Minutes of October 15, 2003 Meeting of the
Bogue Inlet Project Delivery Team

1. **Mickey Sugg** opened the meeting indicating that most of the meeting would be devoted to reviewing the preliminary draft of the EIS (PDEIS). He indicated that we would review each section with the emphasis on major problems and concerns. Comments on the PDEIS should be provided by November 3 and can be submitted by mail or email. The Corps, State, and CPE will meet on 28 October to go over comments received by that date. This early meeting is needed in order to allow time to complete the Draft EIS by November 7. The Corps has scheduled a public hearing for December 8 and needs to get the public notice out 30 days prior to the meeting. Given the short period of time between closure of the comment period on the PDEIS and release of the DEIS, **Mickey** encouraged the PDT to get their comments in as early as possible.

2. **Mickey** asked **Erin Haight** to provide an update on the resource mapping. **Erin** said that the mapping was 90% complete and would be included in the DEIS.

3. **Mike Wicker**, US Fish and Wildlife Service introduced himself and said he would be participating in the project until its conclusion.

4. **Mickey** suggested deleting some of the subheading in the Table of Contents which was accepted by the PDT. **Mickey** also said that an executive summary would be included in the final but has been omitted from the PDEIS until selection of a preferred alternative.

<u>Review of Section 1 of the PDEIS</u>

5. **Todd Miller** had raised a previous question concerning applicable laws, specifically ones addressing mining and erosion control. **Mickey** checked with Judith Rhiner (sp?) and Dan Sams with the NC Land Quality Mining Section and was told that mining permits would not be required if the material is not being stockpiled for use somewhere else. Also, erosion control permits will not be needed as long as the first line of vegetation is not impacted. **Mickey** suggested waiting on review comments on the DEIS by the State to see if mining and erosion control laws need to be addressed.

6. **Todd** also said that the EIS needs to include the State Coastal Area Management Act (1974), the State's water quality standards as they relate to impacts on wetland.

7. **Noelle Lutheran** said that the project would have to comply with the North Carolina Administrative Code (15A NCAC 02B.0200) regarding water quality standards for surface water.

8. The Migratory Bird Act also needs to be discussed in Section 1.

9. **Todd Miller** initiated a discussion on land ownership, i.e., as it relates to new lands that would be created either directly or indirectly as a result of the project. The Town has received an opinion from the State Attorney General indicating that land raised above

mean high water in the areas north of the COLREGS Line either as a direct or indirect result of the project would be owned by the adjacent upland property owners. Therefore, the State of North Carolina would own any land that accretes to that portion of the Emerald Isle sand spit that it presently owns while accretion in other areas would revert to the upland property owners. **Mickey** said that the Attorney General's opinion needs to be summarized in the DEIS.

10. **Mike Wicker** expressed the importance of resolving the land issues early and include some definitive mitigation/conservation measures in the EIS. He said it would be a mistake to delay resolution of these issues until the final EIS. **Mike** suggested that a meeting with the affected property owners should take place to iron out details of any conservation measures that would involve land ownership issues or conservation easements. There was some general discussion of problems related to conservation easements including liability issues, enforcement, and willingness of all of the affected property owners to agree to the easements. **Mayor Schools** said the town is trying to set up a meeting with the property owners but have had scheduling problems. The town hopes to hold the meeting in November. ***(Note: additional discussion on the land issues occurred during the afternoon session which was devoted to mitigation/conservation measures.)***

11. **Sue Cameron** expressed some disagreement with the project needs and opportunities as they relate to the restoration of the inlet habitat. **John Fussell** agreed saying that the inlet environment is transitory and is in a constant state of change. The primary area along the inlet shoreline that would possible be enhanced is the 700-foot sandbag area, which is presently in a degraded condition.

Review of Section 2 of the PDEIS

12. **Mickey** said that he had some organizational suggestions. There were no comments from the PDT regarding Section 2. **Mickey** question **Noelle Lutheran** if the Division of Water Quality would need a public hearing or if the Public Hearing scheduled for December 8 could serve both purposes. This will have to be addressed later following the release of the DEIS.

Review of Section 3 of the PDEIS

13. No comments from PDT. **Mickey** indicated that elimination of infeasible alternatives is covered in Section 5.

Review of Section 3 of the PDEIS

14. **Sue Cameron** offered to work with **Erin** on the discussion related to migratory and other birds. Sue suggested combining inlet and beach resources as they relate to birds into one. **John Fussell** mentioned that Wilson's plovers depend on inlet resources and that their numbers are on the decline. **Mickey** said the discussion should focus on the results of the bird monitoring and provide specific information on the types of birds

observed in the Bogue Inlet area rather than on birds that could use the area. This information will be included in the DEIS and will be based on the monitoring results to date. **Sue Cameron** will provide a definition for colonial and shore birds.

15. **Sue Regier** said that the description of Hammocks Beach State Park needs to clarify that the park includes Bear Island, Huggins Island, and a site on the mainland. **Mickey** said the acreages of each should be given.

16. **John Fussell** said need to clearly define the habitat needs for piping plovers and other birds. **Howard Hall** said such a description can be found on the FWS website which includes a description of the critical habitat for piping plovers.

17. **Mike Wicker** again emphasized that the primary concern of the FWS is birds. While there may be some minor impacts on other species they manage, birds are paramount. Therefore, the DEIS needs to contain some very specific management proposals rather than generalizations.

18. **John Fussell** observed that the number of seabeach amaranth plants have increased and that the end of the island environments may be important to their propagation. **Howard Hall** suggested contacting Dale Suiter of the Raleigh FWS office to find out the result of ongoing research on seabeach amaranth. **Rudi** reported that the number of plants in the recently nourished areas along Bogue Banks increased from 1,200 last year to over 4,000 plants this year.

19. **Todd Miller** stated that the inlet shoals are used heavily by boaters. He indicated that boats also regularly land their boats on the north end of the spit as this is the only deepwater point. This activity will have to be addressed in the formulation of any conservation measures.

20. **Matthew Godfrey** noted that some of the information on turtles is out of date. He said he would work with **Erin** to update the information.

21. **Mickey** asked if diamond back terrapins probably don't use the inlet proper but may be found in the back marshes. Diamond back terrapins have State status but not Federal.

22. **Mike Marshall** said that the EIS does not need to include catfish and yellow perch but should address larval transport into the inlet. **Erin** said that larval transport is covered in the CEA and some of that information will be added to the DEIS.

23. **Mickey** asked if the statement that turbidity would not exceed 25 NTU was too strong. **Noelle** said that she had not completed her review of the EIS but believed that the statement was based on engineering studies. **Todd** said that **Jarrett** had responded to his questions regarding turbidity and material losses associated with the dike construction.

24. **Jarrett** said that turbidity issues for the project need to be weighed in light of the ongoing maintenance dredging activity that disposes 200,000 cy/yr into the channel.

Dredging and open water disposal has actually ranged from 400,000 cy to 600,000 cy during the last 3 years. Relocation of the channel and construction of the sand dike, which will involve the disposal of 200,000 cy into the existing channel, will essentially replace maintenance dredging for at least one year and possibly two years. **Noelle** said that will need to go through the water quality permit process first to see if a permit is denied prior to moving on to the variance process. **Mike Wicker** said that one of the main concerns with turbidity is its temporal impact. **Jarrett** said that the engineering analysis of suspended sediment during the construction of the dike indicated that sediment would not be transported north of the confluence of the inlet channel and Eastern Channel. **Mickey** said that dike construction would only take 6 to 10 days. **Todd** asked if material would be stockpiled adjacent to the channel and then pushed into the channel during slack water. **Jarrett** said the plan is to pump material directly into the channel without stockpiling. There would not be enough time around slack water to push the volume of material needed to construct the dike into the channel. **Todd** questioned the currents used to model the dike construction. **Jarrett** said that the currents were based on the results of the numerical model with the channel fully opened and with the dike 50% complete. The currents during the entire dike construction period remained about the same.

25. **Mickey** said that land use needs to be broken down between the inlet shoreline and the ocean beach.

