



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MARJORY STONEMAN DOUGLAS BUILDING  
3900 COMMONWEALTH BOULEVARD  
TALLAHASSEE, FLORIDA 32399-3000

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SECRETARY

## COMPREHENSIVE EVERGLADES RESTORATION PLAN REGULATION ACT (CERPRA) PERMIT CONSTRUCTION AND INTERIM OPERATIONS AUTHORIZATION

**PERMITTEE:**

U.S. Army Corps of Engineers, Jacksonville District  
701 San Marco Boulevard  
Jacksonville, FL 32207

**ATTENTION:**

Mr. Eric Summa  
Chief, Environmental Branch  
Planning Division

**Permit Number:** 0297646-003

**Project:** Indian River Lagoon - South

**Phase:** C-44 Reservoir and Stormwater  
Treatment Area

**County:** Martin

**Date of Issue:** May 27, 2010

**Date of Major Modification:** August 9, 2014

**Expiration Date:** August 9, 2019

This permit is issued under the authority of the Comprehensive Everglades Restoration Plan Regulation Act (CERPRA), Section 373.1502, Florida Statutes (F.S.); Title 62, Florida Administrative Code (F.A.C.); and pursuant to the Department of Environmental Protection's (Department) authority under Chapters 373 and 403, F.S. The activity is not exempt from the requirement to obtain a CERPRA Permit.

The above named permittee is hereby authorized to initiate the activities described on the application, associated drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof. The activities authorized by this permit must be conducted in conformance with all the provisions of this permit. Failure to comply with all permit conditions and documents referenced herein shall constitute grounds for revocation of the permit and appropriate enforcement action.

This permit constitutes a finding of consistency with Florida's Coastal Zone Management Program (CZMP), as required by Section 307 of the Coastal Zone Management Act, 16 U.S.C. § 1456, and constitutes certification of compliance with water quality standards under Section 401 of the Clean Water Act, 33 U.S.C. § 1341 authorization pursuant to Chapter 373, F.S. The Department's finding of consistency with Florida's CZMP and water quality standards are both conditional upon the U.S. Army Corps of Engineers (Corps/permittee) compliance with all general and specific permit conditions contained herein.

### PROJECT DESCRIPTION:

The C-44 Reservoir and Stormwater Treatment Area (C-44 RSTA) is part of the Indian River Lagoon - South (IRL-S) Restoration Project, which is a CERP "project component" as defined in Section 373.1501(1)(g), F.S. The C-44 RSTA will include a Reservoir and six Stormwater Treatment Area (STA) cells. The Reservoir, a 3,400 acre above-ground water storage area, will have an approximate storage volume of 50,600 acre-feet at a Normal Full Storage Level (NFSL) of 15 feet. The STA will consist initially of emergent vegetation and have a combined total wet surface area of approximately 6,300 acres with a targeted average depth of 1.5 feet. The overall function of the C-44 RSTA is to capture and store runoff from the C-44 Basin within the Reservoir and return it to the C-44 Canal following discharge from the STA. The components of the C-44 RSTA are designed to attenuate flows and reduce nutrient loading to the St. Lucie Estuary.

The Department previously issued permits and associated modifications (File No. 0254895-001 through 0254895-008) to the South Florida Water Management District (District) for the entire C-44 RSTA including the Reservoir, Stormwater Treatment Area and modifications to the Troup Indiantown Water Control District (TIWCD) irrigation and drainage systems. In 2007, construction and operational testing was performed on the TIWCD systems to verify



the design assumptions for the temporary and final reconfigurations. Prior to commencement of construction of the C-44 RSTA Intake Canal, the remaining components of the TIWCD Temporary Reconfiguration Project were completed by the District. Construction of the TIWCD Final Reconfiguration Project, which was also authorized by the Department under the District's permit, is expected to commence after the Corps has transferred the Intake Canal to the District which is anticipated to be six (6) months after construction is complete.

The Department issued a permit to the Corps (File No. 0297646-001) for the entire RSTA, including conceptual authorization of the Reservoir and Stormwater Treatment Area and conditional authorization of the Intake Canal, based on the level of information submitted to the Department as part of the application process. The Corps identified that the construction of the Intake Canal would result in adverse impacts to wetlands on adjacent properties, and as such, the Department's conditional authorization for the Intake Canal was contingent upon the Corps completing a National Environmental Policy Act (NEPA) review and analysis and submitting a strategy which fully addresses and offsets the impacts. On November 08, 2010, the Corps submitted to the Department a Finding of No Significant Impact (FONSI) which identified an alternative for mitigating these impacts. The District acquired the 70 acres of land containing wetlands 1-5. The Department issued a major modification to the Corps permit for Conveyance and Access Improvements (File No. 0297646-002) to address these issues and authorize the Intake Canal components.

**Should the District and Corps mutually agree that construction or interim operations of any features or project components currently authorized by this permit, be constructed or operated by the District instead, the Corps shall coordinate with the Department to determine whether or not a modification to this permit issued to the Corps is necessary.**

#### **PROJECT LOCATION:**

The C-44 RSTA is located in southern Martin County, Florida. The project is located directly north of the C-44 Canal and midway between Lake Okeechobee and the Atlantic Ocean in Sections 2-5, 8-11, 13-17, 22-24, 25-27, 33-36 Township 39 South, Range 39 East; and Section 3 and 4 Township 40 South, Range 39 East.

#### **AUTHORIZED PROJECT COMPONENTS:**

- **Main Access Road** – this 24-foot wide paved road is approximately 4 miles long and was constructed from Citrus Boulevard to the southeast corner of the Reservoir area. Swales, ditches, dry retention areas, and associated culverts/structures are included for water quality treatment and conveyance.
- **Eastern Drainage Canal (EDC/C-133/C-133A)** – improvements to the east/west C-133A Canal immediately north of STA Cell 4 and the C-133 Canal along the east side of the Project to maintain drainage service for the Bar-B Ranch property. The C-133 Canal improvements extend from the northeast corner of the STA area south to the C-44 Canal and include relocation of the access road for Bar-B-Ranch.
- **East Drainage Canal Spillways (EDCS S-418)** – a Structure with two spillways are located within Easement 1 within the EDC, south of the Citrus Boulevard Box Culvert and prior to the C-44 Canal. The controlling spillway is a 34-foot wide broad-crested weir with a crest elevation at 17.0 ft (NAVD88) and is designed for a normal operational flow of approximately 500 cfs. This spillway is the discharge point for the off-site areas located north of the C-44 RSTA.
- **Citrus Boulevard Bridge and Roadway Improvements** – includes a new bridge (40' wide and 80' in length) which spans the Intake Canal, roadway bridge approaches, turn lanes for main access road, treatment areas, stabilized shoulders, paving and striping upgrades. Upon completion, the bridge and roadway improvements will be owned and maintained by Martin County. Construction of temporary roadways and drainage facilities on the north side of Citrus Blvd. are authorized to maintain vehicular use during construction of the bridge and box culvert.



- **Citrus Boulevard Box Culvert** – two 10'x 6' box culverts located under Citrus Boulevard at the East Drainage Canal within Easement 1.
- **Intake Canal (C-400)** – the Canal is approximately 20,000 linear feet in length with a 60 foot bottom width for a majority of its extent (111 foot bottom width from Citrus Boulevard to the C-44 Canal) at an elevation of 3 feet (NAVD88). Design conveyance capacity for the Intake Canal is approximately 1,300 cubic feet per second (cfs). Canal side slopes under the Citrus Boulevard Bridge are comprised of a vertical sheet pile wall system.

