UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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By Electronic Mail

April 20, 2015

Theodore A. Brown, Chief,
Planning and Policy Division
Directorate of Civil Works,
Headquarters, U.S.C.E., CECW-P (SA)
7701 Telegraph Road
Alexandria, VA 22315-3860

SUBJECT: Port Everglades Harbor Navigation Study Final Environmental Impact Study and Feasibility Study, Broward County, Florida, CEQ No. 20150064, ERP No. COE-E00000-FL

Dear Mr. Brown:

To fulfill U.S. Environmental Protection Agency's (USEPA's) Clean Air Act (CAA) §309 and National Environmental Policy Act (NEPA) §102(2)(C) responsibilities, the USEPA reviewed the above final EIS (FEIS). Under §309, USEPA is directed to review and comment publicly on the environmental impacts of Federal activities. In its review of the draft EIS (DEIS), the USEPA expressed environmental concerns over potentially significant impacts to public water supplies, water quality, aquatic ecosystems including corals and hardbottoms, mangrove wetlands, seagrasses, and the associated mitigation identified to offset these impacts.

The USEPA continues to have some environmental concerns for the project as proposed, including concerns that were raised following the review of the DEIS and that remain unaddressed in the FEIS. A summary of these unresolved environmental concerns are further discussed in an attachment to this letter (please see Attachment A). In addition, numerous environmental issues associated with the Port of Miami project and its associated dredging impacts have further highlighted the need for Best Management Practices (BMPs) for the proposed dredging operations to avoid and minimize direct and indirect (secondary) impacts; an improved assessment methodology and monitoring plan; appropriate mitigation commitments for proposed dredging activities; and adequate budgeting for monitoring (including disposal site) and mitigation. The EPA Region 4 Water Protection Division can provide more detailed technical comments to the U.S. Army Corps of Engineers (USACE) to help address some of the identified issues regarding BMPs for dredging operations, and to clarify some issues surrounding the ocean disposal of dredged material from the proposed project. In addition, for the purposes of addressing potential technical issues regarding the ocean disposal of dredged material from the proposed project prior to the USACE's Marine Protection Research and Sanctuaries Act (MPRSA) Section 103 determination, the EPA Region 4 Water Protection Division can also provide additional technical comments regarding this matter under separate cover.

In summary, the USEPA continues to have environmental concerns regarding the proposed mitigation from direct impacts to Aquatic Resources of National Importance, water quality impacts and associated indirect project impacts. The USEPA recommends that the unresolved issues identified in Attachment A be further addressed by the USACE and documented in the Chief's Report and/or Record of Decision (ROD). Additionally, we understand that USACE plans to host an interagency team to refine the monitoring plan and evaluate its effectiveness during implementation for this project. We strongly recommend the USACE convene meetings with this team within the next three or four months and also utilize this team to work through the other issues highlighted in this correspondence.

If you wish to discuss these comments provided further, please contact Beth Walls, (404-562-8309 or Walls.beth@epa.gov), or Christopher Militscher, (404-562-9512 or Militscher.chris@epa.gov), of my staff.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Resource, Conservation, & Restoration Division

Attachment A

CC: Eric Suma, Chief, Environmental Branch, Planning Division, Jacksonville District Corps of Engineers w/Attachment A

Attachment A
Summary of Comments on Final EIS and Feasibility Study for Port Everglades Harbor Navigation Improvements, Broward County, Florida
CEQ No. 20150064
April 20, 2015

The USEPA has identified a number of yet unresolved issues from the DEIS. The primary issues are the implementation of Best Management Practices (BMPs) and dredging technology; the quantification of direct impacts and quantification and mitigation of indirect impacts to coral reef and hard bottom communities; the quantification and mitigation for direct impacts to mangrove wetlands; the monitoring plan; and adequate budgeting for monitoring (including the disposal site) and mitigation. The issues are more fully described below.