Table 8 Discussion

26. **John Fussell** asked a question regarding the definition of direct, indirect, and cumulative impacts. **Howard Hall** said that he distinguishes direct and indirect by time and space. Cumulative impacts would be based on the impacts of the present project weighed against the impacts of similar projects. What he is looking for are cumulative impacts that would "break the camels back". **Mickey** explained that direct impacts would occur during the time of construction while indirect impacts would occur over time, for example, the movement of sediment from its disposal area to some other location.

27. **Jarrett** said that Table 8 is a summary of the impacts outlined in Section 5 and that the revised table reflects some changes in Section 5 that were made following the initial distribution of the PDEIS. ***(Note: A copy of the revised Section 5 was mailed to the PDT on 16 October 2003)***.

28. **Mike Wicker** said that bird management is going to be the major issue for FWS. He stressed the need to develop the details of the management plan as early as possible. He indicated a willingness to meet and work with the town, property owner, and agencies to hash out the details of the management plan. **Mike** said David Rabon will provide comments on the Biological Assessment by early next week and could have some specific recommendation at that time. **Mike** said that development of the management plan is not just saying what we want but what are we going to get? **John Kilgore** questioned the need for a management plan since we are simply restoring habitat that had

been there before. **Jarrett** said that we are looking for ways to enhance the environment not simply restore it.

29. **John Fussell** said that piping plovers depend on migratory inlets and overwash areas yet Table 8 indicates that fixing the inlet will result in more piping plover habitat. This also raised questions with the representation given to turtle habitats and seabeach amaranth. As a result of these comments, Table 8 will be revised to tone down the positive impacts on piping plovers, turtles, and seabeach amaranth associated with Alternatives E and F. The only potential improvement in turtle habitat will be in the area presently protected by the sandbags.

30. **Todd** suggested listing Hammocks Beach State Park as a separate resource. However, **Mickey** pointed out that the impacts on the State Park are included in the discussion of impacts on the various resources.

31. **Todd** questioned how uncertainty, i.e., the uncertainty with the predicted changes in the inlet and adjacent shoreline, would be addressed in the mitigative measures. **Erin** said that the DEIS will include a figure showing the historic shoreline positions on both Emerald Isle and Bear Island. **Mickey** indicated that the uncertainty issue would be addressed in the mitigation section that is to be added to Section 5.

32. **Doug Huggett** said that statements regarding sea turtle nesting on Bogue Banks during the last couple of years should only present the data and not draw any conclusions unless there is a scientific basis or study that supports the conclusions.

33. **Sue Cameron** questioned the omission of negative impacts on Dudley Island for Alternatives E and F noting that erosion of the island is likely to continue under all alternatives. **Jarrett** agreed saying that there would be a respite period without erosion under Alternatives E and F until the sand spit redevelops. Table 8 and the write-up in Section 5 will be changed to reflect this.

34. **Sue Regier** asked if there would be any impacts on Cow Channel, specifically, could the project cause and increase in shoaling? **Jarrett** said that the numerical model did not show any changes in the hydraulics for Cow Channel or the Atlantic Intracoastal Waterway and without some change in the sediment transport parameters there would not be any impact on Cow Channel. **Sue Regier** indicated that some secondary channels leading from Western Channel connect with Cow Channel and asked if sediment could be transported through these channel and deposit into Cow Channel. **Jarrett** said that the sediment that would be scoured during the one to two month channel adjustment period would be transported along the bottom of the channel as bed load and would not move into Cow Channel.

35. **Mike Wicker** reiterated his willingness to work with the town and the property owners to develop a bird management plan that all could accept. **Mayor Schools** said that the town wanted to meet separately with the property owners to discuss options. After that meeting, he would welcome the interaction with the FWS and other agencies.

36. **Mickey** said that the DEIS will include a specific mitigation plan for the preferred alternative. **Mickey** said the elements of the mitigation plan will include conservation easements, posting, and impacts to Bear Island.

37. The PDT agreed to meet after lunch to hash out mitigative measures.

Mitigation Measures

38. **Doug Huggett** said that need to take into account lessons learned from the Mason Inlet project. For example, fencing the area to prohibit public access is against Division of Coastal Management regulations. **Mickey** said that the mitigation plan for Mason Inlet is based on providing information to the public to explain the purpose of the bird management plan and explain why access to certain areas is restricted. **Mickey** said it is important that visitors to the inlet understand the restrictions. **Mike Wicker** said that he had talked with Walker Golden of the Audubon Society said that the Audubon Society was interested in participating in a bird management plan for Bogue Inlet.

39. There was some general discussion on land ownership and where restrictive access should be located. **Sue Cameron** said that the area located on the extreme north end of the existing sand spit is important foraging habitat for piping plovers and other birds. This area should be protected by ropes and/or posting. **Todd** indicated that boaters often pull their boats into the slough. **Rudi** questioned why restrictions could not be established now given that the land in question is already State land. **Rudi** asked why is the town being asked to impose these restrictions? **Sue Cameron** said that the project would result in a change in use, specifically restoration of public access.

40. **Todd** asked if the town intended to reestablish public access to the inlet. **Mayor Schools** said that the citizens would like to have the access restored; however, if access is judged to be detrimental, then the town would not let it happen. Presently, vehicular access to the beach is only allowed between October 1 and March 31. **Rudi** said that if access is reestablished, vehicular access north of the ramp should be prohibited, i.e., vehicles would only be allowed to drive toward the ocean once on the beach.

41. **Mickey** said he recalled having seen some mitigative measures in a previous draft; however, **Erin** pointed out that they are in the draft Biological Assessment (BA). **Mickey** said that he would send out that section of the BA to the PDT.

42. **Frank Rush** provided an update on the planned meeting with the Pointe property owners. He hopes to get them together on a Saturday in early November to go over the various options and explain the changes anticipated with the project. He said there are a couple of options; first would be to have the property owners deed everything west of a line to the town or include everything west of a line into a conservation easement. **Frank** said that the property owners would need to retain enough land that would allow them to meet the CAMA setback should the structure be lost to fire or some other catastrophe.

Frank also said that he wanted to have the town boundaries amended to include the inlet area.

43. **Mike Wicker** said he favored deeding property to the town. Also, extending the town boundaries to include the inlet area would go a long way to resolving issues. **Frank** said that he presently does not have any authority to control dogs.

44. **Mickey** initiated a discussion on Fishery management. **Mike Marshall** said what we have talked about is what we think will happen, what about things that happen that were not predicted? **Jarrett** said that monitoring of the area would include a duplication of the recent aerial photos and ground truth approximately 1.5 years post-construction and based on the results of that monitoring, mitigative requirements would be developed at that time. Of course, this puts a big unknown on the town as far as future costs are concerned. While impacts outside the Permit Area are not anticipated, there was agreement to include some know shellfish areas outside the permit area to monitor for sedimentation and other negative impacts. **Noelle** agreed that monitoring of selected areas outside the Permit Area should be included in the plan.

45. **Mickey** questioned the need to continue benthic monitoring in the beach nourishment area. He asked **Mike Marshall** to get with **Ron Sechler** to see if they want to include benthic sampling along the beach nourishment area.

46. **Todd** asked how far are you taking things that can go wrong? For example, what if the channel migrates to the west, should mitigation plan include what would be done if that happens? **Mickey** said that would be included in the proposed mitigation plan. **Mickey** mentioned that the town is considering the possibility of purchasing land that could be given to the State to mitigate for any future impacts.

47. **Doug Huggett** said that if thresholds are included in any plan that the details need to be tightly defined and the response to exceeding the thresholds made very clear. **Mickey** said that mitigation for unanticipated changes on Bear Island and Emerald Isle would be included in the new mitigation section for Chapter 5.

48. **Ed Murphrey** mentioned the concept proposed by Coastal Science and Engineering to establish 1,000-foot lines east and west of the relocated channel and should the channel migrate outside of this corridor then the channel would be repositioned. **Mickey** pointed out that this would fall under the inlet management alternative which has been eliminated due to costs and time associated with implementing such a plan. Management of the inlet may be included in the long-term storm damage reduction project being formulated by the Corps of Engineers. **Ed** asked if it would be a big deal to change the maintenance practices to keep the channel in a fixed location to which **Mickey** responded, yes. This type of change would require new congressional authorization.

49. **Mickey** restated that the comments should be submitted to him via mail or email by November 3 or earlier if possible. The Corps and State will meet with CPE on 28

October to go over comments received by that time. The Public Hearing will be on December 8.

