



Monday, February 3, 2014

U.S. Army Corps of Engineers, Wilmington District
ATTN: Mr. Hugh Heine, Environmental Resources Section
69 Darlington Avenue
Wilmington, NC 28403
hugh.heine@usace.army.mil

Re: Comments on the Morehead City Harbor Draft Integrated Dredged Material Management Plan and Environmental Impact Statement

Via electronic mail

Dear Mr. Heine,

Thank you for the opportunity to comment on the Morehead City Harbor Draft Integrated Dredged Material Management Plan and Environmental Impact Statement (DMMP/EIS). This letter is being submitted on behalf of the Surfrider Foundation Bogue Banks Chapter ("Surfrider"). Surfrider Foundation is a grassroots environmental organization dedicated to the protection and enjoyment of oceans, waves and beaches.

While Surfrider recognizes the importance of dredging the navigation channel to maintain the viability of the harbor, the plan to place dredge spoils on Shackleford Banks raises significant concerns regarding the impacts that this proposed activity may have on the natural physical processes, natural resources, wildlife, and recreational users of this unique barrier island ecosystem. In its current form, the draft DMMP/EIS does not sufficiently address these issues and we cannot fully support its implementation.

To further elaborate on issues of concern, Surfrider offers comments on the following sections of the draft DMMP/EIS for consideration:

2.1 – Existing Conditions
3.2.2 – Beach Disposal

- The DMMP/EIS proposes Alternative 2k – placement of coarse-grained material on Shackleford Banks – as part of the suite of alternatives for placement of dredge spoils. In figure 3-10, the DMMP/EIS shows the area proposed to receive these spoils as a 3.65 mile stretch of beach between stations 229 (on the eastern end) and 424 (on the western

*attachment
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end). In addition to achieving the objective of the project, implementation of this alternative is also considered in the DMMP/EIS to serve secondarily as a beneficial use. The beneficial use in this instance is to remediate erosion on Shackleford Banks.

- The DMMP/EIS clearly identifies that erosion is occurring on the west end of Shackleford Banks¹ and cites that it is caused by a combination of natural processes and ongoing/historical dredging. There is also mention of erosion occurring on the southern shore of the island.
- As previously described, to achieve this beneficial use, the DMMP/EIS proposes to place dredge spoils on the southern shore of the western half of Shackleford Banks. This location; however, is eastward of the area described to have the greatest volume of erosion. The DMMP/EIS described that this eastward offset is “necessary to reduce rapid shoaling of the material directly back into the navigation channel while still providing sufficient beach length to place the necessary quantities.”² However, no study is cited to substantiate these intended effects. Lacking this important information, it is unclear whether or not it will be beneficial or effective to place the sediment eastward of the erosion “hotspot”. Surfrider suggests that further sediment transport studies be referenced or conducted to determine how the proposed action will effectively alleviate erosion on Shackleford Banks.
- The DMMP/EIS also describes the amount of fill that is expected to be placed. In Table 3-27, as much as 516,000 cubic yards of sediment could be placed on Shackleford Banks during the initial placement. The document describes that subsequent disposal events would only be 166,450 cubic yards – equal to the yearly volumetric erosion rate.³ As for where the sediment will be placed, for each disposal event, only about a third to half of the 3.65 mile disposal area on Shackleford Banks would be impacted with disposal of Harbor sediment.⁴ Again, no studies are cited in the DMMP/EIS that can be used to extrapolate how much sediment would effectively respond to the erosion occurring (or, in this same vein, how much sediment might be unnecessary or not “beneficial” to respond to erosion), nor are there studies referenced to provide a rationale for the frequency of placement.
- It is unclear exactly why this erosion is being viewed as a problem and, therefore, why Alternative 2k is viewed to be a beneficial use. Erosion is a natural process that need not be impeded in a natural undeveloped setting. In this instance, there is no development present that is threatened by the erosion occurring. In the absence of a problem, Surfrider argues that the current management strategy employed by the National Parks Service, which allows erosion to occur and continue unabated, should continue.

