



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
9900 SOUTHWEST 107 AVENUE, SUITE 203  
MIAMI, FLORIDA 33176

REPLY TO  
ATTENTION OF

JUL 20 2011

Regulatory Division  
South Permits Branch  
Miami Regulatory Office  
SAJ-2004-6642 (LP-AG)

City of Miami  
c/o Johnny Martinez, City Manager  
3500 Pan American Drive  
Miami, FL 33133

Dear Mr. Martinez:

This is in reference to your request for a Department of the Army (DA) permit to perform work in or affecting waters of the United States. If you determine the permit provided is acceptable in its entirety and you have chosen to proceed with the authorized activity, then upon recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403) you are authorized under a Letter of Permission to:

maintenance dredge approximately 46,041 cubic yards of accumulated sediments from 7.6 acres of submerged bottom to the specified depths in the attached drawings (pgs.1-60) within the Wagner Creek and Seybold Canal in order to restore conveyance capabilities and to remove contaminated sediments from these waterways. "New" dredging below the existing hardpan controlling depth within these waterways is not authorized. Dredging work shall be done in accordance to the methods outlined in section 3.3 of the *Corrective Action Plan(CAP) version 2*, dated August 2009 incorporated herein by reference. Dredging shall be completed within the proposed footprint as follows:

Operational Section 1 (between NW 20<sup>th</sup> Street and NW 14<sup>th</sup> Avenue)  
Operational Section 2 (between NW 14<sup>th</sup> Avenue and NW 15<sup>th</sup> Street)  
Operational Section 3 (between NW 15<sup>th</sup> Street and NW14th Street)  
Operational Section 4 (between NW 14 Street and S.R. 836)  
Operational Section 5 (between S.R. 836 and NW 11<sup>th</sup> Street)  
Operational Section 6 (between NW11th Street and the Miami River)

All dredge spoil will be transported by water-tight container trucks to an approved upland disposal facility. There will be no de-watering of dredge spoil authorized by this permit. The project also includes the temporary deployment of turbidity curtains prior to all in-water construction and to be removed upon completion of the authorized work in waters of the U.S.

The project is located in the City of Miami, Miami-Dade County, Florida and is situated along a 1.7 mile tributary to the Miami River. This tributary has two sections: Wagner Creek and Seybold Canal. Wagner Creek and the northern two thirds of the Seybold canal are located in

Section 35, Township 53 south, Range 41 east, and the southern one-third of Seybold Canal is located in Section 2, Township 54 south, and Range 41 east.

Geographic Location:

Latitude and Longitude: Start Point Operation Section 1: Lat. 25.794674° North  
Long. 80.22163° West

Ending Point Operation Section 6: Lat. 25.778909° North  
Long. 80.207198° West

The project must be completed in accordance with the enclosed construction drawings date-stamped by the U.S. Army Corps of Engineers(Corps) on 19 July 2011, (pgs. 1-60),and the general and special conditions which are incorporated in, and made a part of, the permit.

**Special Conditions:**

1. Prior to the commencement of work authorized by this permit, the permittee or his representative and the contractor shall hold a pre-work conference. Said conference shall be requested a minimum of 14 day prior to the commencement of the work. Please contact Robert Kirby with the Corps Compliance and Enforcement Section at (305)779-6050 to schedule this meeting.
2. The permittee is responsible for ensuring that the permit conditions included in this authorization are explained to all construction personnel working on the project and that copies of this authorization are provided to all contractors and sub-contractors before the before the work begins.
3. All work associated with the maintenance dredging shall conform to the Corrective Action Plan (CAP) version 2 dated August 2009, herein incorporated by reference. Any deviation from the CAP shall be submitted in writing to the Corps for review prior to implementation.
4. Prior to the commencement of dredging at each Operational Section, the contractor shall provide a work plan, including the specific types of equipment and methods that will be used, the location of all staging areas, timelines for completion of work and a contingency plan in the event any structures within the operational section fail due to the dredging activities.
5. For all proposed dredging and staging activities, the permittee and/ or contractor shall maintain the necessary setbacks from existing structures so that impacts to these structures do not

occur. As noted in section 2.8 of the CAP version 2, setbacks for Wagner Creek will be 4 feet and for Seybold Canal will be 10 feet.

6. The contractor must notify the Corps within 24 hours of any structures that failed due to the dredging activities and what emergency measures will be taken to prevent further damage. The Corps must review and approve any preventative measures (i.e. shoring of a property with riprap boulders, driving of temporary piles to prevent seawall failures) before they are implemented.