50. The next meeting of the PDT will be December 4, 2003 at 10:00 am in the Emerald Isle Town Hall.

List of Participants
October 15, 2003 Bogue Inlet PDT Meeting

Name	Representing	Phone Number
Tom Jarrett	CPE-NC	910-392-0453
Erin Haight	CPE-FL	561-391-8102
Mickey Sugg	USACE	910-251-4811
Dave Melteny	NC Wildlife Res. Comm.	252-946-6481
Doug Huggett	NC DCM	919-733-2293 ext 245
Gary Beecher	NC DWQ	910-395-3900
Noelle Lutheran	NC DWQ	910-395-3900
Greg “Rudi” Rudolph	Carteret County	252-393-2663
Bill Ennett	Cedar Point	252-393-8123
Ed Murphrey	Pointe Association	252-746-3784
Mike Marshall	NC Marine Fisheries	252-726-7021
Sue Regier	NC Div. Parks & Rec.	919-715-8694
Susan Cameron	NCWRC	910-325-3602
Mary Helen Casey	Lands End	252-354-2925
Mike Wicker	USFWS	919-856-4520 ext 22
Howard Hall	USFWS	919-856-4520 ext 27
Matthew Godfrey	NCDMF	252-726-7021
Todd Miller	NCCF	252-393-8185
Art Schools	Mayor Emerald Isle	252-354-3424
Frank Rush	Town Manager Emerald Isle	252-354-3424
John Kilgore	Emerald Isle	252-354-7084
Michelle Duval	Environmental Defense	919-881-2601
John Fussell	Local Biologist	252-240-1046
Ted Tyndall	NC DCM	252-808-2808

Comments received following October 15, 2003 PDT meeting

From: Tom Jarrett
Sent: Wednesday, October 01, 2003 10:42 AM
To: toddm@nccoast.org
Cc: crv89@earthlink.net; Steve.Benton@ncmail.net; ncsbpa@mindspring.com; john_wells@unc.edu; caroline.bellis@ncmail.net; rudi@co.carteret.nc.us; frush@emeraldisle-nc.org; Mickey.T.Sugg@saw02.usace.army.mil; matthews.kathy@epa.gov; Tere.barrett@ncmail.net; glenn.mcintosh@saw02.usace.army.mil; mduval@environmentaldefense.org; Craig Kruempel; Erin Haight; Robert.E.Sattin@saw02.usace.army.mil; jims@nccoast.org; david_rabon@fws.gov; ron.sechler@noaa.gov; john.dorney@ncmail.net; aschools@emeraldisle-nc.org; bennett@ec.rr.com; brian.strong@ncmail.net; dale_suiter@fws.gov; allend@coastalnet.com; david.mchenry@ncwildlife.org; doug.huggett@ncmail.net; emurphrey@copypro.net; Hugh.Heine@saw02.usace.army.mi; tdelmore@ec.rr.com; jfuss@clis.com; johnk@clis.com; larry.eaton@ncmail.net; mhcasey@hotmail.com; godfreym@coastalnet.com; mike.marshall@ncmail.net; noelle.lutheran@ncmail.net; ron_lewis@co.onslow.nc.us; sam.bland@ncmail.net; camerons@coastalnet.com; David.L.Timpy@saw02.usace.army; fox.rebecca@epa.gov; christopher.c.frabotta@saw02.usace.army.mil; howard_hall@fws.gov; john_ellis@fws.gov; justin.p.mccorcle@saw02.usace.army.mil; ted.tyndall@ncmail.net; Trish.Murphey@ncmail.net
Subject: Re: Questions on EIS Draft
In a message dated 9/30/2003 5:09:57 PM Eastern Daylight Time, toddm@nccoast.org writes:
Tom,

I have just started reviewing the draft EIS for Bogue Inlet and had a few quick questions regarding the construction of the dike in the inlet channel:

(1) Does the estimate of the volume of sand it will take to build the dike include what will be lost into the surrounding waters? The calculations in the engineering report seem to indicate that's the case--the dredge will pump for 9.5 days averaging 900 cubic yards/hour.
Reference Section 6 of the Engineering, Geology, and Geotechnical Report. The time required to raise the dike to elevation 2.5 feet above NGVD was 6.5 days requiring 141,200 cubic yards. Once raised to this level, the dike would be capped with an additional 8,100 cubic yards to raise the dike to its final elevation of 4.5 feet NGVD (equal to the elevation of the sand spit). Thus the total volume for the dike is 149,300 cubic yards. This computed volume was increased by about 35% to account for losses resulting in a total construction volume of 200,000 cubic yards.
(2) If a percentage of sand pumped is lost to the environment during dike construction, what will be the final volume of sand in the dike itself? Is it possible to provide a three dimensional illustration that shows the length, widths, and height of the finished dike?
Again reference Section 6 in the Engineering Report. The bottom width of the dike was based on the fall velocity of the median grain size (.188 mm) of the material that would be removed to construct the dike and the full cycle of current velocities flowing in the existing channel. The velocites in the channel were based on the results of the numerical model for the channel fully opened and with the dike 50% complete. The schematic of the dike cross-section shown in the report (figure 6.6) indicates a bottom width of 700 feet where the existing channel depth is -6 feet NGVD. Note that the inferred side slopes of the dike would be around 1V:35H, which again would be dictated by tidal currents and the travel distance of the material. The bottom width would be wider for deeper sections of the channel. For example, the maximum depth of the channel where the dike would be constructed is about -12 feet NGVD which would result in a total bottom width of around 1,100 feet. Since only 1.25% of the material is less than .062 mm (i.e., silt) most of the material would be retained in the dike. The sediment plume from the dike construction is shown on Figure 6.1 and would not extend beyond the juncture of Eastern Channel and the inlet channel. The allowance for an additional 35% in the construction volume to account for losses includes this 1.25% silt content.

We will attempt to provide a 3-D view of the dike at the next PDT.

(3) It states in the report that for the purposes of the model, an average width of 1,200 feet was used for the channel. The report also states that the width of the channel is actually between 1,650 and 1,800 feet. Why wasn't the actual width of the channel used for the model? Would using the larger distance increase the amount of sand needed for dike construction by another 30%?

Actually, in checking the computations for the dike construction, I realized that I used a width of 1,450 feet rather than 1,200 feet. We will make this correction for the DEIS.

The width of the channel varies from approximately 0 feet at a depth of -12 ft NGVD, 350 feet at a depth of -8 feet NGVD, 1,000 feet at a depth of -6 ft NGVD, 1,450 feet at 0 NGVD, and 1,700 feet at elevation +4.5 ft NGVD (see Figure 6.2 in the Engineering Report). The cross-sectional area of the channel at this location is approximately 9,400 sq ft measured relative to NGVD. The 1,450 foot width used to determine the volume required to construct the dike was based on the width of the channel at mid depth (i.e., 0-ft NGVD). For the cross-section of the channel shown on Figure 6.2, using a width of 1,450 feet results in an average depth of the cross-section of around -6.5 feet NGVD. This average depth at NGVD was used to determine fall distances for the medium particle size which led to the estimated volume to construct the dike.

In other words, the volume of material needed to construct the dike was actually based on the cross-sectional area of the channel not just the channel width. As discussed above, the computed volume was increased by 35%.

(4) DOT is estimating it will lose about 30-40% of the sand it pumps to fill the inlet on Hatteras Island using a 30" pipeline dredge. Would that loss rate be similar to what would happen at Bogue Inlet? What size pipeline dredge will be used at Bogue Inlet?

Construction of the dike was based on the use of a 30-inch pipeline dredge. As noted in the Engineering Report, a dredge of this size pumping material through the relatively short pipeline should be able to pump 1,500 cubic yards/hour, however, our estimate of the time required to construct the dike was based on a production rate of 900 cy/hr. Again, the volume estimates include assumed losses of 35%.

Thanks for the clarifications on these issues.

Todd

Thanks for your early comments. Keep them coming.

