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Comments on: Shoreline Restoration and Management Plan / Draft Environmental Impact Statement

Thank you for the opportunity to comment on the National Park Service's (NPS) 2012 Shoreline Restoration and Management Plan / Draft Environmental Impact Statement (EIS). These comments are submitted jointly by Save the Dunes, The Nature Conservancy and Shirley Heinze Land Trust.

We appreciate the opportunity to comment on the plan. A great deal of work has clearly gone into developing the EIS, and we are pleased that NPS is addressing these important shoreline issues.

Main Conclusions

Until funding is available to implement an enhanced shoreline restoration plan, all of the current intermittent beach nourishment activities using dredged materials should be encouraged and enhanced in both Reach 1 and 3. Wherever possible, these should also be modified to increase the amount of nourishment material to better address the sand deficit.

We are particularly concerned about the Preferred Alternative for Reach 1, which involves an approach that has not been tested in the Great Lakes or freshwater systems to our knowledge. Therefore, significant risk exists for NPS to expend large sums of money without potentially achieving the desired results.

We believe the best long-term solution to these issues lies in a permanent bypass system and ask that NPS and the consultant team revisit these alternatives for Reaches 1 and 3. We appreciate that significant coordination would be required to develop such systems and, while this is a challenge, it is not insurmountable. We would be happy to help with such coordination if we could be of any assistance.

The source of sediment should be a dredged source rather than a mined source in the spirit of creating a more natural system, which is one of the goals of the EIS. This rules out Alternatives B-1 and B-5 for Reach 1, which are also the most expensive alternatives.

Jurisdiction / Access / Ownership

What were the assumptions and considerations for each of the alternatives in terms of ownership, authority, and access issues? We have learned about ongoing conversations between the federal government and the State of Indiana relating to this, and we want to be sure that the alternatives were evaluated with these realities in mind. Also, given that the State of Indiana declined to be a cooperating agency, what ramifications are there for the Preferred Alternatives, if any? The State of Indiana decided to become a Coastal Zone Management State, and we are disappointed that they did not sign on to cooperate, as we believe extensive coordination with them is critical.

We also recommend increased coordination with the wide range of stakeholders impacted by this plan, including industry, government (local, state and federal), planning agencies, town councils, community groups, tourism organizations, conservation groups, residents and others. While the public meetings have been helpful to date, we believe NPS should schedule conversations with affected stakeholders on a one-on-one basis to ensure they understand the project and have ample opportunity to ask questions and have input beyond the NEPA process.

Man-made Structures

Page 21 of the EIS refers to the desire to return the Indiana Dunes National Lakeshore to its natural condition. It adds that “Reestablishment of more natural shoreline processes could eventually allow the current structures along the lakeshore to be removed in the future without endangering the adjacent infrastructure.” We ask for clarification of this statement. Which “structures” is this referring to in particular, and which infrastructure?

Cost Estimates

While we understand that the National Park Service did not base their selection of the Preferred Alternative solely on cost, we do believe that it would help those reviewing the study to see a more detailed breakdown of the cost calculations for each alternative in order to more effectively evaluate them. A single lump sum cost over 20 years is inadequate for our review and we respectfully request to see detailed budget calculations and cost assumptions for each alternative. For example, what portion of the cost of Alternative E is attributable to the construction of the cobble berm and what are the respective costs for initial construction, operations, and maintenance in the bypass systems alternatives. These figures could help us understand how the bypass alternative for Reach 3 is comparable to other Reach 3 alternatives when the bypass alternative for Reach 1 is significantly higher than other alternatives when the bypass distance is four times longer in Reach 3 and its construction would likely be far more complex than the bypass alternative in Reach 1.

Also, on page 31, at the end of the first paragraph, the EIS reads “...the plan anticipates that these alternative actions would be implemented in all reaches of the project area at the same time, rather than only in one reach at one time.” This is a major assumption that may be unrealistic given funding constraints, weather and other realities. Were your cost estimates developed assuming this (e.g. was the cost of mobilization assumed to be one event rather than two?)

Preferred Alternative for Reach 1

We appreciate the fact that you mention that additional analysis is needed before Alternative F is implemented.

For the Preferred Alternative for Reach 1, the proposed berm is a new engineering solution that has not been tested on the Great Lakes. We appreciate that modeling and research have been conducted, the results of which indicate that the berm may be effective. However, we remain concerned that, given the high cost of the project and lack of precedent, should it fail, or cause unanticipated consequences or adverse impacts elsewhere along the lakefront, it could be problematic for the natural resources and visitors to the park, as well as adjacent communities.

How do state laws, guidelines and policy relate to the filling of the lake with a cobble berm? We want to be certain that the berm, if installed, would not set a precedent for new lake fill projects anywhere in Indiana.

Under the water in this Reach, there is a cohesive coastline containing clay that has been there since the last glaciation roughly 10,000 years ago. How would the Preferred Alternative prevent the cobble from the berm from scouring this material, downcutting the cohesive coastline and causing additional shoreline issues? On page 59 it says this material will be protected, but it is unclear how exactly that will occur.

What effect might the berm have on near shore currents and the littoral transport of sand along the shoreline? If sediment is retained along the 6,500 ft. of the shore proposed to be protected by the berm might this accelerate erosion on the 3,700 feet of shoreline west of the berm and not protected by the Beverly Shores revetment? Could the berm dissipate more rapidly in some sections creating breaks resulting in major, long lasting rip currents?

The placement location for nourished sand is stated to be Mount Baldy. Current nourishment places the material further east near Crescent Dune (which suffers worse from erosion) – why is this the preferred placement location? Nourishment material should be placed in front of Crescent Dune.