#### **C-44 Reservoir:**

- **Reservoir/Reservoir Embankment (D-400)** – comprised of approximately 50,000-linear feet (LF) of embankment with a soil cement crest surface and soil cement facing on the interior embankment face, the approximately 3,400-acre Reservoir has a NFSL of 15 feet (El. 41 ft. NAVD88) and provides approximately 50,600 acre-feet of storage capacity.
- **Reservoir Discharge Structure (S-402)** – the tower structure is comprised of three (3) six foot by six foot (6' x 6') slide gates to convey a maximum of 1,100 cfs (600 cfs under normal operations) through two (2) seven foot by seven foot (7' x 7') box culverts (with operable slide gates) to the Northern Distribution Canal (C-401N). The structure also includes a service spillway capable of conveying 810 cfs for emergency discharges associated with probable maximum precipitation (PMP) events.
- **Western Reservoir Perimeter Canal [WRPC (C-400W)]** – a 35,000 LF canal paralleling most of the northern, western, and southern extent of the Reservoir embankment. The WRPC maintains a bottom width of 5 feet and a constant elevation of 12.0 ft (NAVD88) for a majority of the canal with a transition from 5 ft to 25 ft along the south side of the Reservoir. The WRPC will be used to transmit surface runoff, seepage flow, and anticipated future flows from the C-23 Canal. The C-23 connection and introduction of flows are not authorized in this permit. Culverts (S-420A-B) will be constructed in locations where the canal crosses access roads.
- **WRPC Spillway (S-403)** – a 50-foot wide spillway, which discharges to the C-44 Intake Canal (C-400) with a crest elevation of 18.0 feet (NAVD88) and a capacity of 1,100 cfs.
- **Eastern Reservoir Perimeter Canal [ERPC (C-400E)]** – the ERPC is approximately 15,000-linear feet and runs parallel to the eastern embankment of the Reservoir. The canal maintains a bottom width of 5 feet at an elevation of 12 feet (NAVD88). The ERPC is designed to convey runoff and seepage. A raised inlet structure with a slotted weir elevation of 18.0 feet (NAVD88) (Eastern Reservoir Perimeter Canal Discharge Structure/S-419) provides discharges from ERPC (C-400E) to the Intake Canal (C-400) via a 60" reinforced concrete pipe to be constructed in a location where the canal crosses an access road.
- **Eastern Reservoir Perimeter Canal Discharge Structure (S-419)** – this Raised Inlet Structure with a slotted weir elevation of 18.0 feet (NAVD88) provides discharges from the ERPC (C-400E) to the C-44 Intake Canal (C-400) via a 60" reinforced concrete pipe (RCP) culvert.
- **Northern Distribution Canal (C-401N)** – this Canal conveys flows from the Reservoir to STA Cells 1, 2, 3 and the Southern Distribution Canal. The Canal maintains a bottom width of 10 feet, a bottom elevation of 18.5 feet (NAVD88) and a normal operating elevation of 28-29 feet (NAVD88) with a design conveyance capacity of 1,100 cfs. The northern portion of this feature from the Reservoir Discharge Structure (S-402) (STA 140+54), including the discharge culverts, extending south to STA 90+87 is being constructed by the Corps.



### **CONCEPTUALLY AUTHORIZED PROJECT COMPONENTS:**

The following structural components are conceptually approved based on the information submitted to the Department as part of the application process. A modification to this permit to authorize the construction of these features, or a subset of these features, and any resulting change in the proposed interim operations of this project may be required should any re-design of project components, such as changes to the embankment section, trigger substantial changes. As required in General Condition No. 2, the Department shall be consulted upon any changes resulting from any re-design to determine whether a modification to the permit is required. Any modification to this permit resulting through such consultation shall be required prior to construction of said feature and/or interim operations of the project commencing.

#### **C-44 Reservoir:**

- **Inflow Pump Station (S-401)** – a 1,100 cfs Pump Station to provide water from the C-44 Canal to the C-44 Reservoir via the Intake Canal. The Pump Station is comprised of four (4) electric 275 cfs pumps. The S-401 Inflow Pump Station is the inflow compliance monitoring point for the C-44 RSTA.

#### **C-44 Stormwater Treatment Area:**

- **Stormwater Treatment Area (STA) / STA Embankments (L-400-1 through L-400-6)** – comprised of approximately 170,000 linear feet of embankments, the six individual cells [Cell 1 (995 acres); Cell 2 (1275 acres); Cell 3 (465 acres); Cell 4 (1280 acres); Cell 5 (1280 acres); Cell 6 (995 acres)] encompass approximately 6,300 acres and maintain a targeted average depth of 1.5 feet.
- **Northern Distribution Canal Service Spillway (S-405)** – is located at the terminus of the Northern Distribution Canal (C-401N) and is designed to convey 1,100 cfs to the Eastern (STA) Collection/Discharge Canal (C-402W) during emergencies or PMP events.
- **Southern Distribution Canal (C-401S)** – this Canal joins the C-401N at the confluence of STA Cells 1-4 (east of the FP&L power lines) and conveys flows from the Reservoir to STA Cells 4, 5 and 6. The Canal maintains a bottom width of 10 feet, a bottom elevation of 18.5 feet (NAVD88) and a normal operating level of 28-29 feet (NAVD88) with design conveyance capacity of 1,100 cfs.
- **Culverts (S-421A-C)** – will be constructed in locations where the canal crosses access roads.
- **Interior Works** – these are Structures located within the C-44 STA and serve to convey water internally between the Reservoir, STA Cells, and the multiple Canal systems:
  - **STA Cell Inflow Structures** [Cell 1 (S-406A-C); Cell 2 (S-408A-C); Cell 3 (S-410A and B); Cell 4 (S-412A-D); Cell 5 (S-414A-D); Cell 6 (S-416A-D)] – located at the upstream end of each STA Cell, the C-44 STAs include 20 gated Inlet Structures consisting of 60” diameter reinforced concrete pipes with operable slide gates. These Structures serve to convey water into the STA Cells from both the Northern and Southern Distribution Canals.
  - **STA Cell Outflow Structures** [Cell 1 (S-407A-C); Cell 2 (S-409A-C); Cell 3 (S-411A and B); Cell 4 (S-413A-D); Cell 5 (S-415A-D); Cell 6 (S-417A-D)] – located at the downstream end of each STA Cell, the C-44 STAs include twenty (20) forty foot (40’) wide manually adjustable weirs (consisting of two (2) twenty foot (20’) weir plates with a nominal crest elevation of 26.75 feet (NAVD88). The crest elevation is adjustable by installing or removing weir plates. Flows from these Structures are discharged to the Eastern and Western STA Collection Canals through a 60” diameter reinforced concrete pipe (RCP). Outlet Structures are designed for a combined discharge rate of 600 cfs under normal operational conditions and a combined maximum total discharge rate of 1,100 cfs.



- **Low Level Gated Outflow Structures** [Cell 1 (S-407E); Cell 2 (S-409E); Cell 3 (S-411E); Cell 4 (S-413E); Cell 5 (S-415E); Cell 6 (S-417E)] – located at the downstream end of each STA Cell, these 60” diameter reinforced concrete pipes with manually-operated slide gates exist to evacuate water from the STA Cells below the level of the weir plates and are not intended for normal operations.
- **Eastern STA Collection Canal (C-402E)** – this Canal conveys discharges from STA Cells 1, 3, 4, 5, and 6 to the project outlet (S-404). Canal bottom widths range between of 8–40 feet with bottom elevations ranging between 12 and 14 feet (NAVD88).
- **Western STA Collection Canal (C-402W)** – this Canal conveys discharges from STA Cell 2 to the project outlet (S-404). Canal bottom widths range between of 5–40 feet with bottom elevations ranging between 12 and 16 feet (NAVD88).
- **North Interior Drainage Canal [NIDC (C-403N)]** – this conveyance Canal is located along the west side of STA Cell 3 to provide drainage for the Florida Power and Light (F&PL) easement area. Culverts will be constructed in locations where the Canal crosses access roads. Discharge from this Canal is into the South Interior Drainage Canal.
- **South Interior Drainage Canal [SIDC (C-403S)]** – this conveyance Canal is located along the west side of STA Cells 4, 5 and 6 to provide drainage for the FP&L easement area. Culverts will be constructed in locations where the Canal crosses access roads. This Canal connects to the ditches/dry detention areas located in the vicinity of the Main Access Road which discharge to the Intake Canal.
- **Discharge Canal Structure (S-404)** – this Structure is located at the terminus of the Collection Canals and consists of a 120 foot wide broad-crested spillway with a crest elevation of 19 feet (NAVD88). The spillway is designed for a normal operational flow of 600 cfs as well as peak flow of 1,880 cfs generated during probable maximum precipitation events. This Structure also includes a manually-operated gated Structure that can allow for the drawdown of the entire Canal system or low-level releases from the Reservoir to the C-44. The discharge compliance monitoring point for the C-44 RSTA is located at this Structure.