7. This permit does not authorize any work other than maintenance dredging. If the contractor identifies any structures that will need repair at any of the operational sections prior to the commencement of dredging activities, that work shall require a separate permit from the ACOE. The permittee shall obtain all necessary permits for these repairs prior to the start of work within each operational section.

8. Prior to any maintenance dredging activities the contractor shall ensure that all underground and subaqueous utility lines within the dredge footprint are identified and that the proper safety procedures are implemented to avoid any impacts to these existing structures.

9. The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

10. Maintenance or use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.

11. As per section 3.2, Table 3-2 of the Cap, version 2, the permittee will obtain permission to move vessels during dredging activities 30 days before dredging of the Seybold Canal operational sections begin. In the event a vessels needs to traverse an active dredging area, the silt curtain will be temporarily lowered when work is not occurring. In addition, silt curtains will be removed/ relocated as necessary on Saturdays and Sundays to permit access for the passage of recreational watercraft.

12. The Permittee must comply with National Marine Fisheries Service's "Sea Turtle and Smalltooth Sawfish Construction Conditions" dated March 23, 2006, attached to this permit.

13. The Permittee agrees to abide by the Final Manatee Protection plan developed for this project, dated December 10, 2010, during all phases of the project (copy attached)

14. Prior to the initiation of any of the work authorized by this permit the Permittee shall install floating turbidity barriers with weighted skirts that extend to within 1 foot of the bottom around all work areas that are in, or adjacent to, surface waters. The turbidity barriers shall remain in place and be maintained until the authorized work has been completed and all erodible materials have been stabilized and turbidity returns to back ground levels.

15. The permittee shall comply with the special conditions specified in the Florida Department of Environmental Protection Permit 13-0186694-006, issued on 16 February 2011.

16. Should any other regulatory agency require changes to the work authorized or obligated by this permit, the Permittee is advised that a re-verification of the revised work is required prior to initiation of those changes. It is the Permittee's responsibility to request a modification of this proposed work from the Miami Regulatory Office.

17. Within 10 days from the date of initiating the authorized work, the Permittee shall notify Mr. Robert Kirby with the Corps Compliance and Enforcement Section at (305) 779-6050 of the date of commencement of work authorized by this permit.

18. Environmental controls and best management practices must be implemented to prevent any materials related to construction activities from entering the surrounding water. Any material removed as well as material applied to accomplish the project must be contained so as to prevent fugitive particulates and/or discharge to surface waters.

19. Cultural Resources/Historic Properties: If, during the initial ground disturbing activities and construction work, there are archaeological/cultural materials unearthed (which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the permittee shall immediately stop all work in the vicinity and notify the State Archaeologist and the Corps Regulatory Project Manager to assess the significance of the discovery and devise appropriate actions, including salvage operations. Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7.

In the unlikely event that human remains are identified, they will be treated in accordance with Florida State Regulation 872.05; all work in the vicinity shall immediately cease and the State Archaeologist, Corps Regulatory Project Manager, and local authorities shall immediately be

notified. Such activity shall not resume unless specifically authorized by the State Archaeologist and the Corps.

20. This authorization only allows the removal of accumulated marine sediments and detritus during the dredging activities. All dredging shall be in accordance with the attached permit drawings and shall not exceed the depth indicated on those drawings. This authorization does not permit any "new dredging" (i.e. removal of previously undredged limerock substrate) below the controlling hard pan depth within either waterway.

21. All dredge spoil associated with the project shall be handled and disposed of in accordance with the procedures outlined in section 3.75 of the CAP, version 2. Sediments dredge from area showing elevated dioxins will be disposed at Chemical Waste Management in Emelle, Alabama. All other sediment will be disposed in either Waters Managements' Medley or Central landfills in Florida. Receipts for the disposal of all spoil material at the above facilities shall be provided to the Corps Compliance and Enforcement Section within 30 day of disposal.

22. This permit does not authorize de-watering of dredge material. Free dredge water that collects within the Water-tight roll-off containers (WRC) shall be disposed of in accordance to the procedures outlined in section 3.4.3 of the CAP, version 2.

23. Within 30 days of completion of the authorized work or at the expiration of the construction window of this permit, whichever occurs first, the Permittee shall complete the attached "Self-Certification Statement of Compliance" form (attached) and submit to the Corps. In the event that the completed work deviates, in any manner, from the authorized work, the Permittee shall describe, on the Self-Certification Form, the deviations between the work authorized by the permit and the work as constructed. Please note that the description of any deviations on the Self-Certification Form does not constitute approval of any deviations by the Corps.