4.5 – Marine and Estuarine Resources

4.7 – Terrestrial Resources

¹ p 46, 51, 191

² p 53

³ p 54

⁴ p 256

Shackleford Banks and its surrounding waters provide a unique habitat for a diversity of animals including foraging and roosting grounds for shore birds,⁵ nesting beaches for sea turtles,⁶ nursery areas for fishes,⁷ and habitat for marine invertebrates.⁸ Surfrider is concerned about the cumulative long-term impacts that beach disposal will have on these organisms and does not agree that the DMMP/EIS provides sufficient science-based evidence quantifying the degree of impact that sand placement will have on the ecosystem. Our specific concerns regarding this activity are outlined below:

- The DMMP/EIS states that “the characteristics of the dredged material dictate where disposal of that material will be permitted”⁹ and that “sediments used to replace natural beach sand should match the natural beach as closely as possible in order to minimize environmental effects”. However, it goes on to state that “while the scientific literature agrees with this statement in principle, *there is little data available to quantify what similarity (or difference) is ecologically significant*”.¹⁰ Surfrider agrees that there is insufficient data to determine how varied grain size of beach disposal sands will affect communities of organisms in the disposal area and would argue that such data needs to be provided before determining that the impacts to these organisms would be insignificant.
- The DMMP/EIS states that “beach disposal and/or nourishment of sediment may have negative effects on intertidal macrofauna through direct burial, increased turbidity in the surf zone, or changes in the sand grain size or beach profile” and that “opportunistic infauna species (e.g. *Emerita* and *Donax*) found in the nourished areas are subject to direct mortality from burial” with recovery often occurring “within one year”.¹¹ It also states that “in NC, post-nourishment studies have documented similar reductions in abundance of coquina clams (*Donax spp.*), mole crabs (*E. talpoida*), and amphipods (*Haustoriid spp.*) immediately following disposal with recovery times persisting between one and three seasons after project construction depending on sediment compatibility”.¹² These organisms are important prey species for numerous birds and fish species. Although the DMMP cites previous studies from other locales, within and outside North Carolina, indicating that short-term recovery is rapid after pumping operation ceases, Surfrider does not think sufficient evidence has been presented regarding the long-term impacts that sand placement will have on these organisms and the food webs that they support on Shackleford Banks. Therefore, the DMMP/EIS cannot accurately conclude that impacts to these organisms will be insignificant.
- The DMMP/EIS states that nourishment on Shackleford Banks would be expected to move along the beach at a rate slow enough that “surf-feeding fishes and shorebirds can move to other areas that are not affected”;¹³ however, no citation of a scientific study is provided to support this claim. It also states that “the surf zone represents HAPC for

⁵ p 195, 285

⁶ p 260

⁷ p 178

⁸ p 177

⁹ p 221

¹⁰ p 223

¹¹ p 236

¹² p 236

¹³ p 237

some species, including adult bluefish and red drum, which feed extensively in that portion of the ocean” and that “disposal operations along the beach can result in increased turbidity and mortality of intertidal macrofauna, which serves as food sources for those and other species. Therefore, feeding activities of the species could be interrupted in the immediate area of sand disposal”.¹⁴ Surfrider is concerned about the long-term impacts that sand placement activities will have on the foraging behavior and health of fishes and shorebirds, and posits that additional studies are needed before drawing a conclusion that the project will not significantly impact these species.

4.10 – Esthetic and Recreational Resources

- The DMMP/EIS will affect the surf break, which attracts significant numbers of visitors to the area. These visitors use ferry services, dine at restaurants, stay at local hotels, and are patrons of the numerous family-owned small businesses in the area. Although the DMMP/EIS identifies the surf break as a significant recreational resource and cites the uniqueness of the surf break (“one of the best and most unique surfing spots on the east coast”¹⁵), the DMMP/EIS fails to consider whether and to what extent the proposed project will impact the surf break and, if impacted, how they will be mitigated.
- The act of placing hundreds of thousands of cubic yards of sediment on an undeveloped natural barrier island that’s managed like a wilderness area, not to mention the use of an imposing amount of equipment on the beach during pumping activities,¹⁶ is certainly a significant impact to the esthetics of Shackleford Banks, which people come from all over the world to see.

The surrounding coastline, such as Bogue Banks, has already been altered in drastic ways, further emphasizing the importance of preserving what little natural areas remain like Shackleford Banks. It is the closest example that our community has of what a natural barrier island should look like and there is no critical need to place fill on this National Seashore. In fact, altering the island in such an artificial way would set a bad precedent for managing our natural coastlines. We request that you carefully consider the concerns outlined here and look forward to reviewing a revised DMMP/EIS that addresses these issues.

Sincerely,



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¹⁴ p 241

¹⁵ p 208

¹⁶ p 272