

**Meeting Minutes**  
**Outer Banks Task Force Meeting**  
**February 8, 2000 at 10:00 AM**  
**Seminar Room, College of the Albemarle, Edenton, NC**

A list of the meeting attendees is attached.

▪ **Introduction**

Julie Hunkins, chairperson of the Outer Banks Task Force, began the meeting by welcoming everyone and having participants introduce themselves. She then reviewed the meeting agenda and asked if there were any changes that should be made. The presentation on the Offshore Sand Resources Study was delayed until after lunch.

▪ **NC 12 Hot Spots**

Jerry Jennings, NCDOT, began the discussion about the "hot spots" by updating the group on the storm recovery efforts that are taking place at each site. Dune reconstruction and vegetation are the major activities at the hot spots. On Pea Island, the three major areas of dune reconstruction are near completion. At Rodanthe, Buxton, Hatteras, and Ocracoke, vegetation of the dunes is expected to be complete by the end of March.

Mr. Jennings also stated that sand compatibility and contaminants tests have been run on a privately owned site near Avon, which indicate that sand from this site is suitable for use to create a secondary dune line at Buxton. Dialogue with the property owner is needed to ascertain willingness and cost. NCDOT has also conducted grain size analysis at a second potential sand source near Avon. The property owner has mining permits for this site. This is a potential sand source for future use.

**Other discussion related to the hot spots**

**Ocracoke Spoil Site**

Ms. Hunkins updated the Task Force on a meeting that was held February 3 regarding the Ocracoke spoil site. At the on-site meeting that included the National Park Service (NPS), the U.S. Army Corps of Engineers (USACE), the Division of Coastal Management (DCM), and the Division of Water Resources (DWR), the NCDOT Ferry Division expressed concern that the spoil area has nearly reached capacity. More channel dredging is needed, and there is concern as to where the material can be placed. The meeting generated three options: 1) nearshore disposal just off of Ocracoke Island (in addition to disposal from channel dredging planned by USACE), 2) use of a Wildlife Resources Commission (WRC) permitted site (a small island near the inlet), or 3) expansion of the Ocracoke spoil site. NPS agreed to allow nearshore disposal by the Ferry Division in conjunction with USACE. NCDOT will, however,

prepare plans and documents for the expansion of the spoil site since material may not be disposed of on or near the beach during certain times of the year. Tom Jarrett, USACE, stated that the dredged material will be placed from the berm area to sea level. The Environmental Assessment should be completed by the end of the week.

John Fisher, N.C. State, asked why direct placement of the sand on the beach was not discussed. Ms. Hunkins stated that the purpose of the meeting was not the protection of NC 12, but rather the disposal of material from channel dredging projects that are to be undertaken by USACE and NCDOT in the near future. Nearshore disposal is the most feasible alternative by USACE that could also benefit Ocracoke Island and NC 12. She then asked if there are ways to measure the potential benefits to the beach and the road. Dr. Fisher replied that the area would need to be monitored before and after disposal. He suggested that photographs be taken over a six-month period, in conjunction with pictures being shot of the terminal groin area.

#### NC 12 Studies

Ms. Hunkins updated the group on the interim improvement studies for the six hot spots. Requests for proposals from private consulting firms are out for two of the studies – 1) Canal Area, Sandbag Area, and Rodanthe and 2) Ocracoke. Shortlisting and selection should take place this month. The interim improvements study between Buxton and Avon is under contract. USACE is providing engineering and planning services. The Hatteras interim study has been added to the Avon to Buxton Long-Term Study. A consultant has been selected for this study and the contract will be underway soon.

Mike Bryant, Pea Island National Wildlife Refuge (PINWR), requested a summary of the studies. (A summary is included in the meeting minutes.)

#### ▪ Risk Assessment

Dr. Fisher briefed the Task Force on the NC 12 vulnerability study that he and Dr. Margery Overton are conducting. The first phase of the study is to create a model for determining the impacts of storms on beaches. The model is called "SBEACH" and is being developed using storm condition information, topography, and bathymetry. The second phase of the study, the risk assessment, will then be used to predict the outcomes of selected storm events and topography at each of the hot spots within the next ten years.

Ms. Hunkins added that the results will be used to evaluate the interim improvements between Buxton and Avon to ascertain how the Buxton hot spot compares to other hot spots. This study will also feed into the Long-Term Comprehensive Planning Study.

The Task Force was also informed that the Digital Terrain Models (DTMs) used for topography information were based on 1998 photography by the Division of Coastal

Management (DCM). Ms. Hunkins told the group that any agency with a need for the DTMs or other information gathered for input into this study should contact her.