Environmental Concerns Identified from the Draft Chief's Report (Report)

The USEPA is concerned that the proposed funding for the compliance with the Marine Pollution, Research and Sanctuaries Act (MPRSA), including appropriate amount of sediment testing, disposal site monitoring, compliance and site selection (if needed), appears to be inadequate. Based on our review of Paragraph 2d of the Report, the USEPA understands that the use of the Ocean Dredge Material Disposal Site (ODMDS) is expected to be contingent upon a hardbottom habitat assessment. Due to the deep and high current environment at the ODMDS, the EPA Region 4 Water Protection Division staff have estimated the cost of this assessment to be on the order of $500,000. This cost is not reflected in the budget presented in the draft Chief's Report or FEIS/Feasibility Study.

Paragraph 2e of the Report states, "*Additional mitigation will be provided for any direct and indirect impacts caused by dredging or increased turbidity/sedimentation.*" However, the Report does not quantify or provide an estimate regarding the amount of mitigation that might be required or clearly describe how this will be determined. Moreover, the FEIS/Feasibility Study does not identify which BMPs for the dredging operations will be implemented nor were site specific impact assessments conducted with respect to whether/how such BMPs are utilized. The USEPA recommends that the USACE clarify this issue and clearly document it in the Report. The level of impacts from the dredging operation (and amount of mitigation required to offset such impacts) will be dependent on the BMPs selected to be implemented. Accordingly, the USACE should require specific BMPs as part of the dredging operation that ensure the avoidance and minimization of increased turbidity/sedimentation. The USEPA will be pleased to offer technical assistance to the USACE to ensure the implementation of appropriate BMPs during the dredging operation.

Per Paragraph 3 of the Report, the projected cost breakdown does not include the cost of monitoring or additional mitigation costs. Considering the significant amount of monitoring and mitigation expected for the proposed project, the USEPA believes that these costs should be addressed and disclosed.

Per Paragraph 6 of the Report, the unknown cost of an unknown amount of mitigation (to be determined through construction monitoring) appears to the USEPA to be a significant risk and the potential uncertainty is not reasonably accounted for in this discussion.

The Affected Environment to be Impacted

The USEPA considers mangrove, seagrass, coral reefs and hardbottom communities to be Aquatic Resources of National Importance (ARNI) and every effort should be made to avoid these impacts. Moreover, the Clean Water Act's implementing regulations establish environmental standards for the USEPA and the USACE's use in evaluating USACE feasibility studies for those activities impacting special aquatic sites,[1] (e.g., the Port Everglades harbor mangrove wetlands and submerged aquatic vegetation habitats).[2] The Florida Department of Environmental Protection designated the waters within the Port as Class III, acceptable for recreation, fish, and wildlife, and the waters adjacent to State Park, the Atlantic Ocean, as Outstanding Waters of the State.[3]

Environmental Impacts, Proposed Mitigation, Status of the Issue and Recommendations

Corals/hardbottom: One of the most significant impacts associated with dredging the outer entrance channel is the permanent removal of coral and hardbottom habitat. Within the outer reef system, the proposed action will widen the outer entrance channel an additional 3 feet, deepen the outer entrance channel from 45 to 57 feet, and extend the channel 2,200 feet further into the middle and outer reef tracts. The DEIS indicated the permanent removal of approximately 5.58 acres of the middle reef and approximately 11.09 acres of the outer reef (a total of 16.57 acres) to create the entrance channel flare for vessel safety purposes. However, the FEIS indicates the permanent removal of 14.62 acres of the middle and outer reefs, instead of 16.57 acres, to create the entrance channel flare. Clarification of this change is needed for the determination of the total direct impacts acreage amount.

The FEIS identifies the potential for up to an additional 17.13 acres of reef and nearshore hardbottom impacts with respect to the option for anchoring of cutterhead dredge equipment (See Section 4.5.10.2.2.). In order to ensure the implementation of the project avoids and minimizes the impacts to coral reefs and hardbottom communities in accordance with the Clean Water Act Section 404(b)(1) Guidelines, the USEPA recommends that the project plans include the BMPs for prohibiting the anchoring of cutterhead dredge equipment on reef and hardbottom communities.