Tom

From: Todd Miller [toddm@nccoast.org]
Sent: Monday, October 06, 2003 4:52 PM
To: Sugg, Mickey T SAW
Cc: Tom Jarrett; Frank A. Rush
Subject: 1.7 PERMITS, LICENSES AND ENTITLEMENTS -- Several Omissions

Mickey et al:

There are several significant omissions in the following section **(1.7 PERMITS, LICENSES AND ENTITLEMENTS)** that you may want to address:

1. Clean Water Act: The existing section focuses on NPDES (does this mean that a dredge pipe discharge needs an NPDES permit?), wetland, and 401 requirements. While it mentions water quality standards, and doesn't provide any background on what they are and the various water quality classifications that are impacted by this project. Specific water quality classifications and standards that are applicable to this project should probably be listed, including those assigned to SA, ORW, SB and HQW waters. It should also be noted that the NC General Assembly has it's own set of water pollution laws that are applicable to this project as well.

2. The NC Coastal Area Management Act of 1974 including it's numerous regulatory requirements (i.e., no permit can be issued that results in a violation of water quality standards).

3. The NC Sedimentation and Erosion Control Act of 1973.

4. The NC Mining Act.

5. Public Trust Laws and Common Law Rights: NC has enacted laws that deal with public trust rights to raised properties. There are also constitutional public trust rights as well. These need to be explained since they will have a major impact on land ownership issues that the project will have to address.

Todd

Todd Miller
Executive Director
North Carolina Coastal Federation
3609 Highway 24 (Ocean)
Newport, NC 28570
252-393-8185
252-393-7508 (fax)
www.nccoast.org

From: Sue Regier [sue.regier@ncmail.net]
Sent: Monday, October 20, 2003 3:17 PM
To: Erin Haight
Cc: Brian Strong; sam bland; sean mcelhone; Paul Donnelly
Subject: Acreages for Hammocks Beach SP

Erin,

Here is the acreage information I said I would get you after the meeting last Wednesday. This is my first day back in the office since I saw you at the meeting.

There are three sections to Hammocks Beach State Park totalling 1,137 acres.

The largest section of Hammocks Beach State Park is Bear Island containing approximately 892 acres. 700 acres of Bear Island is a Registered Natural Heritage Area with the Natural Heritage Program.
This Registry recognizes the fact that Bear Island is an undeveloped barrier isalnd with the natural dynamics of the coastal forces shaping the island and its habitats. Bear Island contains a mosaic of the Dune Grass, Maritime Wet Grassland, Maritime Shrub, and Maritme Evergreen Forest natural communities.

The second largest section is Huggins Island containing approximately 210 acres (approximately 115 acres of this is uplands with Maritime Evergreen Forest - the remainder --95 acres-- is Maritime Swamp Forest and Tidial Marsh)

The smallest section is the Mainland section containing about 35 acres.

From our perspective, when you say Hammocks Beach State Park it refers to all three sections not just Bear Island.

Also, both Bear Island, Huggins Island, and Dudley are Significant Natural Heritage Areas under the Natural Heritage Program's
classification. Bear Island is also a Registered Natural Heritage
Area.

Brian will be sending the information of the dredging of Cow Channel that you requested at the meeting last Wednesday. Let me or Brian know if you have further questions.

Sue
--
Sue Regier, Head
Resource Management Program
NC Division of Parks and Recreation
voice: 919-715-8694
fax: 919-715-3085

email: Sue.Regier@ncmail.net

From: McHenry, David G. [david.mchenry@ncwildlife.org]
Sent: Monday, October 20, 2003 10:40 AM
To: Tom Jarrett
Cc: crv89@earthlink.net; Steve.Benton@ncmail.net; ncsbpa@mindspring.com; john_wells@unc.edu; caroline.bellis@ncmail.net; rudi@co.carteret.nc.us; frush@emeraldisle-nc.org; Mickey.T.Sugg@saw02.usace.army.mil; matthews.kathy@epa.gov; Tere.barrett@ncmail.net; glenn.mcintosh@saw02.usace.army.mil; mduval@environmentaldefense.org; Craig Kruempel; Erin Haight; Robert.E.Sattin@saw02.usace.army.mil; toddm@nccoast.org; jims@nccoast.org; david_rabon@fws.gov; ron.sechler@noaa.gov; john.dorney@ncmail.net; aschools@emeraldisle-nc.org; bennett@ec.rr.com; brian.strong@ncmail.net; dale_suiter@fws.gov; Allen, David H.; McHenry, David G.; doug.huggett@ncmail.net; emurphrey@copypro.net; Hugh.Heine@usace.army.mil; tdelmore@ec.rr.com; jfuss@clis.com; johnk@clis.com; larry.eaton@ncmail.net; mhcasey@hotmail.com; Godfrey, Matt H.; mike.marshall@ncmail.net; noelle.lutheran@ncmail.net; ron_lewis@co.onslow.nc.us; sam.bland@ncmail.net; Cameron, Sue; David.L.Timpy@usace.army.mil; fox.rebecca@epa.gov; christopher.c.frabotta@saw02.usace.army.mil; howard_hall@fws.gov; john_ellis@fws.gov; justin.p.mccorcle@saw02.usace.army.mil; ted.tyndall@ncmail.net; Trish.Murphey@ncmail.net
Subject: RE: Minutes of the Oct 15 PDT meeting

Follow Up Flag: Follow up
Flag Status: Flagged
Tom,

Thanks for the meeting notes. I have only one clarification I would like to suggest. Number 11 states that " There was general agreement to limit the impacts to the 700 feet of inlet shoreline presently protected with sandbags." I believe this should be rewritten/clarified to note that the limit of any possible restoration of inlet shoreline from any new channel construction should be the sandbag area, which currently represents a degraded condition. However, this is even a tenuous assertion because it really isn't direct restoration anyway as this area would be expected to fill in relatively quickly (?) along with much of the remaining portion of the natural inlet channel. Consequently, the net gain or loss of inlet shoreline from the project needs to be tabulated (if it is not already in the EIS) to get a perspective on the project's overall impacts. For example, immediately following construction, a mid-line oriented channel would create X linear feet of fairly straight inlet shoreline and eliminate Y linear feet of meandering natural inlet (minus the 700 feet of degraded sandbag area). Granted the longer-term balance in inlet shoreline habitat would vary as any newly constructed channel begins to move (if it does) and areas of the preexisting inlet fill in.

Thanks,

Dave McHenry
NE Coastal Region Coordinator

Habitat Conservation Section
NC Wildlife Resources Commission
252/946-6481 extension 345

-----Original Message-----
From: Jtomjarrett@aol.com [mailto:Jtomjarrett@aol.com]
Sent: Saturday, October 18, 2003 4:25 PM
To: crv89@earthlink.net; Steve.Benton@ncmail.net; ncsbpa@mindspring.com; john_wells@unc.edu; caroline.bellis@ncmail.net; rudi@co.carteret.nc.us; frush@emeraldisle-nc.org; Mickey.T.Sugg@saw02.usace.army.mil; matthews.kathy@epa.gov; Tere.barrett@ncmail.net; glenn.mcintosh@saw02.usace.army.mil; mduval@environmentaldefense.org; ckruempel@coastalplanning.net; ehaight@coastalplanning.net; Robert.E.Sattin@saw02.usace.army.mil; toddm@nccoast.org; jims@nccoast.org; david_rabon@fws.gov; ron.sechler@noaa.gov; john.dorney@ncmail.net; aschools@emeraldisle-nc.org; bennett@ec.rr.com; brian.strong@ncmail.net; dale_suiter@fws.gov; allend@coastalnet.com; david.mchenry@ncwildlife.org; doug.huggett@ncmail.net; emurphrey@copypro.net; Hugh.Heine@usace.army.mil; tdelmore@ec.rr.com; jfuss@clis.com; johnk@clis.com; larry.eaton@ncmail.net; mhcasey@hotmail.com; godfreym@coastalnet.com; mike.marshall@ncmail.net; noelle.lutheran@ncmail.net; ron_lewis@co.onslow.nc.us; sam.bland@ncmail.net; camerons@coastalnet.com; David.L.Timpy@usace.army.mil; fox.rebecca@epa.gov; christopher.c.frabotta@saw02.usace.army.mil; howard_hall@fws.gov; john_ellis@fws.gov; justin.p.mccorcle@saw02.usace.army.mil; ted.tyndall@ncmail.net; Trish.Murphey@ncmail.net
Subject: Minutes of the Oct 15 PDT meeting

Minutes for the Oct 15 PDT are attached. Please look them over and let me know if I have missed any points or misinterpreted what was said.