- **Long-Term Study – Buxton to Avon**

Ms. Hunkins introduced Tim Keener of URS Greiner Woodward Clyde and Jay Bissett of Arcadis Geraghty and Miller, the consultants selected for the Long-Term Study between Buxton and Avon. NCDOT and the consultants will discuss the study approach at the next OBTF meeting. The contract and scope of work are being developed and should be complete by the end of March. Brian Yamamoto is the NCDOT project engineer working with the consultants. If there are any questions about the study, Task Force members should contact Mr. Yamamoto at (919) 733-3141.

- **Interim Improvements Study – Buxton to Avon**

The meeting continued with a discussion of the Interim Study underway to address measures between Buxton and Avon. The study is being conducted by NCDOT with the Corps of Engineers serving as a consultant. Ms. Hunkins told the group that a NEPA/404 Merger Process meeting would be held on Thursday, February 10 to discuss the Purpose and Need and the range of alternatives for the study. She stated that the goal of the study is to select an alternative that will protect NC 12 during the upcoming hurricane season. She asked the Task Force for any concerns that should be addressed by the project team.

Next, Ms. Hunkins listed the five alternatives that are being developed for the study: 1) No-build, 2) Sheet piling, 3) Sandbags, 4) Road relocation, and 5) Beach nourishment. The alternatives should be developed by May and will be discussed at the next OBTF meeting. She also stated that there are plans to have an information session with the public about the studies and alternatives. She said that the session might be held in conjunction with the next OBTF meeting so that Task Force members can also attend the public meeting.

Don Goins, NCDOT, expressed concern about the time required to construct some of the alternatives – they might not be feasible to construct by hurricane season. Ms. Hunkins replied that scheduling will be included in the evaluation matrix. NCDOT is working with USACE to develop schedules.

The Task Force further discussed the alternatives as they related to scheduling. Mr. Jarrett stated that a variance would be needed for beach nourishment during the sea turtle moratorium, and a variance from the Coastal Resources Commission (CRC) would be required for sheet piling and sandbags, both of which could cause delays. Wayne Teeter, Hyde County, commented that if beach nourishment was done in a small, monitored area, sea turtle eggs could possibly be relocated.

Mike Street, Division of Marine Fisheries (DMF), stated that the Task Force needs to know if any of the alternatives can be constructed this year. Dr. Fisher then asked about the possibility of quickly relocating two sections of the roadway if the risk assessment shows it is needed. Mr. Goins replied that it could be accomplished quickly.

Ms. Hunkins commented that the alternatives are being designed and all will be ready to go to contract. Dr. Fisher then asked if road relocation could be considered in conjunction with other alternatives. The answer was yes. Jerry Jennings, NCDOT, said that the northern and southern ends of the relocated section are more critical now. Mrs. Goins asked if there would be seasonal problems related to road relocation. Ms. Hunkins said that relocation is likely to be out of sea turtle habitat, as well as habitats of other Threatened and Endangered Species.

Chris Bernthal, National Park Service (NPS), stated that a range of alternatives would need to be addressed in the Environmental Assessment (EA). Ms. Hunkins responded that the document will address all alternatives equally. Agencies and the public will have opportunities to comment on the alternatives before selection by the NEPA/404 Merger Process Project Team.

Mr. Street asked if the alternatives only covered the already-relocated section of road near Buxton. Ms. Hunkins replied that the alternatives were being studied for the entire area between Buxton and Avon.

Mr. Jarrett then provided the group with a general description of each alternative as follows:

**Sheet Piling**

Description:

- Cut-off walls
- At-grade (not exposed)
- Penetration of 25-30 feet
- Parallel to road

Purpose:

- Prevent breach of island (inlet)

Permits:

- NPS Special Use Permit for sections outside of NCDOT right-of-way
- CAMA Permit (variance required)

Implementation Time:

- 3-4 months

Other Concerns:

- Will not prevent overwash
- Possible sea turtle habitat loss

### **Sandbags**

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|----------------------|---|
| Description:         | <ul style="list-style-type: none"><li>▪ At-grade (not exposed)</li><li>▪ Height: 8 feet</li><li>▪ Width: 20 feet</li><li>▪ Parallel to road</li></ul>   |
| Purpose:             | <ul style="list-style-type: none"><li>▪ Prevent breach of island (inlet)</li></ul>  |
| Permits:             | <ul style="list-style-type: none"><li>▪ NPS Special Use Permit for sections outside of NCDOT right-of-way</li><li>▪ USACE Permit (for filling of bags out of surf zone)</li><li>▪ CAMA Permit (variance required)</li></ul> |
| Implementation Time: | <ul style="list-style-type: none"><li>▪ 3-4 months</li></ul>  |
| Other Concerns:      | <ul style="list-style-type: none"><li>▪ Will not prevent overwash</li><li>▪ Possible sea turtle habitat loss or infringement</li></ul>  |