The USEPA is concerned that the amount of mitigation required to compensate for indirect impacts to coral and hardbottom resources has been underestimated as the projected impacts do not account for the following:

- The FEIS indicates the proposed action will remove 0.07% of the middle reef (shallow colonized pavement and linear reef middle tract) and 0.52% of the outer reef (deep

[1] 40 CFR Part 230, Subpart E - Potential Impacts on Special Aquatic Sites, §§ 230.41 Wetlands and 230.43 Vegetated shallows.
[2] CWA, Section 404(b)(1) Guidelines.
[3] FEIS (2015), Section 3.9.1, p. 152.

colonized pavement; linear reef outer tract; spur & groove reef) foraging habitat within Broward County by expansion of the outer entrance channel. However, these estimates do not include secondary impacts to the coral reef complex associated with the actual construction activity (e.g., dredging, and any blasting effects, including associated turbidity and sedimentation).

- The USEPA notes that uncertainty may continue to exist between the USACE's and the National Oceanic and Atmospheric Agency (NOAA) Fisheries' defined indirect impacts as it is unknown whether impacts will extend beyond 150 meters as assumed by the USACE. The USEPA recommends further coordination with NOAA to help narrow the uncertainties associated with indirect impacts considering the importance of the resources that may be effected by this proposed project.

The USACE proposes a hybrid mitigation plan that includes mitigation for the direct removal of approximately 14.62 acres of complex, high-profile, linear and spur/groove reef habitat through the creation of approximately 5 acres of artificial reef, along with the transplantation of 11,502 corals from the impact site to the artificial reef. A third component of the USACE hybrid mitigation plan includes the enhancement of approximately 18 acres of reef via the installation of approximately 103,000 coral colonies out-planted from coral nurseries. However, the amount of mitigation required to compensate for indirect impacts to coral and hardbottom resources may not be sufficient as the impacts are not fully defined due to the potential uncertainties with the USACE criteria.

Seagrasses: The DEIS indicates dredging will permanently remove up to 3.57 acres of mixed or monoculture Johnson's seagrass where it occurs along the south access channel and widener and impede post-dredging recolonization as the seagrasses require shallow, 13-14 foot habitats. The USEPA notes a discrepancy in defined impacts exists between the USACE and the NOAA Fisheries. The proposed project may include the removal of approximately 7.41 acres of vegetated and un-vegetated seagrass habitat (including that within the new channel footprint and resulting side slopes).

The USACE proposes mitigation for seagrass impacts to involve the use of approximately 2.4 seagrass 'functional units' at a previously permitted restoration project at West Lake Park, which is currently under design. The difference in the quantification of the direct impacts should be clearly identified in the Final Chief's Report ('Final Report') and/or Record of Decision (ROD). The USEPA recommends that the mitigation for seagrass and associated habitat for direct impacts be adequate compensation for the direct losses to these aquatic resources. Given the current status of mitigation credits needed to offset losses, the USEPA requests that the USACE fully address compensatory mitigation issues in the Report and/or ROD.

Mangrove wetlands: The USACE indicates the proposed action will impact 1.16 acres of jurisdictional mangrove wetlands located along the east side of the south access channel along J. Lloyd State Park's western shore. However, the USEPA finds there is a larger wetlands impact (8.59 acres) associated with the close linkage between the turning notch component of the proposed action to be done by the USACE and that being directly performed by the local project sponsor. Instead of the USACE removing these black and red mangrove wetlands, the project

sponsor will be removing them to allow the USACE to completely implement the proposed action.

The USACE proposes to directly mitigate only for the loss of approximately 1.16 acres of mangroves in the project footprint by providing one mangrove 'functional unit' at a previously permitted restoration project at West Lake Park, which is currently under design.