24. All reports or notices related to this permit shall be sent to Mr. Robert Kirby with the Corps Compliance and Enforcement Section at 9900 S.W 107<sup>th</sup> Avenue, Miami, FL 33176.

If the work authorized is not completed on or before July 19, 2016, authorization, if not previously revoked or specifically extended, shall cease and be null and void.

**Instructions for Objecting to Permit Terms and Conditions:** This letter contains an initial proffered permit for your proposed project/permit application. If you object to certain terms and conditions contained within the permit, you may request that the permit be modified. Enclosed you will find a Notification of Administrative Appeal Options and Process fact sheet and Request for Appeal (RFA) form. If you choose to object to certain terms and conditions of the permit, you must follow the directions provided in Section 1, Part A and submit the completed RFA form to the letterhead address.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria under 33 CFR Part 331.5, and that it has been received by the District office within 60 days of the date of the RFA. Should you decide to submit an RFA form, it must be received at the letterhead address within 60 days from the date of permit issuance. You must submit a completed RFA form to the South Atlantic Division Office at the following address:

Mr. Jason Steele  
South Atlantic Division  
U.S. Army Corps of Engineers  
CESAD-CM-CO-R, Room 9M15  
60 Forsyth St., SW.  
Atlanta, Georgia 30303-8801.

Mr. Steele can be reached by telephone number at 404-562-5137, or by facsimile at 404-562-5138.

Should you have any questions concerning this application, you may contact Albert Gonzalez at the letterhead address, by electronic mail at [Albert.Gonzalez@usace.army.mil](mailto:Albert.Gonzalez@usace.army.mil), or by telephone at 305-779-6055.

The Corps Jacksonville District Regulatory Division is committed to improving service to our customers. We strive to perform our duty in a friendly and timely manner while working to preserve our environment. We invite you to take a few minutes to visit the following link and complete our automated Customer Service Survey:

<http://per2.nwp.usace.army.mil/survey.html>.

Your input is appreciated – favorable or otherwise.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:



*FOR:*  
Alfred A. Pantano, Jr.  
Colonel, U.S. Army  
District Commander

Enclosures:

Project drawings dated stamped on July 19, 2011  
Transfer Form  
Preliminary JD Form  
Final Manatee Protection Plan dated December 15, 2010

Copy Furnished:

CH2M HILL  
c/o Thomas McSweeney

CESAJ-RD-PE

GENERAL CONDITIONS  
33 CFR PART 320-330  
PUBLISHED FR DATED 13 NOVEMBER 1986

1. The time limit for completing the work authorized ends on the date noted in the permit letter. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow a representative from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.



**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL**

Applicant: City of Miami		File Number: SAJ-2004-6642	Date:
Attached is:		See Section below	
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
	APPROVED JURISDICTIONAL DETERMINATION	D	
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at [http://www.usace.army.mil/CECW/Pages/reg\\_materials.aspx](http://www.usace.army.mil/CECW/Pages/reg_materials.aspx) or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

**ADDITIONAL INFORMATION:** The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

**Project Manager as noted in letter**

If you only have questions regarding the appeal process you may also contact:

**for process:  
Stuart Santos 904-232-2018**

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

\_\_\_\_\_  
Signature of appellant or agent.

Date:

Telephone number:

**RIVERS AND HARBORS ACT SECTION 10 DETERMINATION OF  
JURISDICTION**

**Project Name: Wagner Creek and Seybold Canal Dredge**

**Action ID: SAJ-2004-6642**

**Applicant: City of Miami**

There are "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area.

**Waterbody: Biscayne Bay**

**Waters have been determined to be navigable because:**

- Navigation Study
- Judicial interpretation in a Federal court of law
- Waters subject to the ebb and flow of the tide
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. **Explain:** Both Wagner Creek and Seybold Canal have a direct connection to the Miami River. Both of these waterways are considered Traditionally Navigable Waters.

**Project Manager: Albert Gonzalez**

**Date: July 19, 2011**



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Southeast Regional Office  
263 13th Avenue South  
St. Petersburg, FL 33701

## SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006

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## STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or in Vero Beach (1-772-562-3909) for south Florida, and emailed to FWC at [ImperiledSpecies@myFWC.com](mailto:ImperiledSpecies@myFWC.com).
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at [http://www.myfwc.com/WILDLIFEHABITATS/manatee\\_sign\\_vendors.htm](http://www.myfwc.com/WILDLIFEHABITATS/manatee_sign_vendors.htm). Questions concerning these signs can be forwarded to the email address listed above.