### **Beach Nourishment**

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|----------------------|---|
| Description:         | <ul style="list-style-type: none"><li>▪ 3.2 million cubic yards of sand (initially)</li><li>▪ Re-nourishment required every 4 years (1.2 million cubic yards of sand)</li></ul> |
| Purpose:             | <ul style="list-style-type: none"><li>▪ Prevent breach of island (inlet)</li><li>▪ Reduce frequency and severity of overwash</li></ul>  |
| Permits:             | <ul style="list-style-type: none"><li>▪ NPS Special Use Permit</li><li>▪ USACE permit</li><li>▪ CAMA Permit (variance required)</li></ul>                                       |
| Implementation Time: | <ul style="list-style-type: none"><li>▪ 6 months</li></ul>  |
| Other Concerns:      | <ul style="list-style-type: none"><li>▪ Cannot be implemented by upcoming hurricane season</li><li>▪ Sea turtle nesting and hatching season</li></ul>                           |

### **Road Relocation**

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|----------------------|---|
| Description:         | <ul style="list-style-type: none"><li>▪ North and south of relocated section</li><li>▪ Approximately 2.2 miles</li></ul>  |
| Purpose:             | <ul style="list-style-type: none"><li>▪ Reduce risk of road closure</li></ul>   |
| Permits:             | <ul style="list-style-type: none"><li>▪ NPS Special Use Permit for sections outside of NCDOT right-of-way</li><li>▪ USACE Nationwide Permit</li><li>▪ CAMA Permit</li></ul> |
| Implementation Time: | <ul style="list-style-type: none"><li>▪ 3 months</li></ul>  |
| Other Concerns:      | <ul style="list-style-type: none"><li>▪ Will not prevent breach of island</li><li>▪ Will not prevent overwash</li></ul>   |

Mr. Teeter requested that decisions not be affected strictly by whether work can be completed by the upcoming hurricane season. He suggested getting as much work done as possible by September instead of having to wait until the next hurricane season to implement an interim solution. Ms. Hunkins responded by saying that the goal will still be to work closely with the resource agencies in order to implement an alternative by June or July.

Mr. Street then raised a question about the source of sand for bags. The response was that the sand would come from the surf zone.

Ruth Boettcher, Wildlife Resources Commission (WRC), asked if sheet piles and sandbags would be positioned as close to the road as possible. USACE responded that they would.

Ms. Hunkins asked if there would be any maintenance difficulties for equipment used to scrape sand from the road with the sheet pile or sandbag alternative. USACE responded by saying that there should be little to no conflict.

Ms. Hunkins stated that getting the road open quickly after a storm is an important consideration. Mr. Jennings added that scour on the sound side is a potential problem because pavement can be lost there. Stan White, Dare County, asked about the impact of sound-side flooding on the road. Mr. Jarrett responded by saying that an inlet would not form, but there would likely be some loss of pavement. Mr. Teeter added that sound-side flooding recedes quicker than surfside flooding.

Steve Harrison, NPS, asked whether the goal of the interim improvement is to keep sand and water off of the road, prevent loss of pavement, and/or prevent an inlet. He stated that the goal needs to be determined before an alternative can be selected. Ms. Hunkins replied that the key is to make sure the road is accessible during evacuation and storm events. It may be closed for a time, but it should be able to be reopened quickly after a storm event. Some minor loss of pavement may be expected to occur. Sandy Sanderson, Dare County Emergency Management, added that the alternative should ensure the public has an evacuation window during daylight before winds exceed 40 miles per hour. The road should be open through at least one high tide cycle in order to get people off of the island at the last minute. Mr. Goins stated that a breach of the road should be prevented, at a minimum. Dr. Fisher commented that the models he and the Corps are using for their studies are set up for the prevention of a breach of the island, not prevention of overwash.

Mr. White suggested that equipment should be staged on both ends of Hatteras Island in order to clear sand from the road quicker. Mr. Teeter added that in the event of a storm, ferries used to bring equipment might not be able to travel

through Hatteras Inlet; therefore, equipment needs to be staged on Ocracoke Island. Mr. Goins commented that some equipment is mobilized at Buxton, but that additional equipment at Buxton and Avon is problematic due to the limited equipment available.

Jack Cahoon, NCDOT Ferry Division, stated that there is always the possibility of an inlet forming north of Buxton and north of Rodanthe during a storm. If an inlet is cut, USACE-maintained channels around Rodanthe and Avon could be used by the Ferry Division, and there should be an interim plan in place for such an event. Ms. Hunkins suggested looking at emergency plans in the recent report by the Ferry Division for ideas. Mr. Street stated that it would be a good idea to have ramps and landings in place. Mr. Goins commented that there would be a maintenance problem for ferries at Oregon Inlet. It was then suggested that the ferries be located in a more protected area. Landings are located at Rodanthe (county property) and at Avon (partially county property).