Given the cumulative impacts of all proposed components of this harbor deepening project, both by the USACE and the local sponsor, the USEPA considers the proposed mangrove wetlands mitigation to be insufficient. The USEPA recommends that the USACE include complete information with the total mitigation needed for all direct losses of mangrove wetlands planned, and provide this information in the Final Report and/or the ROD.

Water Quality and BMPs: The USACE has deferred specific BMPs for dredging operations to the proposed contractor and the State of Florida. Water quality and offshore habitat impacts from this 6-7 year project are expected to be very significant and have the potential to degrade water quality and result in secondary sedimentation impacts to ARNI. The FEIS/Feasibility Study does not provide a comprehensive analysis or specific BMP requirements that addresses avoidance and minimization of secondary sedimentation impacts and minimization of water quality impacts during the multi-year project in accordance with CWA Section 404(b)(1) Guidelines .

The USACE has proposed to follow a similar monitoring criteria and BMP implementation process that was utilized for the Port of Miami project which has proved problematic, resulting in a citizen lawsuit and a warning letter from the State of Florida. Because the USACE's proposed monitoring plan is written in the context of adaptive management, the USEPA recommends that the impacts to water quality and aquatic resources be addressed in a timely manner. The USEPA can provide the USACE with technical assistance that would help to meet the avoidance of potentially critical impacts before they become a re-occurring problem.

The USEPA does not believe that the proposed identification, monitoring and enforcement of future, project-specific BMPs to protect water quality under the Clean Water Act and ARNI is adequately detailed in the FEIS. Because required BMPs are to be determined based on the USACE dredging contractor's discretion, it is unknown what minimization efforts will be instituted for the proposed project. In addition, the USEPA strongly recommends consideration of BMPs from the Permanent International Association of Navigation Congresses' (PIANC) document "*Dredging and Port Construction around Coral Reefs*," as well as those BMPs discussed in the FEIS.

The USEPA believes a site specific assessment could have been completed and is still recommended to be completed utilizing existing USACE models (e.g., SSFATE, ERDC TN-DOER-E10) for evaluating the potential extent of sedimentation effects of the dredging operations and evaluating the relative benefits of different BMPs. This modelling with site-specific data would aid in identifying BMPs to avoid and minimize impacts, and as well, to identify the geographic extent of indirect impacts, important for designing the monitoring zone evaluation area, and for ultimately determining the appropriate amount of compensatory mitigation.

The USEPA requests that the BMPs or appropriate equipment selection be implemented through Federal contracting practices in accordance with the USACE's *Dredging and Dredged Material Disposal Engineer Manual 1110-2-5025*. The USEPA recommends that the most effective and practical BMPs should be utilized by established USACE methods. The costs associated with these BMPs should be incorporated into the project budget and be required and implemented as part of the USACE's dredging contract.

Because the estimated funding to perform adequate ODMDS criteria testing of dredged materials is not provided in the FEIS, the USEPA questions if adequate funding for the testing of materials is going to be provided based upon past experience with the District's deepening projects. The FEIS did not provide an assessment of the risks of the project's full implementation if portions of the project do not meet the ocean disposal criteria. The USEPA also questions if the USACE has underestimated the costs associated with conducting their own ODMDS site selection pursuant to MPRSA Section 103, as the draft Chief's Report and FEIS/Feasibility Study do not appear to include all costs associated with the monitoring of the proposed expanded ODMDS.

The USEPA requests that further coordination and communication with the USACE prior to the commencement of the proposed project. Based on the review of the FEIS/Feasibility Study, the USEPA would be pleased to share extensive and detailed technical comments on the proposed dredging contracting and operations. The USEPA believes these detailed technical comments can identify potential solutions to reasonably foreseeable problems with water quality and associated indirect impacts to ARNI and can be provided to the USACE under separate cover. In addition, the USEPA would also be pleased to discuss these issues with the interagency team that we understand the USACE will be leading with respect to this project.