Thanks,
Tom

From: Matthew Godfrey [godfreym@coastalnet.com]
Sent: Monday, October 20, 2003 4:37 PM
To: Erin Haight
Subject: Re: Bogue PDEIS - Turtles

Hi Erin,

The Duke grad student is Kristin Hart, and her email is: kmh5@duke.edu I heard that she just left for field work for at least a week, so you might
not be able to contact her right away.

Sue Cameron forwarded me the .doc version of section 4 of the draft EIS. I have gone through the sections that include info on sea turtles, and have tried to add suggestions, corrections, or simple questions. Many of the references were not listed in the Literature Cited section and I don't know them all offhand (particularly the Ripple reference). I have suggested other references that may be more suitable. I was a bit confused why section 4.6.2 (page 30) makes more reference to the Chesapeake Bay than inshore waters of North Carolina. I think it would be more appropriate to stick to the waters of NC in this document; there are a number of publications and reports available on the subject such that you don't have to resort to using so much information from the Chesapeake Bay.

I am willing to take another look at the turtle sections after they have been revised. If you do send it to me, please include a list of literature cited.

thanks,
Matthew

At 09:12 AM 10/20/03, you wrote:
>Matthew:
>You stated during the 10/15/03 PDT meeting that you had comments
>regarding
>the turtle sections in the PDEIS. I'm not sure how extensive your
>comments are and what would be the best way to supply your comments to
>me. If possible, we'd prefer that your comments come in sooner rather
>than later so that we are not rushed to address them. So please let me
>know if you'd prefer a phone conversation or sections of the PDEIS to edit.
>Also, you indicated that there is a Duke graduate student who is familiar
>with diamondback terrapins. Could you please forward her contact
>information to me?
>Thanks again for your assistance and guidance.
>
>Erin A. Haight
>Environmental Scientist
>Coastal Planning & Engineering, Inc.
>2481 N.W. Boca Raton Blvd.
>Boca Raton, FL 33431
>Phone (561)391-8102

From: Matthew Godfrey [godfreym@coastalnet.com]
Sent: Tuesday, October 21, 2003 3:13 PM
To: Christie Barrett
Subject: Re: Sea Turtle CEA Draft corrections

Hi Christie,

I quickly looked over the revised version, and it looks fine. One thing that you might consider changing is every reference to Ripple 1996. If I remember correctly, this is more of a coffee-table book than a biological text. For a general overview of green turtle biology, there is: Hirth, H. F. 1997. Synopsis of biological data on the green turtle Chelonia mydas (Linnaeus, 1758). 97(1), U.S. Dept. of the Interior, Fish and Wildlife Service.
For a general overview of Kemp's ridleys:
Marquez, M. R. 1994. Synopsis of biological data on the Kemp's ridley turtle, Lepidochelys kempi (Garman, 1880). NOAA Tech Mem. NMFS-SEFC-343. For hawksbills: Witzell, W. N. 1983. Synopsis of biological data on the hawksbill turtle Eretmochelys imbricata (Linnaeus, 1766). FAO Fisheries Synopsis FAO, Rome, 78pp.
For loggerheads:
Dodd, C. K. J. 1988. Synopsis of the Biological Data on the Loggerhead Sea Turtle Caretta caretta (Linnaeus 1758). Biological Report 88 (14), USFWS, 110pp.
For leatherbacks:
Pritchard, P. C. H. 1971. The leatherback or leathery turtle, Dermochelys coriacea. IUCN Monograph IUCN, Morges, Switzerland, 39pp.

Also, I am not sure what the NCWRC 1998 reference refers to (probably a letter or communication) but I assume you will provide copies should anyone ask to see it.

best,
Matthew

From: NC WILDLIFE RESOURCES COMMISION [camerons@coastalnet.com]
Sent: Wednesday, October 22, 2003 1:53 PM
To: Erin Haight
Cc: Melissa Green
Subject: Bogue Inlet Channel Relocation - PDEIS

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Erin,
I've attached section 4 with my comments on piping plovers and waterbirds. I've edited what you have and also added comments on the overall content of some sections with suggestions on things you may want to change. In general, I think the most important point to get across in this section is what birds utilize Bogue Inlet and the value of natural inlets to waterbirds. I also think John Fussell's suggestion of going into more detail on the biology and different microhabitat needs of piping plovers is a good one. That information can be found in the Federal Register for Critical Habitat and the Piping Plover Recovery Plan (both available online). A couple of good references that may help you are:

"The Sibley Guide to Bird Life and Behavior" by David Allen Sibley - gives some good general information
Parnell, J.F. and M.A. Shields. 1990. Management of North Carolina's Colonial Waterbirds. Sea Grant Publication UNC-SG-90-03. Brown, S., C. Hickey, B. Harrington, and R. Gill, eds. 2001. The U.S. Shorebird Conservation Plan, 2nd ed. Manomet Center for Conservation Sciences, Manomet, MA. - available online at http://www.manomet.org/USSCP/files.htm
Kushlan, J.A., et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, DC, USA, 78 pp - available online at www.waterbirdconservation.org

I would also like to clarify some terms. The term 'waterbird' refers to any bird species that uses aquatic habitat. It includes several subsets such as shorebirds (refers to a group of migratory birds commonly called sandpipers and plovers, but also includes oystercatchers, avocets, and stilts; most of these birds can be found along shorelines, especially in migration, but they are also found inland, upland, on arctic tundra or at sea) and colonial waterbirds (refers to birds that nest in groups called colonies and includes terns, skimmers, herons, egrets, gulls, ibis and pelicans).

Please feel free to call me if you have question on my comments or questions on waterbirds in general. Thanks for giving me the opportunity to comment.

Sue Cameron
North Carolina Wildlife Resources Commission
Waterbird Biologist
253 White Oak Bluff Road
Stella, NC 28582
910-325-3602
camerons@coastalnet.com

From: NC WILDLIFE RESOURCES COMMISION [camerons@coastalnet.com]
Sent: Friday, October 24, 2003 2:53 PM
To: Erin Haight
Subject: RE: Bogue - Colonial Waterbirds

Follow Up Flag: Follow up
Flag Status: Flagged

Erin,
It may be easier if I just tally the information you are most interested in presenting rather than sending you a huge chunk of the database to wade through. Are you most interested in presenting data from 1977 (when the coast-wide surveying effort began) and comparing it with the most recent data (2001)? Also, which species would you like to show? I think it is most important to discuss species that have used or could use Bogue Inlet for nesting. Many of these species are showing declines and are the ones we are most concerned about. Common terns, gull-billed terns and black skimmers (all early successional nesters) have shown some of the most significant declines. Other early successional nesters such as least terns are vulnerable to the same threats as these other species. I also think it's important to mention the loss of nesting sites for these species. Not only are fewer of these species nesting in the state, but they are also nesting in fewer locations. This means there are fewer suitable nesting sites and these species may be more vulnerable to catastrophic events. In other words, if the birds are nesting at fewer sites, a catastrophic event at one nesting site could destroy a large portion of the nesting effort in the state. I feel like I'm rambling now, but my point is, we really need to think about the entire coastline when evaluating these projects. O.K, after all of that…I've attached a file with some numbers for the species I mentioned. I hope this helps. Let me know if you want to add any other years or species.

Sue Cameron
North Carolina Wildlife Resources Commission
Waterbird Biologist
253 White Oak Bluff Road
Stella, NC 28582
910-325-3602
camerons@coastalnet.com

-----Original Message-----
From: Erin Haight [mailto:Ehaight@coastalplanning.net]
Sent: Friday, October 24, 2003 11:15 AM
To: camerons@coastalnet.com
Subject: Bogue - Colonial Waterbirds

Sue:
Regarding the tern and skimmer nests, I've included the reference link for the National Park Service site regarding terns and skimmers in 1977, for your information.

http://www.nps.gov/caha/colon_bird.htm

As discussed during our phone conversation today, we are interested in referencing the NCWRC data instead. Could you please provide your historic data set, or a summary of, for inclusion into the report.