# CAUTION: MANATEE HABITAT

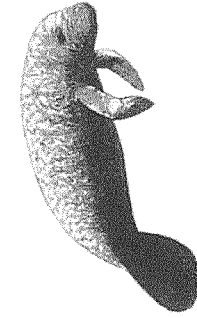
All project vessels

## IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work  
all in-water activities must

## SHUT DOWN

Report any collision with or injury to a manatee:



Wildlife Alert:

**1-888-404-FWCC(3922)**

cell \*FWC or #FWC

## FINAL MANATEE PROTECTION PLAN

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### 1.0 INTRODUCTION

The West Indian manatee was listed as an endangered species by the Florida Fish and Wildlife Service (FFWS) on June 2, 1970. This species habitat range is rivers, estuaries, and coastal areas of subtropical and tropical areas. The West Indian manatee is a herbivore that migrates to warmer waters during the colder months. In Florida, most migrate south during the winter and congregate mainly in estuaries and canals. They prefer brackish over marine environments. The present distribution of the West Indian manatee includes the coasts and rivers of Florida, the Greater Antilles, eastern Mexico and Central America and northern and eastern South America. A critical habitat was established for the West Indian manatee in 1976. It includes Biscayne Bay, and all adjoining and connected lakes, rivers, canals, and waterways from the southern tip of Key Biscayne (FFWS, 1999).

During sampling events for Wagner Creek and Seybold Canal it was noted that Manatees frequent both the creek and canal. During the June/July 2008 sampling event, Manatees were sighted up to the NW 15<sup>th</sup> St. Bridge (adjacent to University of Miami Hospital). During the May 2009 sampling event, Manatees were sighted between the NW 14<sup>th</sup> Ave./NW 17<sup>th</sup> St. bridges (adjacent to VA Hospital). There is anecdotal evidence that Manatees have been sighted as far northwest as the NW 20<sup>th</sup> St. Culvert.

Because of the above, Manatee protection will be a daily concern during the dredging of Wagner Creek and Seybold Canal. The following are key issues to Manatee Protection during the work.

- Mechanical dredging will be utilized to remove the sediments. A manatee watch will be required to minimize the possibility that manatees will be adversely impacted by dredge operations.
- Control of water quality (turbidity) may require the use of multiple turbidity curtains during dredging. Protective actions will be required so the turbidity control measures do not adversely impact manatees.

The following manatee protection measures will be implemented to avoid potential impacts to manatees during the Wagner Creek and Seybold Canal project construction.

### 2.0 MANATEE PROTECTION MEASURES

1. All personnel associated with the project activities shall be instructed about the presence of manatees and manatee speed zones in the project area and the need to avoid collisions with, and injury to, manatees.

2. The dredge construction will begin at the North end of Wagner Creek. For Manatee protection during dredging activities in Wagner Creek, chain link fence barriers (Manatee Barriers) will be installed across the channel south of the construction area to prevent manatee access into the dredge area. Sketches showing typical design features and locations of manatee Barriers can be found in Attachment D-1 and Attachment D-2 to this plan.

Manatee Barriers will be located south of the dredging activities and be designed to;

- a. Extend to the sediment/water interface
- b. Match the contour at the sediment/water interface as well as shoreline contours up to at least one (1) foot above the High/High Waterline.
- c. Prevent Manatee movement north of the barrier and avoid manatee entanglement in the barrier.

Before installation of a manatee barrier, inspection of all areas north of the barrier location will be performed to confirm that Manatees are not present north of the proposed barrier location. If Manatees are sighted north of the proposed barrier location they will be allowed to leave on their own volition before the barrier is installed. Manatee Barriers will be installed by the dredging contractor at least two days prior to commencement of dredging activities north of the barrier and during the two days the area will be monitored to ensure no manatees are trapped north of the barrier.

Once installed, Manatee Barriers will remain in place until dredging north of the barrier is complete. Each day before dredging begins areas north of the barrier will be inspected by Manatee Watch personnel to determine if Manatees have moved north of the barrier. If Manatees are sighted north of the barrier, the barrier shall be opened so the manatee is able to leave the construction area on its own volition. The barrier will then be reinstalled as described above as well as modified to prevent manatee movement north of the barrier. Each morning the manatee barrier will be inspected to insure that no manatees are entangled in the barrier and there are no access points for manatees into the work area along the bottom, sides or over the top of the barrier. If a manatee becomes entangled in a manatee barrier the Florida Fish and Wildlife conservation Commission should be notified immediately at 1-888-404-FWCC.

3. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
4. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
5. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Except as described in number 2 above, siltation or turbidity barriers must not impede manatee movement.



6. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
7. At least one person shall be designated as a manatee observer when in-water work is being performed. That person shall have experience in manatee observation and be equipped with polarized sunglasses to aid in observation. The manatee observer must be on site during all in-water construction activities and will advise personnel to cease operation upon sighting a manatee within 50 feet of any in-water construction activity.
8. Movement of a work barge, other associated vessels, or any in-water work shall not be performed after sunset, when the possibility of spotting manatees is negligible, or at other times when observation becomes ineffective (e.g., in cases of rain, fog or limited visibility).
9. Any collision with or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida.
10. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Awareness signs that have already been approved for this use by the Florida Fish and Wildlife Conservation Commission (FWC) must be used (see [MyFWC.com](http://MyFWC.com)). One sign which reads Caution: Boaters must be posted. A second sign measuring at least 8 1/2" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities.
11. The permittee shall ensure that the contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. Within 30 days following each event, the logs and a report summarizing incidents and sightings shall be submitted to the Florida Fish and Wildlife Conservation Commission, Imperiled Species Management Section at: [ImperiledSpecies@myfwc.com](mailto:ImperiledSpecies@myfwc.com).
12. Air Curtain technology as a turbidity control methodology will be tested at the confluence of the Seybold Canal and the Miami River. It is not known how manatees may react to air bubble emissions. Manatees may be attracted to bubbles associated with the aeration activity possibly increasing the number of manatees near the dredge operations and at a location in the Miami River where the risk of boat/manatee collisions is already high. Because the manatee attractant characteristics of the proposed are curtain are unknown, manatee protection measures in association with this technology are required.

Monitoring of manatee use and behavior at the air curtain site and the site vicinity shall be conducted by an independent third party approved by Miami-Dade DERM, the Florida DEP and the FWC Imperiled Species Management section (ISM). Approval for the observers shall be obtained prior to installation of the device. Prior to installation, observation for manatees in the

area must occur on at least seven (7) days. After installation, observation must occur at least twice a day, once in the a.m. and again in the p.m., for no less than thirty minutes per observation when the air curtain is in operation. Manatee monitoring reports describing manatee presence, absence, behavior and location in relation to the device shall be submitted by email to FWC ISM on a weekly basis to [ImperiledSpecies@myfwc.com](mailto:ImperiledSpecies@myfwc.com).

If any aberrant or unusual manatee behavior in the vicinity of the device is noted, or if the device appears to serve as an attractant to manatees, or produces a situation in which there is an increased risk of manatee impact from the Seybold Canal dredge operation or boat/manatee collisions in the vicinity of the air curtain location, the device will be removed and other turbidity control measures will be implemented.

If the Miami-Dade DERM and the DEP determine that the device does not achieve the turbidity control results expected from the device, it will be removed and other turbidity control measures will be implemented.

## Attachment A

### Final References to "Manatee" in CAP 2 body

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FINAL- REFERENCES TO "MANATEE" in CAP2 body

Please also see Manatee Protection Plan Update (12-15-10)

### REFERENCES in CAP2

This Work Plan addresses the need to minimize water volume generated during dredging operations, the management of water collected during dredging, and water quality controls to be implemented during the dredging activities. Finally, it describes the procedures to be implemented for endangered species protection (manatees) and structure protection during the dredging activities. [p. 2-1, Sec. 2.1]

Most areas of Wagner Creek and Seybold Canal are frequented by manatees (Section 3.5.8). A Manatee Watch will therefore be onsite at all times during the work. As discussed in the following sections, turbidity barrier design will account for turbidity control while generally allowing access for manatee movement. During Wagner Creek dredging, Manatee Barriers will be utilized to limit Manatee movement into the dredging area. Design and use of Manatee Barriers will be as described in Appendix D, Manatee Protection Plan. [p. 3-17, Sec. 3.5.2]

The primary water quality controls to be implemented during Wagner Creek dredging will be turbidity barriers and monitoring. Turbidity barriers will be installed and maintained both upstream and downstream of the active dredging area. Turbidity barriers for Wagner Creek will be solid construction and will be designed to minimize the potential for manatee entanglement. Figure 3-14 shows a typical barrier design.

Wagner Creek is narrow (20 ft to 35 ft) and shallow (2 ft to 4 ft deep in un-dredged areas). Turbidity barriers used in Wagner Creek will be designed to extend side to side and to the surface of underlying material. It is envisioned that a typical downstream barrier will be 25 ft wide x 4 ft deep. A typical upstream barrier will be 25 ft wide x 8 ft deep.

