



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
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JACKSONVILLE DISTRICT
USACE

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing shore protection to the above reach, viz., DEP survey monuments R-116 to R-126. This beach segment was identified in the county-wide General Design Memorandum as being in need of nourishment due to the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also exacerbated the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat and public recreation waterward of the seawalls which protect this upland development.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

As a result of our review, the following observations are provided for your use in preparing/improving the final EIS:

Page iv 6 *Major Findings and Conclusions*. The SEIS states that measures have been taken to avoid, minimize, and compensate for adverse impacts including reducing the fill placement area to avoid nearshore hardbottom resources. Nonetheless, the SEIS preferred alternative comprises the same amount of fill material and extent as was initially proposed in the Public Notice for the project dated, March 22, 2000. In letters dated May 5, 2000 and June 1, 2000, EPA requested the scope of the project be reduced, particularly south of R-121. Irrespective of anticipated sand spreading which occurs after all sand nourishment operations, this design change would have lessened nearshore hard bottom impacts in the vicinity of the adjacent golf course. After our review of this documentation it is unclear what measures were examined to avoid and minimize adverse impacts to hard bottom resources.

An artificial reef (3.1 acres) is being proposed for construction approximately 500 feet north of the project site. However, the SEIS did not include sufficient data about this location (and its depth) to make a determination as to its effectiveness (long-term) as mitigation for the expected losses. Further, EPA is concerned that in the absence of sufficient underlying support (hardbottoms) the reef material will eventually sink into the sand. As you recall, this is what happened at Juno Beach when a similar mitigation structure was built over a sandy substrate.

Furthermore, it remains to be demonstrated whether the proposed artificial structure(s) will compensate for the losses attendant to project impacts. In our scoping letter dated September 25, 2001, we requested that the SEIS include an assessment of the functions and values provided by artificial reefs (placed at different depths) compared with those of the affected natural hardbottoms. In our estimation this is an important evaluation since this project will impact a narrow band of hardbottom resources located adjacent to and encompassing the entire 1.9 mile length of the project.

On the other hand, the proposed mitigation consists of clustering reef structure in one 3.1 acre block which already contains natural nearshore hardbottom communities. We agree that reef structure is desirable, but it has not been demonstrated whether this dense concentration of material at one point on the shoreline compensates for some structure along an almost 2 mile reach. Hence, we were pleased to note that there will be a research effort which will attempt to determine whether construction of a discrete reef adequately provides the necessary in-kind mitigation for the loss of linear nearshore hardbottom resources. If the results of this study indicate that this is not the case, there should be a commitment to provide additional mitigation.

One of the project needs is to restore and maintain the beach for public recreational use, thus benefitting the local economy and creating a public asset. The SEIS would be improved in this regard with some evaluation of the adverse effects on recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) that would be lost if the preferred alternative is selected.

Page 43. Table 2.2 *Major Features and Direct and Indirect Impacts of the proposed Action and Other Alternatives.*

Page 43. *Total Cost:* The statement is made that if the No-Action Alternative were selected, net land losses would be \$18 million. It would be helpful if there were some general explanation(s) as to how this and the other values in Table 2.2 were derived. The dry beach in question can only be maintained via indefinite renourishment which is becoming increasingly costly, e.g., more than \$14 million during the first 15 years of the project. While the excavated sand is effective in reducing the annual monetary losses from minor storm events (approximately \$1.4 M); larger hurricanes would continue to result in extensive property damages. This combination of circumstances makes it difficult to interpret how relative values are assigned unless all the underlying assumptions are detailed.

Appendix E. *Reef Mitigation and Monitoring Program:* Appendices E and F reference the state agencies (e.g., Florida Department of Environmental Protection) primarily responsible for approval and acceptance of the proposed mitigation together with other natural resources addressed in the SEIS. However, there are federal agencies which also have responsibilities in this regard and this should be noted in the final EIS.

EPA requested that the SEIS provide information on the impacts to the macro-invertebrate communities residing in the proposed borrow area. Instead, the applicant conducted a video survey (Appendix H) of the borrow areas which provides a qualitative overview of the various biotic assemblages. This macro-characterization is instructive, but it does not provide the necessary information to determine whether any additional mitigation would be necessary to compensate for the dredging which will occur in Sites III and IV.

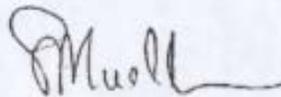
While seven potential borrow sites are mentioned in the text and depicted in Figure 2.6, it would be helpful if a summary of the pertinent information in Coastal Tech 2000d were provided in the final document to verify that Sites III and IV can meet the sediment needs of the project at the least environmental costs.

The SEIS states (page 101) that secondary impacts (elevation of suspended solids) could include downdrift of the project area as "fines" winnow from the material placed in the beach. These secondary effects would reduce algal production (reductions in light levels) and could interfere with the ability of coral to feed heterotrophically. In composite; this would diminish biological function/diversity. Since all borrow material contains some percentage of "fines", this is an unavoidable impact. The SEIS should provide, at least, a quantified range of significance for these secondary impacts and propose appropriate mitigation for them.

On the basis of our review a rating of EC-2 has been assigned. That is, we have some environmental concerns about whether the overall impacts (direct/indirect) attendant to this proposal have been adequately characterized and believe that these short-coming will need to be addressed by additional information in the final document.

Thank you for providing the opportunity to provide comments on the SEIS. If you should have any questions or need additional information on the above comments, please contact Ron Miedema (EPA South Florida Office) at (561) 616-8741.

Sincerely,



Heinz J. Mueller, Chief
Office of Environmental Assessment
Environmental Accountability Division