Thanks again

Erin A. Haight
Environmental Scientist
Coastal Planning & Engineering, Inc.
2481 N.W. Boca Raton Blvd.
Boca Raton, FL 33431
Phone (561)391-8102
Fax (561)391-9116
www.coastalplanning.net

From: NC WILDLIFE RESOURCES COMMISION [camerons@coastalnet.com]
Sent: Wednesday, October 29, 2003 1:56 PM
To: Mickey.T.Sugg@saw02.usace.army.mil; Erin Haight
Subject: Additional Comments on DEIS for Bogue Inlet channel relocation

Hi Erin,
I've attached some comments on Section 1 and 5 of the DEIS. Thanks for giving me the opportunity to review. Take care.

Sue Cameron
North Carolina Wildlife Resources Commission
Waterbird Biologist
253 White Oak Bluff Road
Stella, NC 28582
910-325-3602
camerons@coastalnet.com

Comments on DEIS of Bogue Inlet Channel Relocation Project

I have already provided comments on Section 4. The following comments refer to Section 1 and Section 5 of the DEIS. Some of these issues were already brought up at the meeting on 10/15/2003, but I would like to reiterate those concerns here.

1) In Section 1.3.1, I do not believe that "restoration of beach and inlet habitat" should be a goal of the project. The inlet and beach habitat doesn't need to be restored. Barrier islands and inlets migrate naturally and piping plovers and other waterbirds have evolved to live in this dynamic beach environment. The Federal Register for Critical Habitat for piping plovers states "The integrity of the habitat components depends upon daily tidal events and regular sediment transport processes as well as episodic, high magnitude storm events; these processes are associated with the formation and movement of barrier islands, inlets and other coastal landform." The entire section 5 on waterbirds and piping plovers is misleading because it implies birds need this work so they have habitat, which is not true.
2) Section 5 of the DEIS needs to better explain and take into consideration the increase in human disturbance that will occur at the end of Emerald Isle as a result of this project. While the document acknowledges that "…access to historically isolated inlet shorebird habitat will be established which could increase the potential for predator and human effects to inlet shorebird resources", it does not take this into consideration when evaluating impacts and the document does not discuss this in all of the necessary places. For example, there is no mention of increased access to the point in the section on piping plovers or colonial waterbirds. The increased access to the spit will definitely increase disturbance to nesting, foraging and roosting piping plovers and other waterbirds. In addition, it could open the point to ORV use which will also increase disturbance and degrade habitat. These effects can be alleviated if a waterbird management plan

is put into effect. The increased disturbance is both an indirect and a cumulative effect.

3) I disagree with the finding of negative impact to piping plovers and waterbirds if no action is taken, if the houses are relocated or if sandbags are kept in place. The document claims these alternatives allow the continued erosion of western Emerald Isle and thus the loss of Critical Habitat for wintering piping plovers and habitat for other waterbirds. For example, section 5.7.1.2.1.1 states that "under the no action alternative, inlet shoreline habitat will likely be lost to erosion which will necessitate an adaptation in colonial waterbird behavior to locate and utilize alternative sites." With the erosion on the western end of Emerald Isle there is also a build up of sand on the beach east of the sandbags and the development of the large spit at the point. The document needs take into consideration the value of natural inlets and to look at the inlet as a whole. Erosion in one section of Emerald Isle is offset by accretion in other areas and birds will move within the inlet complex in response to these changes.
4) The DEIS fails to adequately address Island #2. This island, while ephemeral in nature, may not disappear naturally for many years. As far as I know, no modeling was done or estimates of erosion rates given for this island. The only mention of Island #2 in the DEIS is that it "appears to be migrating to the west and may eventually disappear." It seems that we really don't know what will happen to Island #2 under any of the scenarios. Because of this lack of knowledge, I feel that the island has been written off. Will the mapping that is being done, answer any of the questions about what is happening and will happen to Island #2? Did Cleary have any predictions on how long it would take Island #2 to disappear under natural conditions? While I understand that the island could disappear naturally, isn't it possible that relocating the channel may accelerate this process?
5) In several sections in the DEIS, it states that waterbirds nest in the intertidal areas. This is not true. Piping plovers and other beach nesting birds nest above the high tide line on coastal beaches, sandflats at the ends of sandspits, blowout areas behind dunes and washover areas.
6) On page 28, section 5.4.3.3.2.1 it reads, "relocating the houses on western Emerald Isle will result in the further abandonment of the shoreline and continued erosional losses of Critical Habitat for wintering piping plover as the inlet shoreline and sand spit recede." Under several of the alternatives (no action, sandbags, moving houses), the sand spit will actually continue accreting into Bogue Sound. This is great habitat for piping plovers and other waterbirds. A similar statement is made in section 5.7.1.1.2.1. You need to clarify where you are talking about. The entire spit is not eroding, just a small ocean facing section. There inlet beach is actually accreting in other areas.
7) Colonial waterbirds have very different foraging requirement than shorebirds. Section 5.7.1.2 treats colonial waterbird just like shorebirds in the analysis of effects of the different alternatives. Most colonial waterbirds feed primarily on fish not macro invertebrates like shorebirds. This section should discuss fish resources and marsh habitat, which is used for foraging by many colonial

waterbirds. Gull-billed terns are an exception to the rule and forage on crabs and insects in addition to fish.

8) Throughout the bird sections, you imply that a breach in the spit (by Coast Guard Channel) would be a mostly negative occurrence. It could actually have a number of positive effects. The type of habitat that would be formed by this breach is prime foraging habitat for shorebirds including piping plovers. It would also provide good roosting habitat for shorebirds and colonial waterbirds and if some portion of this stays above the high tide line, it would provide great nesting habitat
9) Section 5.7.1.3 on Other Waterbirds needs to be rewritten (see comments on Section 4). Other waterbirds that utilize areas around Bogue Inlet include rails (use marsh habitat), loons (forage and roost in the sound, inlet and ocean) and red-breasted mergansers (forage and roost in the sound, inlet and ocean). Most of the impacts you discuss apply to shorebirds, not other waterbirds. With other waterbirds we are concerned primarily with marsh and subtidal habitat, and fish resources.
10) Check your use of the terms shorebirds and colonial waterbirds. At times you mention colonial shorebirds in the colonial waterbird section and use the term colonial ocean shorebird resources (e.g. section 5.7.2.2.3.1).

North Carolina Department of Environment and Natural Resources
Division of Parks and Recreation

Michael F. Easley, Governor William G. Ross, Jr., Secretary Dr. Philip K. McKnelly, Director

October 30, 2003

Mr. Mickey Sugg
US Army Corps of Engineers
Wilmington Regulatory Field Office
Post Office Box 1890
Wilmington, North Carolina 28402-1890

Dear Mr. Sugg:

I am writing in regards to the proposed Bogue Inlet channel relocation and beach nourishment project at Emerald Isle, North Carolina. Staff with the North Carolina Division of Parks and Recreation (Division) would like to submit the following comments concerning the draft Environmental Impact Statement dated September 24, 2003.

Description of Bear Island

Section 4.1.2 Bear Island, contains a discussion of the natural resources of Hammocks Beach State Park. The discussion is brief and focuses mainly on location, dimensions, etc. I would suggest that additional information that describes the unique features of the Park be mentioned in the discussion. I have include some information that could be included in the re-write.

There are three sections to Hammocks Beach State Park totalling 1,137 acres. The largest section of Hammocks Beach State Park is Bear Island containing approximately 892 acres. 700 acres of Bear Island is a Registered Natural Heritage Area with the Natural Heritage Program. This Registry recognizes the fact that Bear Island is an undeveloped barrier island with the natural dynamics of the coastal forces shaping the island and its habitats. Bear Island contains a mosaic of the Dune Grass, Maritime Wet Grassland, Maritime Shrub, and Maritme Evergreen Forest natural communities.

The second largest section is Huggins Island containing approximately 210 acres (approximately 115 acres of this is uplands with Maritime Evergreen Forest - the remainder --95 acres-- is Maritime Swamp Forest and Tidial Marsh). The smallest section is the Mainland section containing about 35 acres. Also, both Bear Island, Huggins Island, and Dudley are Significant Natural Heritage Areas under the Natural Heritage Program's classification.