Turbidity barrier configuration for Wagner Creek dredging will depend on the following factors:

1. **Dredging Configuration** – Turbidity barrier configurations will be different when dredging to land based containers (WRCs) than when dredging to floating containers. An example of each configuration is shown in Figures 3-15 and 3-16.
2. **COPC Concentrations** – Portions of OS-1 exhibit elevated concentrations of TEQ (> 1 ppb). Monitoring, dredging production, and turbidity barriers will be configured to maintain turbidity levels at the compliance point stipulated by the permits.
3. **Manatee Movement** – Areas north of the active dredging area will be checked for manatees and monitored in accordance with the requirements outlined in Appendix D, Manatee Protection Plan.
4. **Turbidity Monitoring Results** – A Hach® 2100P (or equivalent) Portable Turbidity Meter will be utilized onsite to constantly check turbidity levels. These measurements will be used in the field to aid in selecting the number and proper placement of turbidity barriers.

Dredging in Wagner Creek will progress slowly (30 to 50 ft/day). Wagner Creek is tidal, so both upstream and downstream barriers will be required. [p. 3-18, Sec. 3.5.2.1]

All barriers will be removed at the end of each work day once turbidity levels are at or below the compliance point stipulated by the permits. [p. 3-19, Sec. 3.5.2.1]

Turbidity barrier configurations for Seybold Canal dredging will depend on the following factors:

1. **Dredging configuration** – Turbidity barrier configurations for Seybold Canal will be installed to control turbidity while dredging to floating containers.
2. **COPC Concentrations** – There are no elevated TEQ areas in Seybold Canal. Monitoring, dredging production, and turbidity barriers will be configured to maintain turbidity levels at the compliance point stipulated by the permits.
3. **Manatee Movement** – Areas north of the active dredging area will be checked for manatees before barriers are deployed and monitored ~~before barriers are deployed~~ in accordance with the requirements outlined in Appendix D, Manatee Protection Plan.
4. **Boat Access** – Seybold Canal connects to the Miami River and therefore allows water access for small craft. There are many pleasure craft and small fishing vessels that use Seybold Canal for mooring. Boats will be moved to allow access to the immediate dredging areas. Access to areas north of the dredging will be allowed during non-work hours.
5. **Turbidity Monitoring Results** – A Hach® 2100P (or equivalent) Portable Turbidity Meter will be utilized onsite to constantly check turbidity levels. These measurements will be used in the field to aid in selecting the number and proper placement of turbidity barriers/~~bubble~~ Air Curtains. [p. 3-19, Sec. 3.5.2.1]

Dredging in Seybold Canal will progress at approximately 20 - 30 ft/day. As the dredging progresses toward the mouth of Seybold Canal, turbidity controls will become critical. For this reason, turbidity barriers will be installed and maintained both upstream and downstream of the active dredging area and an Air Curtain will be installed at the mouth of Seybold Canal. Turbidity barriers for Seybold Canal will be solid construction and will be designed to minimize the potential for manatee entanglement. [p. 3.20, Sec. 3.5.2.2]

Manatee protection will be a daily concern during the dredging of Wagner Creek and Seybold Canal and will be monitored in accordance with the requirements outlined in Appendix D, Manatee Protection Plan. A Manatee Protection Plan is presented in Appendix D. [p. 3.23 , Sec. 3.5.8]

The following summarizes the biological assessment findings:

- 238 instances of flora and fauna were observed along Wagner Creek and Seybold Canal.
- 39 species of trees, plants, and vines were observed, none of which are federally Listed as Threatened or Endangered Species.
- 15 wildlife species were observed. Two are considered Species of Special Concern by the Florida Fish and Wildlife Conservation Commission (FFWCC) and one is listed as Endangered by the USFWS.

Species of Special Concern:

- Tricolored Heron (*Egretta tricolor*)

- White Ibis (*Eudocimus albus*)

Endangered Species:

- West Indian Manatee (*Trichechus manatus*)

This investigation revealed that the project area consists only of disturbed lands and urban areas. It does not offer a high quality habitat to floral or faunal species. Standard precautionary measures will be employed during the construction phase of the project to protect the tricolored heron, white ibis, and West Indian manatee (Manatee Watch). Therefore, no significant impacts to federal, state, or locally listed species are anticipated as a result of this project. [p. 4.1 , Sec. 4]