#### **DECLARATION OF REASONABLE ASSURANCES:**

In issuing this permit, the Department finds that the Corps has provided reasonable assurances sufficient to satisfy the requirements of Section 373.1502, F.S. The Department bases these findings on the following documents:

- 1) United States Army Corps of Engineers, Jacksonville District, C-44 Reservoir/Stormwater Treatment Area, Comprehensive Everglades Restoration Plan Permit Application (September 2009) and Request for Additional Information-1 Response Package (January 2010);
- 2) United States Army Corps of Engineers, Jacksonville District, C-44 Reservoir/Stormwater Treatment Area (Intake Canal and Mitigation for Adjacent Wetland Impacts), Comprehensive Everglades Restoration Plan Permit Application and Supplemental Finding of No Significant Impact (FONSI) (November 2010);
- 3) United States Army Corps of Engineers, Jacksonville District, Southern and Central Florida Project Indian River Lagoon South Final Integrated Project Implementation Report and Environmental Impact Statement (March 2004);
- 4) U.S. Army Corps of Engineers, Safety of Dams – Policy and Procedures, ER 1110-2-1156 (April 30, 2004);
- 5) Design Criteria Memorandum: DCM-11, Dam Safety Program (June 18, 2007);
- 6) United States Fish and Wildlife Service, C-44 Reservoir/Stormwater Treatment Area, Biological Opinion (August 2006 and July 2007);



- 7) South Florida Water Management District, C-44 Reservoir/Stormwater Treatment Area Project: Environmental Assessment (July 2007);
- 8) South Florida Water Management District, C-44 Reservoir/Stormwater Treatment Area Project Final Basis of Design Report (April 2006);
- 9) South Florida Water Management District, C-44 Reservoir/Stormwater Treatment Area Project: Intermediate Design Report Packages (February 2007);
- 10) South Florida Water Management District, C-44 Reservoir/Stormwater Treatment Area Project: Pre-Final Design Report, Plans and Specifications (April 2007);
- 11) South Florida Water Management District, C-44 Reservoir/Stormwater Treatment Area Project: Final Design Report, Issued for Bid Plans and Specifications (June 2007, Updated April 18, 2008);
- 12) South Florida Water Management District, C-44 Reservoir/STA Project: Draft Project Level Monitoring and Management Plan (April 18, 2008);
- 13) South Florida Water Management District, C-44 Reservoir/STA Project: Draft Project Operations Plan (April 18, 2008);
- 14) United States Army Corps of Engineers, Jacksonville District, Draft Construction Phase Monitoring Plan for C-44 Reservoir/Stormwater Treatment Area Project (February 2010);
- 15) United States Army Corps of Engineers, Jacksonville District, Draft Interim Monitoring Plan for C-44 Reservoir/Stormwater Treatment Area Project (February 2010);
- 16) United States Army Corps of Engineers, Jacksonville District, C-44 Reservoir/Stormwater Treatment Area, Comprehensive Everglades Restoration Plan Permit Application (April 2014);
- 17) United States Army Corps of Engineers, Jacksonville District, C-44 Reservoir/Stormwater Treatment Area, Request for Additional Information Response (May 2014); and
- 18) United States Army Corps of Engineers, Jacksonville District, C-44 Reservoir/Contract 2 Final Design Plans (May 20, 2014).

Specifically, there are reasonable assurances, pursuant to section 373.1502, F.S., that:

- “The project component will achieve the design objectives set forth in the detailed design documents submitted as part of the application.”
- “State water quality standards, including water quality criteria and moderating provisions, will be met. Under no circumstances shall the project component cause or contribute to violation of state water quality standards.”
- “Discharges from the project component will not pose a serious danger to public health, safety or welfare.”
- “Any impacts to wetlands or threatened or endangered species resulting from implementation of the project component will be avoided, minimized, and mitigated as appropriate.”

The Corps agrees to construct the project in accordance with the provisions of this permit, permit application, and associated documentation on file with the Department. To the extent sovereign immunity has been waived under 33



U.S.C. §§ 1323 and 1344(t), the Corps' agreement to construct the project in accordance with the provisions of this permit and supporting documentation is an enforceable condition of this permit.

The Corps is the federal sponsor of this project. The Corps and its designees are responsible for activities performed during the period of construction and interim operations. If interim operations or additional activities authorized by this permit are performed by any non-federal sponsors, then the permit may be transferred in advance of such activities, or an additional authorization may be required. All conditions found herein apply to the Corps.

**GENERAL CONDITIONS:**

1. This permit, including its general and specific conditions, shall be construed in light of the February 2006 Interagency Cooperative Agreement for Civil Works Projects (ICA) between the Department and the Corps. As recognized in the ICA, the Department has the authority to include reasonable conditions in this permit. All of the conditions in this permit, both general and specific, are enforceable to the extent sovereign immunity has been waived under 33 U.S.C. §§ 1323 and 1344(t). The ICA is incorporated herein by reference.
2. All activities approved shall be implemented as set forth in the drawings incorporated by reference and in compliance with the conditions and requirements of this document. The Corps shall notify the Department in writing of any anticipated changes in:
  - A. operational plans;
  - B. project dimensions, size, or location;
  - C. ability to adhere to permit conditions;
  - D. project description included in the permit, and;
  - E. monitoring plans.

If the Department determines that a modification to the permit is required then the Corps shall apply for and obtain the modification. Department approval of the modification shall be obtained prior to implementing the change, unless the change is determined by the Department to reduce the scope of work from that authorized under the original permit, and will not affect compliance with permit conditions or monitoring requirements.

3. If, for any reason, the Corps does not comply with any condition or limitation specified herein, the Corps shall immediately provide the Department with a written report containing the following information:
  - A. a description of and cause of noncompliance;
  - B. the period of noncompliance, including dates and times;
  - C. impacts resulting or likely to result from the non-compliance;
  - D. steps being taken to correct the non-compliance, and;
  - E. the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

Compliance with the provisions of this condition shall not preclude the Department from taking any enforcement action allowed under state law with respect to any non-compliance.

4. The Corps shall obtain any applicable licenses, permits, or other authorizations, which may be required by federal, state, local or special district laws and regulations. Nothing herein constitutes a waiver or approval of other Department permits or authorizations that may be required for other aspects of the total project.
5. Nothing herein conveys to the Corps or creates in the Corps any property right, any interest in real property, any title to land or water, constitutes State recognition or acknowledgment of title, or constitutes authority for the use of Florida's sovereign submerged lands seaward of the mean high-water line or an established erosion control line, unless herein provided, and the necessary title, lease, easement, or other form of consent authorizing the proposed use has been obtained from the State.



6. Any delineation of the extent of a wetland or other surface water submitted as part of the application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this authorization or a formal determination under section 373.421(2), F.S., provides otherwise.
7. Nothing herein authorizes any entrance upon or activities on property which is not owned or controlled by the Corps or local sponsor, or conveys any vested rights or any exclusive privileges.
8. This document or a copy thereof, complete with all conditions, attachments, modifications, and time extensions shall be kept at the work site of the authorized activity. The Corps shall require the contractor to review this document prior to commencement of the authorized activity.
9. The Corps specifically agrees to allow Department personnel with proper identification, at reasonable times and in compliance with Corps specified safety standards access to the premises where the authorized activity is located or conducted for the purpose of ascertaining compliance with the terms of this document and with the rules of the Department and to have access to and copy any records that shall be kept; to inspect the facility, equipment, practices, or operations regulated or required; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance. Reasonable time may depend on the nature of the concern being investigated.
10. At least forty-eight (48) hours prior to the commencement of authorized activity, the Corps shall submit to the Department a written notice of commencement of activities indicating the anticipated start date and the anticipated completion date.
11. If historic or archaeological artifacts such as, but not limited to, Indian canoes, arrow heads, pottery or physical remains, are discovered at any time on the project site, the Corps shall immediately stop all activities which disturb the soil and notify the Department and the State Historic Preservation Officer.
12. Within a reasonable time after completion of construction activities authorized by this permit, the Corps shall submit to the Department a written statement of completion. This statement shall notify the Department that the work has been completed as authorized and shall include a description of the actual work completed. The Department shall be provided, if requested, a copy of any as-built drawings required of the contractor or survey performed by the Corps.

#### **SPECIFIC CONDITIONS:**

1. **Addresses.** Reports and notices submitted to the Department in accordance with this permit, unless otherwise specified, shall be submitted to the Department's Office of Ecosystem Projects, 3900 Commonwealth Boulevard, MS 24, Tallahassee, Florida 32399-3000 telephone number (850) 245-3166. Electronic copies and notices required by this permit shall also be sent to [RPPS\\_Comp@dep.state.fl.us](mailto:RPPS_Comp@dep.state.fl.us).
2. **Threatened and Endangered Species.** The permittee shall coordinate with both the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (FWS) for appropriate guidance, recommendations, and/or necessary authorizations to avoid, minimize, or mitigate impacts to listed species<sup>1</sup>. The Corps shall comply with applicable federal and state law with regard to protected species and agree to consider input from and to comply with any applicable requirements of the FWC to the extent that to do so would not create an irreconcilable conflict with the Corps' federal responsibilities. Should a potential conflict between FWC's requirements and the Corps' federal responsibilities be identified, the Corps shall coordinate with all involved federal and state agencies to determine and implement reasonable alternatives, to the maximum extent practicable, in order to avoid such a conflict. The Corps shall adhere to all the "Terms and Conditions" contained within the Biological Opinions (BO) so as to avoid and mitigate any impacts to the species identified within. In

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<sup>1</sup> For example, the FWS (2006) Guidelines for Culverts Located in Manatee-Accessible CERP Projects and the Standard Manatee Conditions for In-Water Work (FWC 2005).



addition, the permittee shall submit an Environmental Protection Plan to the Department, which addresses compliance with the requirements of the BOs prior to commencement of construction activities in accordance with Specific Condition No. 9.