A number of rare plant and animal species are endemic to Bear island. Rare plant species known to occur in the area include: Seabeach Amaranth, Winged Seedbox, Four-angled

1615 Mail Service Center, Raleigh, North Carolina 27699-1615
Phone: 919-733-4181 \ Fax: 919-715-3085 \ Internet: www.ncsparks.net
An Equal Opportunity \ Affirmative Action Employer - 50% Recycled \ 10% Post Consumer Paper

Flatsedge, and Moundlily Yucca. Rare animal species include: Loggerhead Turtle, Green Turtle,

Wilson's Plover, Black Skimmer, Common Tern, Least Tern, Giant Swallowtail, Loammi Skipper, Eastern Painted Bunting, and Manatee. In addition, the tidal flats located around Bear Island are important feeding and roosting areas for shorebirds including the federally endangered Piping Plover.

One of the most important aspects of the Park is the unique educational opportunity it presents. Visitors are ferried to the island which affords an excellent opportunity for park staff to education visitors on the marsh and island. In addition, the park recently completed a new visitors center with a focus on coastal ecology.

Shoreline Loss

The report discusses the impact of residual currents along the inlet shore causing potential erosion. Would this be true for the shoreline along Bear Island? If so, this potential loss should be discussed in the report. In addition, how long will this potential impact occur for.

Recreation

Section 5.12, Recreation Resources, have any estimates or modeling been developed that would determine if turbidity from the relocation project will impact swimming on Bear Island or any other recreational activities (swimming, fishing, etc.).

Navigation

Section 5.13, Navigation, I would like to know if Alternative F – Channel Relocation with Beach Nourishment, will result in any short term or long term impacts on Cow Channel. Will the project accelerate silting issues associated with the channel.

Mitigation

There is no discussion of mitigation in this document. Where will this discussion occur? DPR is still concerned about what will be done to mitigate any impacts to Bear Island that occur outside of the project scope. This remains DPRs #1 concern.

Impacts

What is the timeframe of the project. For example, when can we expect that impacts to Bear Island or other resources be judged to be outside of the Bogue Inlet project. In addition, how will it be determined that impacts from storms or other natural occurrences were not exacerbated by the Bogue Inlet project.

The Division appreciates this opportunity to comment on the proposed Bogue Inlet channel relocation and beach nourishment project. The Division requests that the US Army Corp of Engineers seriously considers these concerns in your review. If you have any further questions regarding these comments please call me at (919) 715-8711.
Sincerely,

Brian L. Strong

Resource Management Specialist

cc: Hammocks Beach State Park
Erin Haight, Coastal Planning & Engineering
Mr. Tom Jarrett, Coastal Planning & Engineering

From: Brian Strong [Brian.Strong@ncmail.net]
Sent: Thursday, October 30, 2003 9:46 AM
To: Mickey.T.Sugg@saw02.usace.army.mil
Cc: Tom Jarrett; Erin Haight; sam.bland@ncmail.net; sean mcelhone; Paul Donnelly
Subject: Draft EIS Comments

Enclosed are DPR's comments on the Draft EIS. Hard copy to follow. Let me know if you have any questions.

Brian
--

Brian Strong, Resource Management Specialist
Resource Management Program
NC Division of Parks & Recreation
DENR
MSC 1615
Raleigh NC 27699-1615

TEL: 919 715-8711
FAX: 919 715-3085
EMAIL: brian.strong@ncmail.net
http://www.ncsparks.net

From: Mickey.T.Sugg@saw02.usace.army.mil
Sent: Thursday, October 30, 2003 9:41 AM
To: Erin Haight; Craig Kruempel; Tom Jarrett
Subject: FW: Bogue Inlet PDEIS - Turtles

Comments from Matthew Godfrey

-----Original Message-----
From: Matthew Godfrey [mailto:godfreym@coastalnet.com]
Sent: Thursday, October 30, 2003 9:16 AM
To: Mickey.T.Sugg@saw02.usace.army.mil
Cc: McHenry, David G.
Subject: Bogue Inlet PDEIS - Turtles

Dear Mickey,

I am writing to you in regards the revised Section 5 of the Bogue Inlet BDEIS, specifically those parts that are related to sea turtle resources. With respect to this revised Section 5 (emailed to us by you on 16 October 2003), I have several concerns about the wording and the tone of the anticipated direct and indirect impacts of the channel relocation project.

In general terms, the overall vision of the project seems to be mixture of different objectives. As was brought up by several of the biologists present at the PDT meeting of 15 October, the wording of this document is such that it implies that habitat restoration for turtles (and birds) in the inlet is a primary concern of the project, and that without some kind of manipulation of the inlet shoreline (i.e. via channel relocation), this "habitat" would continue to be degraded and therefore negatively impact sea turtles (and other species). I disagree with this conceptualization of the issues, primarily because inlet habitat (including the inlet shoreline) tends to be dynamic and almost always in flux. I cannot imagine what particular state of the inlet would constitute being labelled as "restored."

In specific terms, there are certain lines or statements in Section 5 that I find disingenuous with respect to sea turtle resources. They are as follows:

Page 22, Section 5.4.1.3.1, line 5: "...sand bag revetments to protect homes once they become threatened will present a barrier to nesting sea turtles along the inlet shoreline." In fact, most sea turtles do not nest on inlet shorelines, but prefer ocean facing beaches. This behavior probably is the result of evolutionary processes favoring those turtles that nested on ocean beaches (more stable) rather than inlet shoreline (less stable).

Page 22, Section 5.4.1.3.1, line 8: "During the 2003 nesting season, there was one report of a false crawl due to a sea turtle encountering a sand bag before nesting could occur." I am not sure who made this report, but I

have been unable to confirm it. Nicole Mihnovets, the Bogue Banks Sea Turtle Biologist, informed me of a turtle crawl that occurred near the western edge of Emerald Isle beach, in which the turtle crawled up the sand to an eroded beach cliff and then returned to the sea without nesting. The nearest sandbags were at least 50 meters away.

Page 22, Section 5.4.1.3.2, line 5: "Therefore, turtles will continually encounter sand bags or debris from destroyed structures when attempting to nest along the inlet shoreline." Again, loggerheads and other species of sea turtle do not normally nest along inlet shorelines.

Page 22, Section 5.4.1.3.3, line 1: "Alternative C does not support the Town of Emerald Isle's project objectives of structure protection and restoration of beach and inlet resources necessary for sea turtle nesting." I would argue that the word "necessary" should be replaced by "sufficient," but more importantly I would argue that this project is not necessary for continued sea turtle nesting on Bogue Banks or Emerald Isle. Nest density on Bogue Banks is low, so that there is little chance of nest destruction caused by turtles digging into nests laid by other turtles. Although this project may conceivably cause the western end of Bogue Banks to extend further west, creating more ocean-front beach habitat that could be used by turtles, I would argue that this is not required for continued turtle reproduction and/or survival in North Carolina at the present time.

Page 24, section 5.4.1.5.1, second paragraph, line 2: "The medium-grained, well sorted material dredged from Bogue Inlet is expected to have little effect on the success of sea turtle nesting activities." I am not sure what this statement is based on, but Carteret County is funding the ongoing research project in Bogue Banks to look at the impacts of renourishment on sea turtle reproduction. At the current time, we have not collected enough data to reach a conclusion such as that expressed by the draft EIS.

Page 24, section 5.4.1.5.2, line 1. Same comment as above

Page 24, section 5.4.1.5.2, line 3: "The nourished beach should provide significant nesting habitat for sea turtles and thus, is likely to result in positive cumulative impacts for sea turtles along the beach in Phase 3." It is unclear what is "significant" nesting habitat. There is no guarantee that beach created by nourishment will necessarily result in increased nesting and/or have no impacts on overall reproductive success of sea turtles. We hope that the ongoing research being conducted on Bogue Banks will provide some insight in the future, but we do not have a sufficient sample size at the current time to reach any definitive conclusions.

Page 77, Section 5.6.2.1.1, line 5 from top of the page: "While the material obtained from the offshore borrow areas contained higher concentrations of shell than the native beach, the higher shell content has apparently not negatively impacted turtle nesting success along Bogue Banks during the 2003 turtle nesting season." Given that the full set of data from the 2003 nesting season has not been thoroughly analyzed, I cannot imagine what the basis is for this statement.

