be challenging but it might be that communities get to a point where there is no other sand source choice but to search upland.

Sutherland asked if the USACE had finished the AIWW Dredged Material Management Plan. Brayman stated that they were ready to contract with a firm to do some preliminary scooping to identify where the extreme shoaling was occurring (i.e., where was the priority dredging). This project was addressing the AIWW from up in VA down into Florida. Brayman noted that she and Caitlin had been talking about the many different data sources that exist for the AIWW navigation channel and adjacent and connecting channels and whether these channels contained beach compatible sand that should/could be utilized for beaches.

Williams referenced Little River Inlet in SC and how it was a natural boundary to Region 1 that coincided with the state borders. However, Williams wondered how the northern boundary of Region 4 was defined. Although the border of VA was the boundary, the natural system certainly straddled the state border and operated in both states. Williams wondered if there were differences on how the two states might handle beach and inlet

management strategies. Were there similarities or difference? Potential conflicts with resource utilization?

Brayman asked if the M&N presentation was going to be the same for the upcoming stakeholder meetings. Tschirky responded that there likely would be less detail provided (would be focused on the proposed management region geographically specific to each meeting). Underwood noted that the CRC and CRAC always wanted to be updated on the BIMP and related issues. Now that the regions were defined, Underwood felt that it was appropriate to start showing this to stakeholders for their input. Martin noted that the presentation would also be put out on the internet so that other people could get hold of it for review. Brayman felt it was a logical presentation from a coastal engineering and technical perspective but wondered how non-technical citizens would respond. Rogers commented that the closer you got to the boundaries of the subregions, the less it mattered. For example, if you were looking at management strategies at Rodanthe (which straddles the line), you would look on both sides of the line. Underwood then asked the question: why then did we develop the subregions? Rogers said the value was in the center point of the subregions. The philosophical question was posed, “Why do you draw lines?” Elkin noted this was, in part, a scale issue – there were project scales and management regions. The lines don’t really matter on a project scale as much as they do on a regional scale. Warren pointed out that the DOT currently is trying to obtain a permit to take sand from the Oregon Inlet groin (subregion 4b) to the sandbags in front of the sandbags protecting Highway 12 in Rodanthe (subregion 4a). Sheldon commented that the lines were just to help people focus on sand management within a particular area. Rogers said the lines were reasonable and that micromanaging the lines wasn’t the point of the BIMP. Underwood felt these regions might help prioritize funding and move funding around if necessary and potentially change the single-project-funding mentality. Williams asked if there would be a detailed description on the data and rationale used for determining the regional and subregional boundaries. Maybe a map with a brief description to hand out at the meetings?

Sutherland led a wrap-up discussion and noted that there would be an attempt to reconvene the BIMP Advisory Committee later in the fall after the first round of public hearings for the BIMP project (but prior to the meetings in early 2009).

The meeting was closed at 3:40 pm.