3. **Contaminated Sites and Residual Agrichemicals.** The permittee shall coordinate with the local sponsor, the District, and the Department concerning assessment and remediation of any contamination, including agricultural chemical residuals (hereafter collectively referred to as "contamination"), identified within the project footprint. The permittee shall coordinate with the District to redress any contamination within the project footprint so that 1) any detrimental impacts to Threatened or Endangered species are minimized to the maximum extent practicable and 2) state water quality standards are not violated by construction of the project and the interim operations period covered by this permit. Any information on identification and delineation of the extent of the contamination shall be promptly provided to the Department. The permittee shall coordinate with the District and provide any District proposed remedial action plan to redress the contamination to the Department no later than 90 days prior to the initial operation or use of the completed project, unless the Department approves an alternative schedule, whichever is earlier. All assessment and remedial activities shall be performed in accordance with applicable Federal and State law. When contamination has been identified in the project footprint, interim operation of the facility shall not commence until the Department has reasonable assurance that interim operation of the project the project will not cause the contamination to result in a violation of water quality standards for those particular contaminants of concern and that impacts to threatened or endangered species have been sufficiently addressed. If contamination is discovered after initial operations, any operations which may result in a violation of water quality standards shall cease until the permittee coordinates with the District to provide an assessment and remedial action plan for Department at the address listed in Specific Condition No. 1. Operations which may cause or contribute to a violation of water quality standards shall not re-commence until the Department has provided concurrence on the proposed remediation plan. The Corps shall coordinate with the Department to determine whether a modification to this permit is necessary if alteration of responsibilities associated with the remediation of contaminated sites results in changes to the current plans for remediation.
4. **On-Site Wetland Impacts and Restoration.** This project is expected to result in permanent and temporary impacts to wetlands within the construction limits with a total impacted area of approximately 614 acres. The project is intended to provide storage and water quality treatment within the C-44 drainage basin which, if implemented successfully, will provide ecologic restoration benefits to the downstream estuaries. Thus, the ecologic restoration from the C-44 RSTA Project will offset the functional loss resulting from construction. At this time, the Department does not require any mitigation to offset the functional loss of wetland areas. However, if construction or operations are discontinued once impacts have occurred and the project has not been accepted by the local sponsor, the Corps shall coordinate with the Department to obtain a modification to the permit prior to renewal or expiration of the permit to address these impacts. As a result of the modification, the Department may require restoration or additional activities necessary to offset the functional loss of any impacted wetlands, acknowledging that future federal authorization and appropriations may be required.
5. **Mitigation for Wetland Impacts.** The 2010 Supplemental FONSI (Reasonable Assurance Document No. 2) identified that a drawdown effect caused by construction of the C-44 Intake Canal could impact wetlands located adjacent (i.e. within approximately 3000 ft.) of the proposed canal (Figure 2). The Supplemental FONSI identified an array of alternatives and a proposed alternative to address the mitigation of any impacts from construction of the proposed canal. The Permittee shall provide the Department, at the address listed in Specific Condition No. 1, the following:
  - A. **Real Estate Certification:** Upon South Florida Water Management District acquisition of the 70 acres containing wetlands 1-5 (22.2 acres of affected wetlands), located within 1500 ft of the Intake Canal, the Corps shall provide receipt of ownership documentation which clearly identifies the 70 acres as wholly owned by the SFWMD.
  - B. **Wetland 6-9, 11 and 12:** The permittee shall use the Uniform Mitigation Assessment Method (UMAM) to evaluate the present conditions of wetlands 6-9, 11 and 12 (approximately 33.8 acres) prior to any



construction activities associated with the C-44 Intake Canal commencing. The finalized UMAM score sheets and all relevant information shall be submitted to the Department prior to any construction activities taking place. Within 90 days of the expiration date of this permit, the permittee shall contact the Department and conduct a post-construction UMAM on wetlands 6-9, 11 and 12 to determine what impacts, if any, have occurred as a result of construction of the C-44 Intake Canal. Whereas the potential for modifications to the current construction schedule exist, the Department reserves the right to modify the date by which a post-construction UMAM shall be undertaken to ensure adequate time has elapsed to sufficiently determine what affects, if any, have occurred to wetlands 6-9, 11 and 12. Upon receipt by the Department of the post-project UMAM score sheets and relevant information from the permittee, the permittee shall coordinate with the Department and SFWMD to determine what mitigation bank credits are necessary, if any, to offset these impacts. Upon a determination by the Department that additional mitigation is necessary, the permittee shall purchase the required number of credits to offset those impacts. Prior to the expiration date of this permit, or any alternative date set by the Department, the Permittee shall provide the Department with documentation that the appropriate amount and type of credits have been purchased by the permittee and deducted from the credit ledger of the mitigation bank.

6. **Real Estate.** Copies of all real estate authorizations (i.e., right-of-way(s), leases, easements, land certifications by the local sponsor or other legal agreements that authorize the applicant to perform the activities described herein) shall be provided to the Department, at the address listed in Specific Condition No. 1, prior to initiation of construction or operational activities. All real estate information should include the tract numbers, folio numbers, section/township/range, and the status of the tracts. Construction activities shall not be permitted to commence on properties beyond public rights-of-way where real estate authorizations have not been received.

### **Construction**

7. **Authorized Construction.** This permit authorizes construction of the Main Access Road to the Reservoir site, the Eastern Drainage Canal and Spillway, the components associated with Citrus Boulevard, the Intake Canal, the Reservoir, and provides for the conceptual authorization of construction and interim operations of the Inflow Pump Station, Water Control Structures, Canals, and other features as outlined in the "Conceptually Authorized Project Components" section of this permit.

The permittee shall submit final plans and technical specifications to the Department for all components of the C-44 RSTA Project for consistency review at least 60 days prior to initiating the construction of such features. Upon review of the submitted plans and specifications, the Department will determine whether a permit modification will be required.

8. **Instructions to Contractors.** The permittee shall ensure that the permit conditions are explained to all construction personnel working on the project component and shall give a copy of this permit to each contractor and subcontractor before the authorized work begins. Prior to construction, the permittee shall schedule a pre-construction meeting for attendance by the contractor(s), and representatives from the Corps, the Department, the District, and other environmental regulatory agencies. The Department shall receive at least two weeks' notice of the meeting. Within 30 days from the Notice-to-Proceed to the Contractor or upon Corps' approval of a proposed construction schedule, whichever occurs first, the Corps shall provide the proposed construction schedule to the Department. Any modified schedules shall be provided to the Department at the earliest possible date.
9. **Environmental Protection Plan.** The permittee shall submit an Environmental Protection Plan (EPP) to the addresses listed in Specific Condition No. 1, at least 30 days prior to commencement of any construction activities. The Department will review and provide a determination of whether or not the plan is consistent with Department statutes and rules. In accordance with Specific Condition No. 2, the plan(s) shall describe the methods used to protect environmental resources, including fish and wildlife, to ensure that there shall be no unauthorized impacts to listed species, wetlands, or water quality as a direct result of construction activities. In accordance with Specific Condition No. 4, the plan should also describe how impacts to wetland resources will be minimized, including limiting temporary wetland impacts, to the extent practicable.