Page 77, Section 5.6.2.1.2., Second Paragraph, Line 1: "The offshore borrow material contains higher concentrations of shell and shell hash, however,

turtle nesting success during 2003 appears to indication that the high shell content has not negatively impacted turtle nesting." Same comment as above.

Page 79, Section 5.6.2.3.1, Line 4: "During 2003, there was one documented false crawl associated with a turtle encountering the existing sand bag revetment." According to WRC data, there was no turtle crawl associated with a sandbag in 2003.

Page 80: Section 5.6.2.5.1, Line 3: "The medium-grained, well sorted material dredged from Bogue Inlet used for nourishing the west end of Emerald Isle is expected to have little negative effects on the success of sea turtle nesting activities." Again, we are currently conducting research on the impact of renourishment on sea turtle reproductive success, and at the current time there are not sufficient data to provide such an answer.

Page 80: Section 5.6.2.5.1, Line 7: "The new beach and possible sand dune development along the inlet shoreline should provide suitable nesting habitat for turtles." Loggerheads and other species of sea turtles tend to choose ocean-facing beaches to lay their eggs, avoiding the highly dynamic inlet beaches.

Page 83, Section 5.6.3.5.3, line 1 "Although offshore sea turtle resources are outside the scope of the project objectives, the use of inlet material for beach nourishment would preserve offshore sea turtle habitat." I am not sure if this statement is justified.

In terms of Section 4 of the draft EIS, I have already contacted Erin Haight directly with comments concerning the natural history of sea turtles and their occurrence in the project area.

Best wishes,
Matthew

==========

Matthew H. Godfrey
Sea Turtle Project
North Carolina Wildlife Resources Commission
307 Live Oak Street
Beaufort, North Carolina 28516 USA

tel: (1) 252-728-1528
email: godfreym@coastalnet.com

From: David H Allen [allend@coastalnet.com]
Sent: Friday, October 31, 2003 10:40 AM
To: Erin Haight; mickey.t.suggs@saw02.usace.army.mil
Cc: Sue Cameron; Henson Tom (Henson, Tom); Dave McHenry
Subject: Prelim. Draft EIS Section 4

Dear Erin and Mickey,

In addition to the extensive comments Sue Cameron sent you recently, I'd like to add a few things to our comments on Section 4 of the preliminary Draft EIS.

1. In Sec. 4.4.3.1, you should make it clear that although the Atlantic Coast population of piping plovers is listed as threatened, we also have piping plovers in North Carolina from the Great Lakes population in the winter that are listed as endangered.
2. Sec. 4.4.3.1.1 is a bit confusing. Please make it clear the critical habitat was designated in wintering piping plover habitat in North Carolina because we have birds here from the endangered population of birds from the Great Lakes.
3. In this same section please make it clear that the entire inlet area (Bogue Inlet spit, Dudley Is, Islands 1 and 2, and much of Bear Is.) are listed as critical habitat for wintering piping plovers, and that all the constituent elements are present.
4. In Sec. 4.7 please state that the least tern, common tern and black skimmer are all listed by the state as Special Concern.

Thank you.

David H. Allen
Coastal Region Faunal Diversity Supervisor
North Carolina Wildlife Resources Commission
183 Paul Dr.
Trenton, NC 28585
(252) 448-1546

From: Todd Miller [toddm@nccoast.org]
Sent: Tuesday, November 04, 2003 2:42 PM
To: Mickey.T.Sugg@saw02.usace.army.mil; Tom Jarrett; Frank A. Rush
Subject: Comments of Bogue Banks Draft EIS

Attached are comments on Section 5 in the draft document. My comments are in red type. Sorry to have to provide comments in this fashion, but it's the best I could do in the time I had to look at it.

In summary, I remain concerned that the EIS presents just one set of potential impacts of the proposed project that are based on what the applicant hopes will happen regarding the channel location. The applicant hopes the channel will stay in the middle of the inlet or move back to the east. While that could happen, Tom Jarrett has also said that there's no way to predict which way the channel will migrate, and it could just as easily go west. For this reason, there needs to be the same level of assessment given to the potential to what the impacts would be if the channel moves west. This is an issue I've raised as a member of the PDT for months, and I expected to see it more adequately addressed in the EIS. Adding a couple of paragraphs to the back end of the document is not an adequate way to address this issue. Furthermore, given the rapid erosion that has occurred on Bear Island since the 1980s, I question if the methodology used to determine the maximum amount of shoreline recession on Emerald Isle (should the channel move west) is an accurate way to forecast the potential for future shoreline changes. I'd like to understand this methodology better, and see how well it would have predicted the actual erosion that has occurred on Bear Island in the past 15 years. For this document to be useful to decision-makers, it needs to tell them all the possible outcomes that may result so that they know what risks they are taking in deciding to either do or not do the project. Equal weight and attention needs to be paid to impacts that could result if the channel moves west towards Bear Island. Until that is done, the document is flawed.

A complete mitigation package with projected costs needs to be included in the document to have an accurate cost/benefit analysis of the project. It needs to specifically provide for who owns land that is created (and currently exists) on the spit, how wildlife will be managed, how public recreation will be provided for and managed, what commitments the Town is making to compensate oceanfront property owners if they lose land as a result of this project, what commitments the Town is making if the State Park is damaged by this project, etc.

I understand that the Town is doing a title search on the existing spit and will provide evidence that it is already in public ownership. If it is not, than the ownership issues regarding the spit need to be addressed.

The dike will be made at the tail end of the dredging operation. If it takes more than 200,000 cubic feet of material, where will that material come from since all the projected dredging will have been completed once 200,000 cubic feet are taken? Is the project authorized to dredge more than 1 million cubic feet, and if so, where will that material come from and are the impacts of additional dredging something that need to be evaluated in this document?

Does the town need to obtain permission to proceed with the project from the oceanfront property owners on Emerald Isle who are projected to lose part of their lots when the channel is moved? Will there be any cost to the Town to obtain permission to erode these properties? What liability does the town have if it undertakes a project that it knows will erode these lots? Is there any?

Todd

Todd Miller
Executive Director
North Carolina Coastal Federation
3609 Highway 24 (Ocean)
Newport, NC 28570
252-393-8185
252-393-7508 (fax)
www.nccoast.org

From: Melissa Green
Sent: Wednesday, November 05, 2003 3:13 PM
To: Erin Haight
Subject: FW: Project impacts on shellfish and SAV

FYI.

Melissa V. Green
Marine Biologist
Coastal Planning and Engineering
2481 NW Boca Raton Blvd
Boca Raton, Fl 33431
(561)391-8102 (954) 249-6240
mgreen@coastalplanning.net

-----Original Message-----
From: Mike Marshall [mailto:Mike.Marshall@ncmail.net]
Sent: Wednesday, November 05, 2003 3:14 PM
To: Melissa Green
Cc: Mickey.T.Sugg@saw02.usace.army.mil; Tere Barrett; ted.tyndall
Subject: Project impacts on shellfish and SAV

Melissa,

Several staff and I have looked at the list of projects you sent to recall if they caused any effects on SAV and shellfish. First, let me explain that there is very little SAV in the southern part of the state with the southern limit of significant grass coverage occurring about New River. So, there would be little if any SAV effects from mid Onslow County south. There are a relatively large number of the listed projects in this area also. Staff could not recall any sea grass impacts caused by the listed projects and know of no studies that indicate any.

We also do not know of any shellfish impacts for listed projects from Morehead City north. Unfortunately, the biologist supervisor from the southern district, where impacts would be most likely due to close proximity of inlets and shellfish resources, has not been available to look at your list. I spoke with his supervisor and he indicated that shellfish impacts for the listed projects in the southern area could generally be described as minimal and indirect. He knew of a few instances where projects had possibly changed shoaling patterns near

inlet areas that covered small areas of hard clam habitat. Indirect impacts also involved shoaling as the flow of natural channels has been diminished or cut off causing reduction of the shellfish resource in a few cases in those areas. None of these impacts were major and the only projects he could point to were Masons Inlet and some Lockwood Folly Inlet work. I do not think the biologist supervisor for the southern area would disagree with that assessment but he may be able to provide a few more specific instances. I will contact him when he returns and perhaps we can give you some more specifics for a later draft.

Feel free to call about any questions.