Dr. Fisher asked about the state's plan in the event of an inlet being formed. It was responded that the OBTF Emergency Protocols call for the group to meet to make a decision. Dr. Fisher and Charles Jones, DCM, agreed that there should be a preliminary plan to handle the situation when an inlet forms. Ms. Hunkins asked that a subcommittee be formed to look at emergency issues related to formation of an inlet in the interim. It was decided that two subcommittees would be appointed, one to look at the use of ferries for emergency evacuation, and one to look at options for the inlet (fill back in, leave it, dredge, etc.). It was agreed that the following agencies should be included in the subcommittees: NCDOT (Ferry Division and Division 1), DMF, USACE, DCM, NPS, USFWS and Dare County Emergency Management. Ms. Hunkins will coordinate with these agencies to appoint members. The subcommittees will report to the Task Force at the next meeting.

- **Offshore Sand Resources Study – Pea Island**

Bill Hoffman, NC Geological Survey, presented the last of four study sites to the Task Force. The Pea Island Study found approximately 79 million cubic yards of sand off of Northern Pea Island and approximately 62 million cubic yards offshore south of Rodanthe, which is enough to support projects on Pea Island. These two areas, also known as Wimble and Platt Shoals, are major flounder spawning areas.

A copy of the comprehensive report will be available to the Task Force in the near future. Full report requests should be sent to Ms. Hunkins. The report will also be posted on the OBTF web site. An executive summary of the Pea Island report is attached to these meeting minutes.

- **Web Page**

Colista Sugg, NCDOT, updated the Task Force on the status of the web page. Members of the Web Page Subcommittee were contacted in late December and

they submitted comments and suggestions. Jim Musselwhite, NCDOT, then presented the web page to the Task Force. It was agreed that current information on NC 12 and the Outer Banks should be included. The group also wrote down comments as they viewed the web page. Ms. Sugg shared the temporary Internet address with the group and asked that additional comments be sent to her by February 25.

- **Presentation – Offshore Geology – New Research Findings**

Stan Riggs, East Carolina University, presented research related to offshore geology of the Outer Banks. His findings show that North Carolina's Outer Banks are "sediment-starved," meaning that there is little sediment on the islands and little is naturally entering the system. There are also areas of "paleo-drainage" from the Pamlico Sound, which correspond to areas where, according to Dr. Riggs, inlets have formed and will re-form. These areas also correspond to the hot spots. He suggested that the southeast coast is entering a cycle of active hurricane seasons, as well as a flooding cycle (rise in sea level), which will cause even more change along the Outer Banks. He predicts that with strong storms within the next ten years, the hot spots could become inlets, and much of the Outer Banks will be lost. Rising sea level over the next 100 years could have the same result.

- **Expansion of Dare County Feasibility Study**

Ron Fascher, USACE, briefed the Task Force on plans to expand the Corps' feasibility study in Dare County to include Hatteras and Ocracoke Islands. The Corps received approval to cost-share the shore protection study. NCDOT will be the non-federal sponsor and responsible for 50 percent of the cost of the study, which may include in-kind contributions. The estimated total cost of the study is \$8 million, which may be reduced if the scope of the study is narrowed. The shore protection study will include a continuation of the Offshore Sand Resources Studies. Because NCDOT has already spent approximately \$1.5 million on the Offshore Studies, the state anticipates receiving credit towards its 50 percent share for that amount.

Currently, the study only includes a beach nourishment option, but USACE will push to include all other shore protection alternatives in the study. NPS commented that the study would probably lead to an Environmental Impact Statement (EIS); therefore, all alternatives should be studied.

Rolf Blizzard, Senator Marc Basnight's Office, asked about the level of support in Washington, D.C., and whether a Congressional Ad is needed for the \$8 million. He added that the current administration does not support shore protection, and it would not be included in the President's budget. USACE replied that they have authority, but no funding, for the study.

It was decided that scope should first be developed, followed by a feasible cost-sharing agreement. Funding should then be sought for the study. Other items that



are needed for the study are a letter of intent from the non-federal sponsor (NCDOT) and a resolution to include Ocracoke Island in the Dare County portion.

▪ **Agenda Items for Next OBTF Meeting**

- Buxton to Avon Interim Improvements Study update (NCDOT and USACE)
- Buxton to Avon Long-Term Study update (NCDOT and consultant)
- NC 12 Hot Spots (Julie Hunkins and Jerry Jennings)
- Dare County Shore Protection Feasibility Study update (USACE)
- Subcommittee Reports
  - Emergency plans in the event of inlet formation (in interim)
  - Use of ferries in the event of inlet formation (in interim)
  - Web Page update (Colista Sugg)

▪ **Next Meeting**

- Date: week of May 8 – will notify members by early April
- Place: Manteo