10. **Site Inspections and Construction Meetings.** Throughout the construction phase of the C-44 RSTA Project, the Department intends to conduct periodic site inspections to ensure permit compliance and to monitor progress. The Department will coordinate with the Construction Manager or other Corps representative prior to performing any on-site inspections. Representatives of the Department may be accompanied by a third-party inspector and/or consultant at any time. Upon, or prior to, receipt of the written statement of completion and certification, the Department shall conduct substantial and final inspections as defined in the Technical Specifications for the project. It is anticipated that this activity may be completed in conjunction with other regulatory agencies and may be accomplished in stages as the project progresses.
11. **Construction Quality Assurance/Control.** For quality control purposes, the USACE Contracting Officer shall ensure that quality control testing and inspections occur during all phases of construction consistent with the accepted Contractor Quality Control plan as outlined in the technical specifications.
12. **Construction Best Management Practices (BMPs).** At all times during construction and maintenance activities that could generate project-generated turbidity, the Permittee shall use best management techniques for erosion and sedimentation control. At least 30 days prior to commencement of construction activities for each contract or phase, the Permittee shall submit the contractor's plan which details the use of sediment controls to minimize the suspension and transport of soils, levee materials, and roadway materials into waters adjacent to or downstream of the construction site to the Department for a review and determination of consistency with Department rules and statutes at the address listed in Specific Condition No. 1. Acceptable plan formats may include Erosion Control Plans, Storm Water Pollution Prevention Plans (SWPPP) or an EPP. Modifications to the site specific plan may necessitate further review and a determination of consistency with Department rules and statutes. Sediment barriers shall remain in place until all adjacent construction activities are complete.
  - A. **Adjacent Wetlands.** Wetlands and Preserve Areas adjacent to construction activities shall be staked and fenced off with construction fencing or other effective physical barriers to prevent encroachment into these wetlands prior to the commencement of construction. All areas of exposed soils shall be isolated from wetlands and surface waters to prevent erosion and deposition of sediments into these wetlands during permitted construction activities. All excavated or dredged material shall be placed strategically to prevent the transport of any material into wetlands and surface waters both during and after completion of the construction.
  - B. **Inspections.** Once installation of the erosion controls identified through the plan(s) has been completed, the Permittee shall contact the Department at the address listed in Specific Condition No. 1 to determine whether inspections of the installed controls are necessary. The Permittee shall be responsible for ensuring that erosion control devices are inspected and maintained daily during all phases of construction. Turbidity barriers and erosion control devices shall be inspected daily, maintained in good working order, and relocated or stabilized as necessary during construction to prevent surface water quality violations.
  - C. **Site Stabilization.** All graded areas shall be stabilized and vegetated immediately after construction to prevent erosion. All screens, silt fences, sheet pile, and other turbidity control devices and preventive operation procedures shall remain in place for the duration of the project and maintained until all turbidity has subsided, the project site has been stabilized, and the turbidity level at the point of discharge from the construction or maintenance work area to receiving waters meets state standards. Once these conditions are met, turbidity and erosion control devices shall be removed within a timely manner and prior to final completion of construction. If there are multiple work zones within a contract or phase, individual work zones shall be stabilized if there will be a significant lag time prior to completion of the entire contract.
  - D. **Vegetation Removal and Temporary Wetland Impacts.** Limits and extent of clearing and grubbing associated with construction activities shall consider minimizing or avoiding impacts to native vegetation, either within or immediately adjacent to the project area including access routes.



- E. **Stockpiles/Soil Disposal Areas.** Vegetative and demolition debris, as well as unwanted excavated material shall be properly disposed.
13. **Water Quality Standards.** Under no circumstances shall the construction or interim operations of the C-44 RSTA or any project component cause or contribute to a violation of state water quality standards. The permittee shall comply with all applicable state water quality standards described in Chapter 62-302, F.A.C.
14. **Water Quantity, Water Quality, and Flooding Impacts.** The Corps shall be responsible for ensuring that the project is constructed and operated in the interim so as not to adversely affect adjacent lands outside the C-44 RSTA boundary with regards to water quantity, water quality, and/or flooding.
15. **NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities.** The issuance of this Permit does not constitute coverage under the National Pollutant Discharge Elimination System (NPDES) Generic Permit For Stormwater Discharge from Large and Small Construction Activities (CGP) or from the discharge of uncontaminated groundwater resulting from construction-related dewatering activities pursuant to Rule 62-621.300(4)(a), F.A.C. If any offsite discharges will occur due to construction dewatering activities, then coverage under the CGP may be required and the Permittees is advised to review that rule. Before discharge of produced ground water can occur, analytical tests on samples of the proposed discharge water shall be performed to determine if contamination exists. If the analytical results comply with applicable criteria for use of the CGP, then a short summary of the proposed activity and a copy of the analytical tests shall be sent to the addresses in Specific Condition No. 1 within one week after discharge begins and the Permittees may proceed with the project component while abiding by all conditions of the CGP.
16. **Dewatering/General Water Use.** For activities that require a water use permit from the State, such as, but not limited to, construction dewatering, industrial use of surface or ground water, and public water supply wells, the Corps will require that their contractor(s) submit the required application, fees and applicable site-specific information to the District for authorization in accordance with the requirements of Rules 40E-2 and 40E-20, F.A.C., and as follows:
- A. **Water Supply Wells.** For activities that require temporary use of a water supply well during construction (e.g. construction trailers), the Corps will require that their contractor(s) obtain all required permits. If the water supply well will serve permanent facilities (e.g., pump station), the Corps will direct the contractor to also submit site-specific information to FDEP OEP. Prior to transfer of the facility to the local sponsor for permanent operations, it is the local sponsor's responsibility to furnish to FDEP OEP a permit request and copies of the well permit for review and authorization by the Department under a separate action.
- B. **Industrial Use of Surface or Ground Water.** For activities that require industrial use of surface or ground water within or adjacent to the project (e.g. soil-cement mixtures or equipment wash down), the Corps will require that their contractor(s) obtain all required permits. For larger or more complex facilities, the Corps will require the contractor, upon submission to District, a copy of the application and site-specific information is also provided to FDEP OEP.
- C. **Construction Dewatering.** For activities that require removal of surface or ground water as part of construction, the Corps will require that their contractor(s) obtain all required permits. If the contractor intends to commence dewatering activities under the conditions of the "No Notice" until a permit is issued, the contractor shall submit a notification to District and FDEP OEP accordingly. The Corps will require the contractor, upon submission to District, to also provide a copy of the application and site-specific information to FDEP OEP. In accordance with General Condition No. 2, the Corps shall also ensure that all proposed modifications to permitted activities proposed by their contractor(s) are submitted to District and FDEP OEP through the same process. All dewatering authorizations or modifications to existing authorizations that may be issued by the District for projects also permitted by FDEP OEP are subject to review for determination of consistency with Department rules and statutes prior to the issuance of authorization from the District.



17. **Turbidity Monitoring.** Effective means of turbidity control, such as, but not limited to, turbidity curtains shall be employed during all construction or maintenance activities that could result in project-generated turbidity levels beyond the work area that have the potential to be discharged to the receiving water body. Turbidity control measures shall be in accordance with Specific Condition No. 12 and best management practices contained in the Erosion Control Plan, SWPPP or EPP referenced in Specific Condition No. 9.

#### **Turbidity Standard**

- A. Turbidity shall not exceed 29 Nephelometric Turbidity Units (NTUs) above background in Class I and Class III receiving waters.

#### **Sampling Protocols**

- B. Sampling and analyses shall be performed as required by Chapter 62-160, F.A.C. (FDEP Standard Operating Procedures (FDEP-SOP), located at <http://www.dep.state.fl.us/water/sas/sop/sops.htm>). Field turbidity monitoring equipment and personnel trained to use it shall be available on site at all times during construction or maintenance activities that could result in project-generated turbidity levels beyond the work area that have the potential to be discharged to the receiving water body.
- C. During construction or maintenance activities, the Permittee shall monitor turbidity levels at a minimum of twice daily, with samples taken at least once every four hours during all operations, at the following locations:
- i. Background Sample(s): One background sample station, at least 100 feet upstream of each construction or maintenance work area, in the adjacent canal or water body, outside any visible plume generated by the construction or maintenance activity; and clearly outside of the influence of construction activities.
  - ii. Compliance Sample(s): Located in the canal or water body adjacent to each work area, downstream or radial to the construction or maintenance work area, directly outside of the turbidity curtains, and within the densest portion of any visible plume.
- D. For monitoring purposes, work areas are defined by the turbidity curtains.
- E. If there are multiple work areas where construction is creating a visible turbidity plume, each construction activity shall be monitored separately.

#### **Turbidity Exceedance**

- F. The following measures shall be taken whenever project-generated turbidity levels exceed the standard stated above in any receiving waters:
- i. Immediately cease all project activities contributing to elevated turbidity;
  - ii. Notify the Department by phone and at [RPPS\\_Comp@dep.state.fl.us](mailto:RPPS_Comp@dep.state.fl.us) within 24 hours;
  - iii. Identify the possible cause of the violation;
  - iv. Modify work procedures that may have contributed to the violation such as installing additional turbidity or erosion protection devices, repairing any non-functional turbidity containment devices, stabilizing exposed soils, and checking calibration of the meter; and
  - v. Work shall not resume until the activities can be conducted in compliance with the turbidity standards. Provide notification to the Department at [RPPS\\_Comp@dep.state.fl.us](mailto:RPPS_Comp@dep.state.fl.us) when compliance is achieved. If compliance is achieved after normal business hours, then the Department shall be notified on the next consecutive business day.