The berm is intended to dissipate in approximately 5 years and its effectiveness in controlling wave action to mitigate against shoreline erosion will deteriorate gradually during those 5 years. Alternative E proposes to provide significantly less annual beach nourishment than is needed to supplant the calculated deficit. The amount of nourishment should be increased up to 136,500 cubic yards annually under this alternative as the effectiveness of the berm decreases.

Several attendees at the October NPS public meeting had questions regarding whether the cobble would migrate towards Beverly Shores. NPS staff said it will not move down to Beverly Shores. Please explain the reasoning behind this assumption.

We also recommend that the NPS team reevaluate the proposed beach nourishment dredged source location. The proposed dredging location is east of the Michigan City Harbor Structure. All of the previous hydraulic dredging that provided intermittent nourishment has occurred west of the harbor structure and in the outer channel. It is commonly thought that the area around the harbor has reached dynamic equilibrium and that the beach east of the harbor is no longer growing but large quantities of sand are bypassing the harbor structure and accumulating west of it. This is the area that needs to be dredged for harbor access and the area that should be used as the source of future nourishment in Reach 1.

If dredging were to occur east of the harbor structure it might destabilize the shoreline and there could be impacts to the residences to the east as well. We ask NPS to evaluate dredging instead on the west side of the Michigan City Harbor Structure, including in areas of significant accumulation such as in the area-called Billy Beach. This area has to be dredged quite frequently in any event to maintain navigable channels, so there could be an opportunity to benefit both the Park and other entities as well. We recommend that you survey and estimate the quantity of sand that could be dredged there.

The discussion of the No-Action alternative on page 52 notes the amount of nourishment obtained from an upland source and trucked to the Reach 1 beach from 1974 to 2008 (average annual amount of 31,500 cubic yards). There is no mention of the relatively frequent nourishments derived from hydraulic dredging in the Michigan City Harbor area. Estimates of these nourishment amounts should be included, as they are for Reach 3.

Has the National Park Service studied the impacts the berm cobble could have on yellow perch, which to our understanding use the clay valleys in the lake bottom? Could cobble move into these depressions and impact their populations?

Also, could the berm create a deep embayment between the berm and the shoreline that could increase waterborne pathogens such as *E. Coli*? Is there a concern that water quality could be impacted? We believe this could have a detrimental effect on water quality. On page 28, NPS says that the probability of effects to water quality is low, so water quality was dismissed from the overall analysis. We believe this is short-sighted and incorrect. Any of the alternatives would have to receive Water Quality Certification through the Indiana Department of Environmental Management (IDEM) and the U.S. Army Corps of Engineers (USACE), so water quality should be part of the analysis.

NPS acknowledges that *Cladophora* algae may be an issue at the cobble berm. Could this lead to a serious botulism outbreak or aesthetic/odor issues?

Would surfers or others endanger themselves near the berm? How would the berm's existence be marked for swimmers or boaters?

Permanent Bypass Alternatives

For both Reaches 1 and 3, permanent bypass alternatives were evaluated but not selected as the Preferred Alternative. We believe further analysis of these alternatives should be pursued. Who would own and maintain them? Who would have access to them?

Preferred Alternative for Reach 3

In Reach 3, extensive dredging already occurs to keep navigation channels and industrial water intakes open. Last month's Superstorm Sandy may create a need for additional dredging in Reach 3 because the storm deposited new sand in recently dredged areas. We understand that USACE has stated it will need to check this area after every significant storm due to low lake levels and navigational needs. The Preferred Alternative, which recommends dredging once every five years, does not take into account the fact that at least for the foreseeable future, annual dredging needs to occur to keep these intakes and navigational channels open. We understand that the NEPA process must be followed here, but given that there is likely to be new dredged material available each year in Reach 3, shouldn't this be assessed as part of the alternatives analysis? It might be an opportunity to save money as well.

Also, NIPSCO may be reconstructing their discharge and intake. Have you had conversations with that company to discuss their structure modifications, timing, and long-term facility plan, as they may impact your assessment and desired outcomes?

Sediment Used for Nourishment

The EIS states that sediment would be "compatible with native site sediment, meaning similar in terms of color, shape, size, mineralogy, compaction, organic content, and texture...free of harmful chemical contaminants, trash, debris, and large pieces of organic material." (page iv) What sampling methodology would be used to make this determination, particularly as it relates to contaminants? Which parameters would be tested for and how many samples would be considered representative of the quantity of material? Grain size is also critical, as studies have shown that it can impact erosion rates. We recall in the past when mined sand was placed at Mount Baldy that was dissimilar and it had to be addressed post-placement at an additional cost. We should avoid that happening again.

Climate Change

The EIS makes several references to climate change impacts expected in the region. How were these issues taken into account in the models and water level scenarios used in the process? For example, on page 37, it states that the 100-year storm event was selected as the design condition for the shoreline improvements. Is this the appropriate design condition considering forecasted climate changes? Please explain further how lake levels, temperature, storm and other climate change issues were incorporated into your analysis.

Avian Concerns

We recommend further study of potential impacts to migratory shorebird habitat especially during nourishment placement.

Invasive Species

There are good guidelines for contractors to prevent invasive species from entering on equipment; however, how will you ensure that contractors are following these guidelines? Also, the report does not acknowledge the role partnerships would play in helping control invasives beyond park boundaries.

Other Thoughts

On page 49, reference is made to "Treat nonnative and invasive weeds or nonnative invasive weeds or topsoil before work is performed (e.g. topsoil segregation, storage, herbicide treatment.)" We are unsure what this means. Please explain how topsoil is involved.

We truly appreciate being involved in this important effort. Thank you for your time and consideration.

Sincerely,



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