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June 5, 2018

Jacksonville District Corps of Engineers
Attn: Planning Division – Lacy Pfaff
701 San Marco Boulevard
Jacksonville, FL 32207-8175

Re: Comments on Port Everglades Updated Reef Map Technical Memo

Ms. Pfaff:

In late January of 2018 the Department and other members of the Port Everglades Interagency Working Group (IWG) were provided with a draft Technical Memorandum (Dial Cordy and Associates [DCA], 1/26/2017) that responded to questions posed by IWG members regarding revisions to the Walker and Klug (2014) regional scale reef and hardbottom map for the Port Everglades area. As a separate document, a series of ground-truthing photographs (Appendix A) were also provided. Department staff have reviewed the document and accompanying material. The Department appreciates the detailed descriptions provided in the Memorandum of the means and methods for side scan, multibeam, towed video, and diver verification surveys as well as the description of how these survey results were used to revise and refine the Walker habitat map. Department staff have determined that additional information and fieldwork are needed to provide reasonable assurance that that final habitat map for the project is accurate. A list of questions related to the mapping effort and recommendations for further map revisions are provided below.

1. How was the initial study area (850 ac) defined? How was the new study area (1,373 ac) defined? The Department recommends that the area studied extend throughout the entire area of interest. Please note, the Draft Biological Monitoring Plan provided by the Department to the IWG proposes monitoring an area extending out to 1,200 m north and south of the outer entrance channel, from the nearshore to the 3rd reef. The Department considers this (within 1200 m north and south of the channel) to be the minimum area of interest (i.e., the minimum area in which the Walker map should be refined).

2. The red box in Figure 7 of the Technical Memorandum indicates that multibeam and side scan data were not collected between 450 m and 1,020 m to the south of

the channel. Based on the information provided, it appears that a similar disclaimer (box) should be added to other areas that were not surveyed in the 2016 Spring-Fall US Army Corps of Engineers (USACE) bathymetric survey, such as the area between 900 m and 1,050 m to the north of the channel, and eastern, nearshore areas to the south (between 0 m and 450 m south) and north (between 0 m and 1,050 m to the north) of the channel. The Memorandum also indicates that NOAA Bathymetric Attributed Grid (BAG) maps were used to revise habitat boundaries (lines delineating habitat types) in the area south of the channel (between roughly 450 m and 1,020 m to the south of the channel), where multibeam and side scan data were not collected during the Spring-Fall 2016 USACE survey. Figure 10 of the Memorandum suggests that the BAG maps were also used to revise habitat boundaries in other areas (see areas mentioned above) not surveyed by USACE in 2016. Is this correct?

3. The Department recommends that revisions to habitat boundaries be based on data sets collected at roughly the same time, using similar methods. Specifically, we suggest that the BAG maps not be used to fill in information in areas not covered by the USACE Spring-Fall 2016 bathymetric survey. Department staff are generally in agreement with the approach taken to revising the Walker map (e.g., using side scan, multibeam, and diver verification surveys to increase the detail of the map), and strongly recommend that such methods be employed not only in areas not covered by the Spring-Fall 2016 bathymetric survey, but throughout the entire area of interest (see point 1 above). If additional surveys are planned that would extend the bathymetric data set to the entire area of interest, then please describe the methods that would be used to do so, and the expected time frame in which these data would be collected.

4. The Technical Memorandum recommends the inclusion and integration of all reconnaissance survey transect data (and possibly ESA survey data) in future map refinement efforts. Please explain specifically how Reconnaissance and ESA survey data would be used to refine the map. Note that the Department has previously stated that the Reconnaissance and ESA surveys were not designed or intended to delineate habitat boundaries and identify sand features. However, the habitat map should not contradict the information obtained during the Reconnaissance and ESA surveys. The current version of the habitat map contains areas identified as sand features that are actually hardbottom, according to video data from the reconnaissance survey (e.g., transects 151 and 160). Therefore, it is recommended that all available information, including but not limited to Reconnaissance and ESA survey data, be used to ensure that the final habitat map is accurate. Habitat boundaries and sand features in the map for which in situ data is currently not available should be groundtruthed to verify and improve the accuracy of the map.

5. Figure 4 of the Technical Memorandum reports towed video groundtruthing transect locations, and Figure 5 reports locations of diver verification bounce dives. Figure 10 of the Memorandum presents changes in the approximate aerial

extent of reef habitat from the 2014 Walker map to the revised 2017 map. Department staff appreciate that towed video transects and bounce dives were used to verify some areas where revisions to the 2014 Walker map were suggested by bathymetric data collected in 2016. The number of transects and dive sites used to verify revisions to habitat boundaries is limited, and the Department strongly recommends additional groundtruthing be conducted to verify changes to the Walker map. This is particularly important for crest and outer slope areas of the third reef, where a sizeable number of contractions (changes from reef in the 2014 Walker map to sand in the revised 2017 map) are present in the revised map (see Figure 10 in the Memorandum), but where no towed video transects or bounce dives were conducted to verify changes (see Figure 4 and 5 in the Memorandum). If additional towed video transects and/or bounce dives are planned that would expand the verified data set, or better yet, extend it to the entire area of interest (see Point 1), then please describe the methods that would be used to do so, and the expected time frame in which these data would be collected.

An accurate habitat map of the Port Everglades area is central to the determination of acreages of direct and indirect impacts and compensatory mitigation and the design of the biological monitoring grid and plan. The Department strongly encourages the USACE to implement the additional data collection and verification efforts discussed in the points above. Undertaking such efforts would both improve the maps accuracy and also help ensure the Port Everglades Project meets the Department's regulatory requirements for issuance of an Environmental Resource Permit. Staff in the Division of Water Resources Management are available to answer any questions you may have, and look forward to continued coordination with the USACE and the IWG on the Port Everglades Project.

Sincerely,

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cc: Jason Spinning, USACE
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