### Monitoring Logs and Reports

- G. Turbidity monitoring results shall be compiled daily and summarized quarterly (every three calendar months) by project component beginning with the first calendar month in which construction or maintenance activities occur that could generate turbidity in receiving waters and continuing until all construction, dredging, stabilization and/or excavation is completed. Monitoring data with supporting documents shall be submitted to the Department quarterly, to the address identified in Specific Condition No. 1 or by email to the [RPPS\\_Comp@dep.state.fl.us](mailto:RPPS_Comp@dep.state.fl.us). If no construction activities occur that could generate turbidity and the project site has been stabilized, during the entire or a specific portion of the quarterly monitoring period, this shall be noted in the report and include information regarding continuation of monitoring.
- H. Daily monitoring logs shall clearly identify the following information:
- i. Project name and current permit number;
  - ii. Dates and times of sampling and analysis;
  - iii. Name of individual collecting samples;
  - iv. Unique identification of the specific instrument unit(s) used for sample collection and analysis as required by FDEP-SOP-001/01 FT 1600 Field Measurement of Turbidity;
  - v. Measurement value and reporting units;
  - vi. Water depth;
  - vii. Depth of sample;
  - viii. Weather conditions;
  - ix. Water level stage in the canal or water body and direction of flow;
  - x. Clear description of project component activities taking place at the time of sampling that may have contributed to turbidity; and
  - xi. Signature and statement of authenticity by a properly trained individual indicating that the instrument meets the outlined specifications and has been calibrated in accordance with FDEP-SOP-001/01 FT 1600 Field Measurement of Turbidity.
- I. Quarterly reports shall include the following information:
- i. Project name and current permit number;
  - ii. Summary of construction activities that have taken place (e.g., construction progress meeting minutes, SWPPP Inspection Reports, or other relevant information may be submitted to fulfill this requirement);
  - iii. Statement regarding sampling results, the net difference between compliance and background results, and whether the turbidity levels are in compliance;
  - iv. Summary of any significant compliance issues and how they were resolved;
  - v. Statement which explains any gaps in sampling activity (e.g., contractor not onsite, work shut down due to weather conditions); and
  - vi. Map indicating the sampling locations and construction activity taken place during the reporting period.
  - vii. If no construction or maintenance activity occurs that could contribute to turbidity generation in receiving waters and the project site(s) are stabilized such that a rain event will not generate turbidity in receiving waters during the entire quarterly monitoring period(s), the Permittee shall submit a written statement to the [RPPS\\_Comp@dep.state.fl.us](mailto:RPPS_Comp@dep.state.fl.us) in lieu of a quarterly report.
18. **Future Phases.** This permit does not authorize any construction or long-term operational activities associated with future portions of the C-44 RSTA. Future phases, including long-term operations, shall require separate review and approval by the Department. Additionally, this permit authorization considers construction and interim operation for both the Reservoir and Stormwater Treatment Area as a single project. Should one feature, either the Reservoir or STA, be constructed and operated in the interim prior to the other, a permit modification may be required.



### **Interim Operations**

19. **Interim Operations Plan and Modifications.** The Corps shall submit a final version of the Project Operating Plan to the Department for a determination of consistency with this permit, Department statutes and rules as well as CERP Guidance Memorandum, at least 180 days prior to initiation of interim operations. Interim operations of any project feature, which include the testing and commissioning period and the operational testing and monitoring period, are anticipated to continue for up to 24 months following construction of the C-44 RSTA project. During this timeframe, the permittee will be the entity ultimately responsible for operations, possibly with the assistance of third parties. If it is anticipated that the interim operations period will exceed 24 months, an additional operational authorization may be required from the Department in the form of a modification to this permit or separate operational permit. The final version of the C-44 Project Operating Manual shall be submitted to the Department at the address listed in Specific Condition No. 1 and shall include the information described below:

- A. **Minimum Water-Level Targets to Avoid Dryout.** In accordance with the relevant design documents, the Corps shall, to the maximum extent practicable, maintain a minimum static water level of 0.5 feet above the existing ground elevation of the STA cells to avoid dryout of the cells, subject to available water
- B. **Responding to Dryout Conditions.** The Corps shall evaluate and correct potential adverse dry-out effects on the water-quality performance of the RSTA. If the compliance requirements in this permit are not met due to dry-out conditions, then the Corps shall propose modifications to the Operation Plan as appropriate and submit the revised plan to the Department.
- C. **Establishment of Marsh Vegetation.** The Corps shall manage water depths in the STA to facilitate the recruitment of marsh vegetation.
- D. **Maximum Water-Level Targets.** The Corps shall ensure, to the maximum extent practicable, that maximum water depths of 4.5 feet above the average ground elevation of the treatment cells will not be exceeded in order to avoid long-term damage to the treatment vegetation and provide protection of project levees.
- E. **Optimization.** Operations shall be conducted to distribute the flows and water levels within the STA to meet the phosphorus reduction performance design goals.
- F. **Initial Filling of the Reservoir.** Initial filling of the Reservoir shall include provisions for inflow rates and limitation of sediment transport associated with filling activities in addition to provisions which recognize and provide for protected species which may exist within the project footprint at the time of initial filling.

Under emergency conditions that threaten the safety of life, property or the C44 RSTA Project, the Corps may modify operations of the project and immediately employ any remedial means to protect life and property in accordance with the emergency provisions of Chapter 373, F.S. The Corps shall notify the Department within 48 hours of such occurrence and shall provide data justifying the need to employ the emergency modifications to operations of the project.

20. **Initial Operations/Start-Up Phase.** During the C-44 RSTA Initial Start-Up Phase, the Corps shall monitor the project in accordance with Table 1 and the Final Interim Monitoring Plan for the C-44 RSTA which has been submitted and approved as a requirement of Specific Condition No. 24, and A and B below.

- A. **Start-Up Monitoring.** The Corps shall monitor in accordance with Table 1 and the approved monitoring plan at the upstream side of the Inflow Pump Station (S-401) and the Outflow Structures (S-402 and 404) upon initiation of flow into the facility.
- B. **Phosphorus Start-Up Test.** The start-up test consists of samples that demonstrate, over a four-week period, a net reduction in total phosphorus. This net reduction shall be deemed to occur when the four-week



geometric mean for total phosphorus water-column concentrations from samples collected at the applicable Outflow Structures (S-404) is less than the four-week geometric mean total phosphorus water-column concentrations collected at the Inflow Structure (S-401).

21. **Flow-through Operations.** Flow-through operations shall commence once the project achieves the Start-Up Test described in Specific Condition No. 20.B. Start-Up Phase documentation and all supporting data and analyses shall be submitted to the Department, at the address listed in Specific Condition No. 1, for review and concurrence with the requirements of Specific Condition No. 20.B. prior to initiating flow-through operations. If the facility has not achieve the Start-Up Test within six months of initiating flows through the Inflow Station, the Corps shall submit status updates regarding progress towards and identifying strategies to achieve this test.
22. **Stabilization and Routine Operations.** Following completion of the Start-Up Phase, the C-44 RSTA shall begin a period of stabilization. The stabilization period is where performance is improving toward the treatment performance goals and is generally anticipated to last one to three years after the Start-Up Phase ends. During the Stabilization Phase, flow-through activities may commence. Following completion of the Stabilization Phase, the project shall begin Routine Operations. During all flow-through operations (Stabilization and/or Routine Operations), water-quality monitoring shall be conducted in accordance with Table 1 and the approved water-quality monitoring plan. Compliance shall be evaluated as set forth below.
  - A. **Stabilization.** The stabilization test for the C-44 STA shall be met when the 12-month flow-weighted average total phosphorus concentrations at the Outflow Stations are less than the flow-weighted average total phosphorus concentrations recorded at the Inflow Station. Once the test has been achieved, documentation of such achievement, including the supporting data and analysis, shall be submitted to the Department at the address identified in Specific Condition No. 1. Starting 12 months after commencing discharge from the project, the Corps shall provide 12-month flow-weighted average total phosphorus concentrations as part of the annual reporting requirements in Specific Condition No. 32. If, after two years of full flow-through operation, the project has not met this Stabilization Test, the Corps shall submit a report which shall evaluate reasons for not meeting the Stabilization Test. The report shall identify, as part of the adaptive management reporting section of the annual report in Specific Condition No. 32, schedules and strategies for achieving the stabilization test.
  - B. **Routine Operations.** Once the C-44 RSTA has achieved stabilization defined above, it will be operated in such a manner as to achieve the project design objectives. The Corps shall take all reasonable steps to achieve STA performance consistent with the interim operations plan and project design objectives. If, after the first three years of operation, the STA is not performing in a manner consistent with its design objectives, the Corps shall confer with the South Florida Water Management District and the Department to develop an adaptive management plan designed to meet these objectives.
  - C. **Other Water-Quality Parameters.** For all water-quality parameters listed in Table 1 other than total phosphorus and mercury, compliance with Section 373.1502(3)(b)(2), F.S.; will be determined based on comparison of concentrations at the outflow, with the applicable surface-water quality criteria identified in Rule 62-302, F.A.C.
  - D. **Public Health, Safety, and Welfare.** Pursuant to 373.1502, F.S. discharges from the C-44 RSTA component shall not pose a serious danger to public health, safety, or welfare.
23. **Initial Pump Testing and Maintenance.** In order to ensure operational readiness, testing and maintenance operations may be required by the construction contractor and/or permittee for the pumps authorized by this permit. Operational readiness requirements of the Pump Stations include operation of the pumps for approximately two to four hours per month, as necessary, to maintain their mechanical integrity. The permittee shall include all monitoring results for inflow volumes and phosphorous load during interim operations as a part of the annual monitoring requirements of this permit.