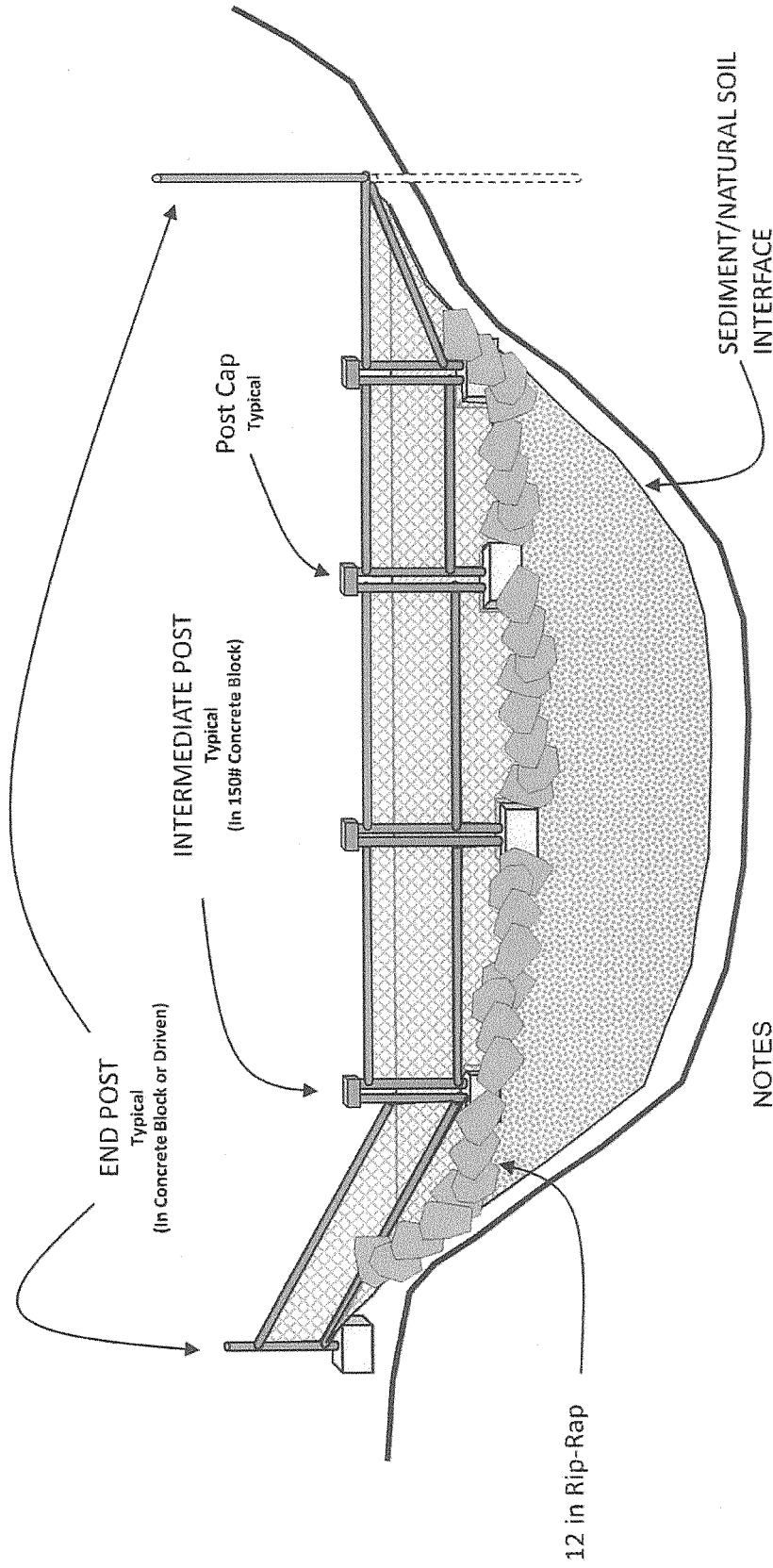
## Attachment B

### Final Figure D-1 Typical Manatee Barrier

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# TYPICAL MANATEE BARRIER

## FIGURE D-1



### NOTES

1. Installed at least 50 ft downstream of last Turbidity Barrier
2. Must be inspected, cleaned of all trash and repaired daily
3. Standard Chain Link Fencing with bottom sections that match the contour at the sediment water interface as well as shoreline contours up to at least 1 ft above the High/High water line. Bottom sections shall be secured with rip-rap boulders, or similar materials, to prevent manatee entanglement or entrapment.
4. The manatee barrier shall be monitored at least once in the morning for manatee entanglement or entrapment, and to insure there are no access points for manatees into the work area along the bottom, sides or over the top of the barrier. If a manatee becomes entangled in the Manatee Barrier, the Florida Fish and Wildlife Conservation Commission should be notified immediately at 1-888-404-FWCC.
5. Area north of Manatee Barrier to be inspected each day and prior to installation to ensure no manatees are trapped north of the barrier. If a manatee becomes entrapped north of the manatee barrier in the construction area the barrier shall be opened so the manatee is able to leave the construction area on its own volition.
6. Regulators to be notified if Manatee is sighted north of Manatee Barrier

	Sediment
	High/High Water Line
	Concrete Block



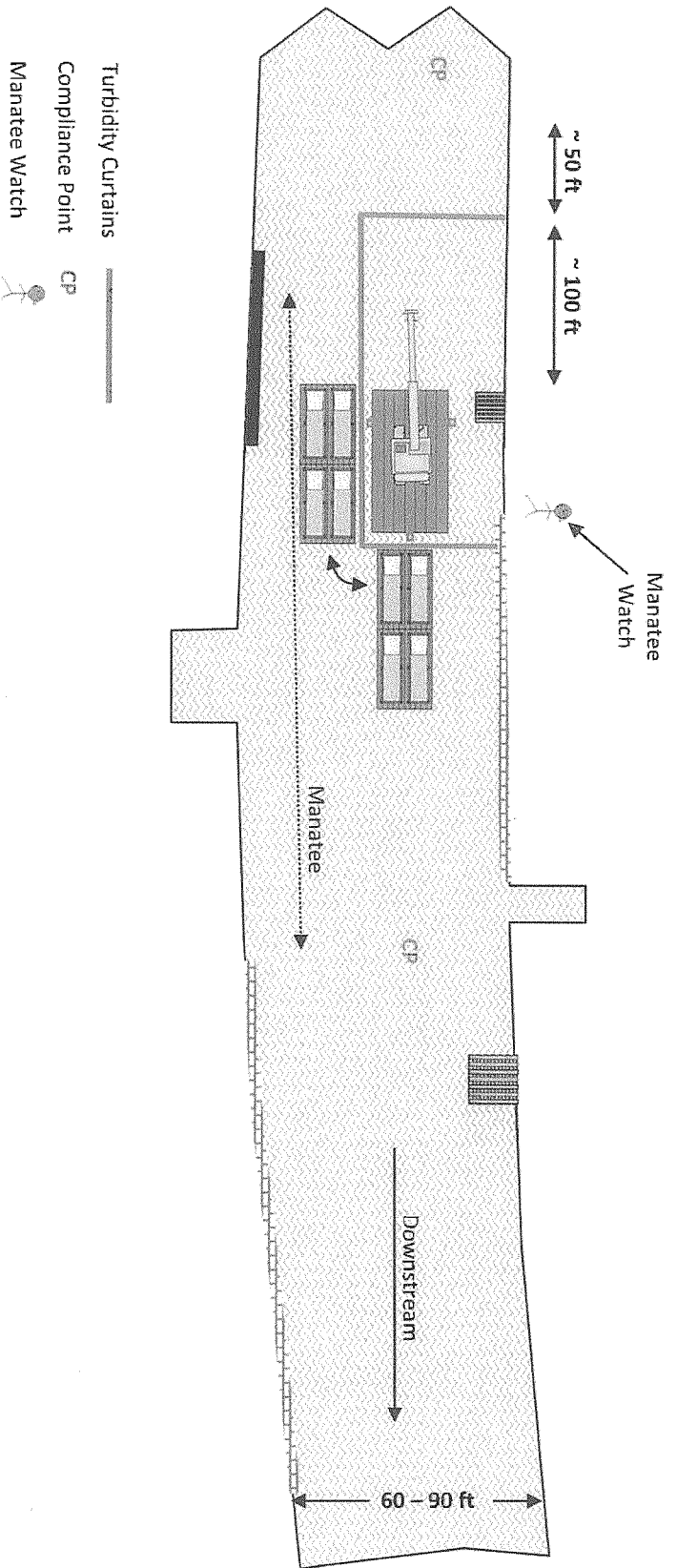
# Attachment C

Final Figure 3-17

Seybold Canal Water Quality Control/Manatee Watch

FIGURE 3-17

Seybold Canal Water Quality Control/Manatee Watch



## Attachment D

Final Figure 3-19

Dredging Near Mouth of Seybold Canal Water Quality  
Control/Manatee Watch

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# Dredging Near Mouth of Seybold Canal Water Quality Control/Manatee Watch

Figure 3-19