### **Monitoring**

24. **Water Quality Monitoring.** The permittee shall collect and analyze surface-water quality monitoring data in accordance with the Construction Monitoring Plan for C-44 and the Final Interim Monitoring Plan for C-44 (Document No. 12 and 13) using the parameters and frequencies identified in Table 1 of this permit and at the sites shown in Figure 1. Prior to commencement of construction activities, the Corps shall submit the final water-quality monitoring plans to the Department for review to determine whether modification to the permit is necessary. Any modifications to these documents shall be submitted to the Department for review and for determination as to whether a modification to the permit is required.
- A. *Quality Assurance and Quality Control.* Sampling and monitoring data shall be collected, analyzed, reported and retained in accordance with Chapter 62-160, F.A.C. Any laboratory test required by this permit shall be performed by a laboratory that has been National Environmental Laboratory Accreditation Program (NELAP)-accredited (primary or secondary) with the Florida Department of Health (DOH) under Chapter 64E-1, F.A.C., where such certification is required by Rule 62-160.300, F.A.C. The laboratory must be certified for all specific method/analyte combinations that are used to comply with this permit. The analytical method used shall be appropriate so as to determine if the sample complies with Class III surface water quality standards as specified in Chapter 62-302, F.A.C. All field activities including on-site tests and sample collection, whether performed by a laboratory or another organization, must follow all applicable procedures described in the most current version of DEP-SOP-001/01. Alternate field procedures and laboratory methods may be used if they have been approved according to the requirements of Rules 62-160.220, and 62-160.330, F.A.C.
- B. *Method Detection Limits.* The sample collection, an analytical test methods, and method detection limits (MDLs) applicable to this permit shall be performed and reported in accordance with Rule 62-4.246, F.A.C. A list of Department established analytical methods, and corresponding MDLs and practical quantitation limits (PQLs), which is titled "Florida Department of Environmental Protection Table as Required By Rule 62-4.246(4) Testing Methods for Discharges to Surface Water" dated April 25, 2006, is available from the Department on request. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values, and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. More stringent MDLs and PQLs may be necessary for specific parameters. If required, these will be identified in the permit monitoring table (Tables 1).
25. **Mercury and Other Toxicants Monitoring.** Mercury and other toxicants shall be monitored in accordance with Table 1, CERP Guidance Memorandum (CGM) 42: Toxic Substances Screening Process-Mercury and Pesticides, Document 13 and shall be reported as part of any subsequent annual report required under Specific Condition No. 32.
26. **Removal of Monitoring Requirements.** Upon demonstration that a specific parameter(s) is not present or is found consistently in compliance with water quality standards, the permittee may request a modification to the monitoring program as appropriate. A minimum of one year's worth of data, for those parameters being sampled quarterly or more frequently, will be required prior to the Department approving any modification to the monitoring program. The Department may approve a reduction of the monitoring frequency or waive the monitoring requirement for parameters that consistently are reported as in compliance with state water quality standards.
27. **Addition of Monitoring Requirements.** If the Department has reason to believe that additional monitoring may be required or parameters exist that may cause or contribute to water quality violations or degradation of receiving waters, additional monitoring or parameters shall be added to the monitoring section of this permit through a permit modification.



## **Reports and Notices**

28. **Facility Inspection Plan and Reports.** Within 90 days prior to initiation of interim operations, the permittee shall submit the draft Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) Manual, to the Department at the address listed in Specific Condition No. 1 for annually evaluating the integrity and functionality of above-ground Levees and Structures, including Pump Stations.

During interim operations, the permittee shall be responsible for ensuring that facility inspections are completed in accordance with the OMRR&R with a summary included in the Annual Report (Specific Condition No. 32). The OMRR&R Manual shall follow the guidelines established under the District's Dam Safety Program (Design Criteria Memorandum #11) including inspections, evaluations, and report preparation. The permittee shall perform a formal inspection and provide a report one year post construction and every five years post construction thereafter evaluating the integrity and functionality of the reservoir, levees, and associated infrastructure including culverts, gates, and water control structures. The inspections shall be conducted by, or under the supervision of, a Professional Engineer.

The inspection report shall be signed and sealed by a Professional Engineer and submitted to the Department address identified in Specific Condition No. 1 and by e-mail to the [RPPS\\_Comp@dep.state.fl.us](mailto:RPPS_Comp@dep.state.fl.us). The cover letter of the inspection report should summarize site conditions and work that was completed, or may be completed, in response to inadequacies found during these inspections. A Professional Engineer or Dam Safety Officer shall review and approve major repair plans or remedial work associated with inadequacies identified during routine and formal inspections.

Within 30 days of final acceptance and turnover to the local sponsor, the permittee shall provide a digital copy of the final OMRR&R to the Department.

29. **Emergency Action Plan (EAP) and Initial Filling Plan.** At least 90 days prior to scheduling the initial filling of the Reservoir, the permittee shall submit a final Initial Filling Plan and an Emergency Action Plan (EAP) to the Department, which has been prepared in accordance with Design Criteria Memorandum #11. Subsequent updates to the EAP, as applicable, shall also be provided to the Department with the Annual Report.
30. **Construction Status Reports.** Construction Status Reports or Construction Meeting Minutes for each project phase shall be provided to the Department upon request and such reports shall continue to be available throughout the construction activities until all disturbed areas are successfully stabilized. These Reports may be requested through the Project Manager, Construction Manager, or obtained at the construction meetings.
31. **Construction Completion and Record Drawings.** In accordance with General Condition No. 13 and the ICA, the permittee shall submit a written statement of construction completion and as-built drawings or equivalent construction documentation to the Department. The statement of completion shall be based on on-site observation of construction and review of the as-built construction drawings for the purpose of determining whether or not the work was completed in compliance with permitted plans and specifications. If there is a deviation from the permitted plans, the construction completion statement shall note these deviations and may require inclusion of revised plan sheets and specifications identifying the changes. Note that major deviations may require a modification to this permit. Plans submitted to the Department shall be clearly labeled as "as-built" or "record" drawings with one electronic copy provided in PDF format and one hard copy. The permittee shall furnish the construction statement and record drawing information to the Department within 60 days or a reasonable timeframe from substantial completion of construction.
32. **Annual Reports.** The permittee shall submit an annual report to the Department detailing the construction and interim operations activities of the components authorized herein. These reports shall be submitted to the Department no later than March 1<sup>st</sup> of each year. The Corps may request a modification of the annual report submission date, and upon approval by the Department, the Corps may modify the submission date to coincide



with other reporting requirements and time periods needed for data acquisition and analysis. At a minimum, the following information should be included in the annual reports:

**A. General Information.**

- i. Permit number;
- ii. Permit name;
- iii. Permit administrator;
- iv. Summary of monitoring results from work conducted under Specific Condition No. 24, 25, and any other conditions requiring monitoring in this permit.
- v. Evaluation of project success in achieving its objectives
- vi. Problems encountered during period covered
- vii. Actions taken to address problems encountered
- viii. Any additional information specifically required by the conditions of this permit.
- ix. Project adaptive management.

**B. Construction/Interim Operations.** A construction and/or operations summary shall include, at a minimum:

- i. Construction/Inspections/Maintenance Progress Report;
- ii. Annual Water Quality Monitoring Summary Report; and,
- iii. Annual Facility Inspection Report.

**C. Water Quality Data.** Data may be obtained from existing and/or proposed sampling locations. For proposed sampling locations, the Corps shall provide a schedule for installation of all monitoring stations/wells. Records of monitoring information, where applicable, shall include:

- i. Date, location, and time of sampling or measurements;
- ii. Person responsible for performing the sampling or measurements;
- iii. Dates analyses were performed or the appropriate code as required by Chapter 62-160, F.A.C.;
- iv. Person responsible for performing the analyses;
- v. Analytical techniques or methods used, including MDL;
- vi. Results of such analyses, including appropriate data qualifiers;
- vii. Depth of samples;
- viii. Flow conditions, including direction of flow, and weather conditions at time of sampling;
- ix. Monthly flow volumes; and,  
Analysis, both graphical and narrative, of all-water quality data collected under the tables of this permit.

**D. Implementation Schedules.** When appropriate, the Corps shall include information on:

- i. C-44 RSTA and CERP implementation;
- ii. Project design modifications; and,
- iii. Implementation of remedial measures in the event of noncompliance with permit conditions.

**Factors Impacting Compliance**

33. **Emergency Suspension of Sampling.** Under hurricane, tropical storm warnings, or other extreme weather conditions, the Corps' normal sampling schedule may be suspended if necessary. The Corps shall notify the Department's Bureau of Assessment and Restoration Support at the address and telephone number listed in Specific Condition No. 1, of any suspension of sampling associated with hurricanes, tropical storms, or other extreme weather events that may require deviation from the normal sampling schedule. Within two days following the cessation of emergency conditions, the Corps shall notify the Department of when normal sampling is expected to resume.

34. **Factors Outside the Permittee's Control.** In the event that non-compliance or failure to achieve performance objectives occurs for any reason other than those listed below, the Corps shall take appropriate remedial measures.



- A. **Natural Background.** Deviations from water-quality standards may occur as a result of natural background conditions, in accordance with Section 403.021(11), F.S.
- B. **Random Variation.** The Corps shall report any statistical uncertainty in the methodology using acceptable scientific methods.
- C. **Other Factors.** Unavoidable legal barriers or restraints, including those arising from actions or regulations not under the control of the Corps.

### **Renewals and Modifications**

- 35. **Permit Modifications.** The permittee shall submit proposed permit modifications of the C-44 RSTA to the Department, prior to implementation of the modification, for review and approval by the Department.
- 36. **Permit Renewal.** At least 60 days prior to the expiration of this permit, the permittee shall apply for renewal of this permit. Renewal may be for a period of up to five years in accordance with Subsection (3)(g) of the CERPRA.
- 37. **Department Review and Approval.** Where conditions in this permit require Department review of remedial actions or plan modifications to be implemented pursuant to this permit, the Department shall consult with the permittee to ascertain whether mutual agreement can be reached. If mutual agreement on the remedial actions or plan modifications cannot be reached, the action of the Department shall be deemed final agency action and shall be subject to judicial or administrative review, as appropriate.

### **Key for Table 1**

#### **Units**

µmhos	Micromhos
NTU	Nephelometric Turbidity Unit
SU	Standard Units (pH)
mg/l	Milligrams per liter
µg/l	Micrograms per liter
Cfs	Cubic feet per second

#### **Sample Type**

CAL	Calculated Parameter
IN SITU	In Situ Field Sample
PR	Pump Record
G	Grab
RG	Rain Gauge
ACF	Automatic Composite Flow Proportional

#### **Sampling Frequency**

DAV	Daily Averages of Continuous Sampling
DAC	Daily Accumulation of Continuous Sampling
Bi-W	Biweekly
Q	Quarterly
W	Weekly

#### **Sampling Location**

Inflow S-401, S-402  
Outflow S-404

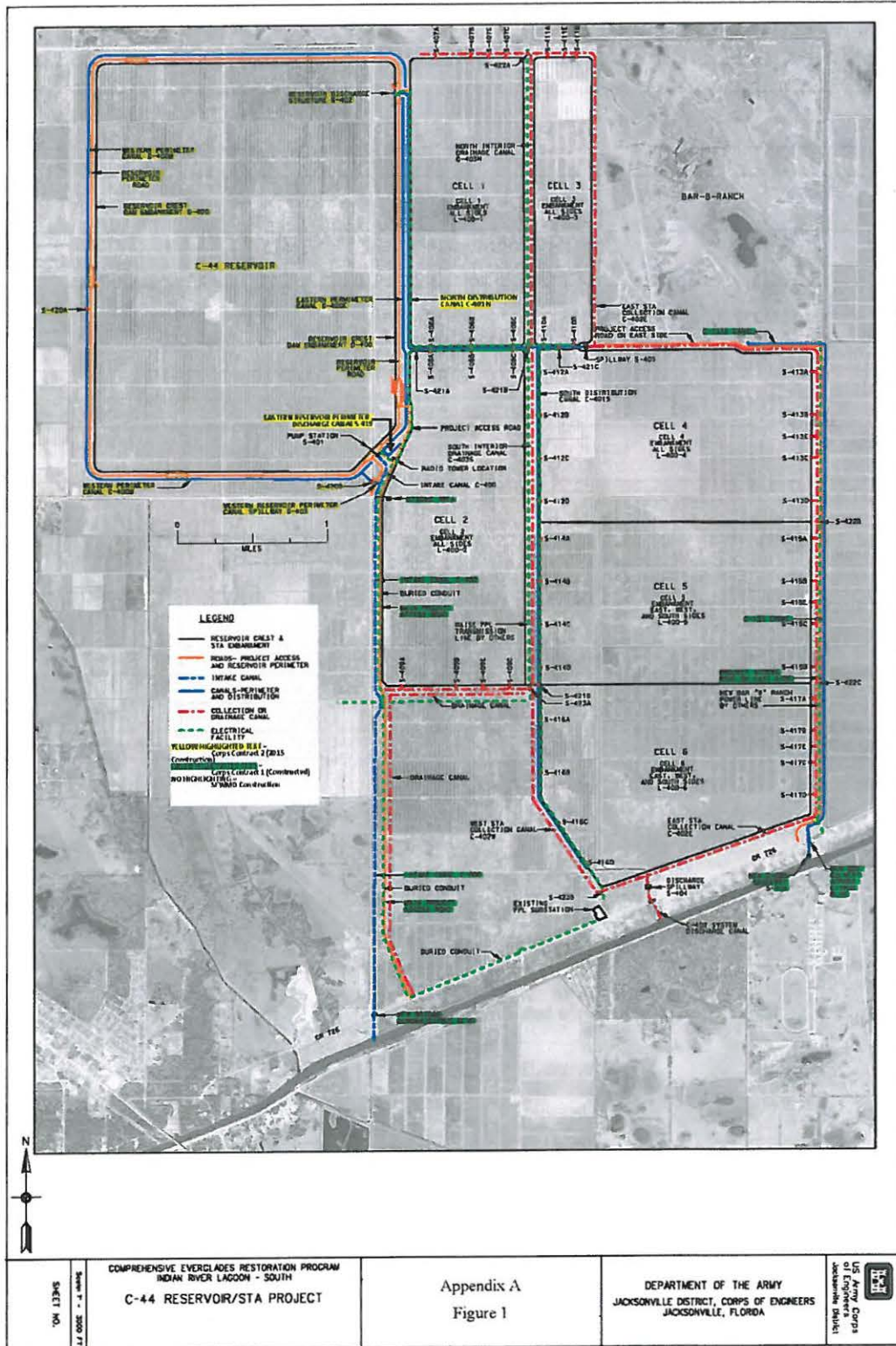


**Table 1. Interim Operations Water Quality Monitoring Plan.**

PARAMETER	UNITS	SAMPLE TYPE	SAMPLING FREQUENCY	SAMPLING LOCATION
Ammonia (NH <sub>4</sub> )	mg/l	G	Bi-W	S-401, S-402, S-404
Alkalinity	mg/l	G	Bi-W	S-401, S-402, S-404
Calcium	mg/l	G	Q	S-401, S-402, S-404
Copper	µg/l	G	Q	S-401, S-402, S-404
Dissolved Oxygen (DO)	mg/l	IN SITU	Bi-W	S-401, S-402, S-404
Mercury and Pesticides	See Specific Condition No. 25			
Magnesium	mg/l	G	Q	S-401, S-402, S-404
pH	SU	IN SITU	Bi-W	S-401, S-402, S-404
Specific Conductance	Umhos/com	IN SITU	Bi-W	S-401, S-402, S-404
Sulfate (SO <sub>4</sub> )	mg/l	G	Bi-W	S-401, S-402, S-404
Temperature	°C	IN SITU	Bi-W	S-401, S-402, S-404
Total Kjeldahl Nitrogen (TKN)	mg/l	ACF/G	W	S-401, S-402, S-404
Nitrate + Nitrite (NO <sub>x</sub> )	mg/l	ACF/G	W	S-401, S-402, S-404
Ortho-Phosphate (PO <sub>4</sub> )	mg/l	G	Bi-W	S-401, S-402, S-404
Total Phosphorus (TP)	mg/l	ACF/G	W	S-401, S-402, S-404
Turbidity	NTU	G	Bi-W	S-401, S-402, S-404
Flow	CFS	PR	DAV	S-401, S-402, S-404
Flow	CFS	CAL	DAV	S-401, S-402, S-404
Rainfall Amount	Inches	RG	DAC	Rainfall Sampling Station

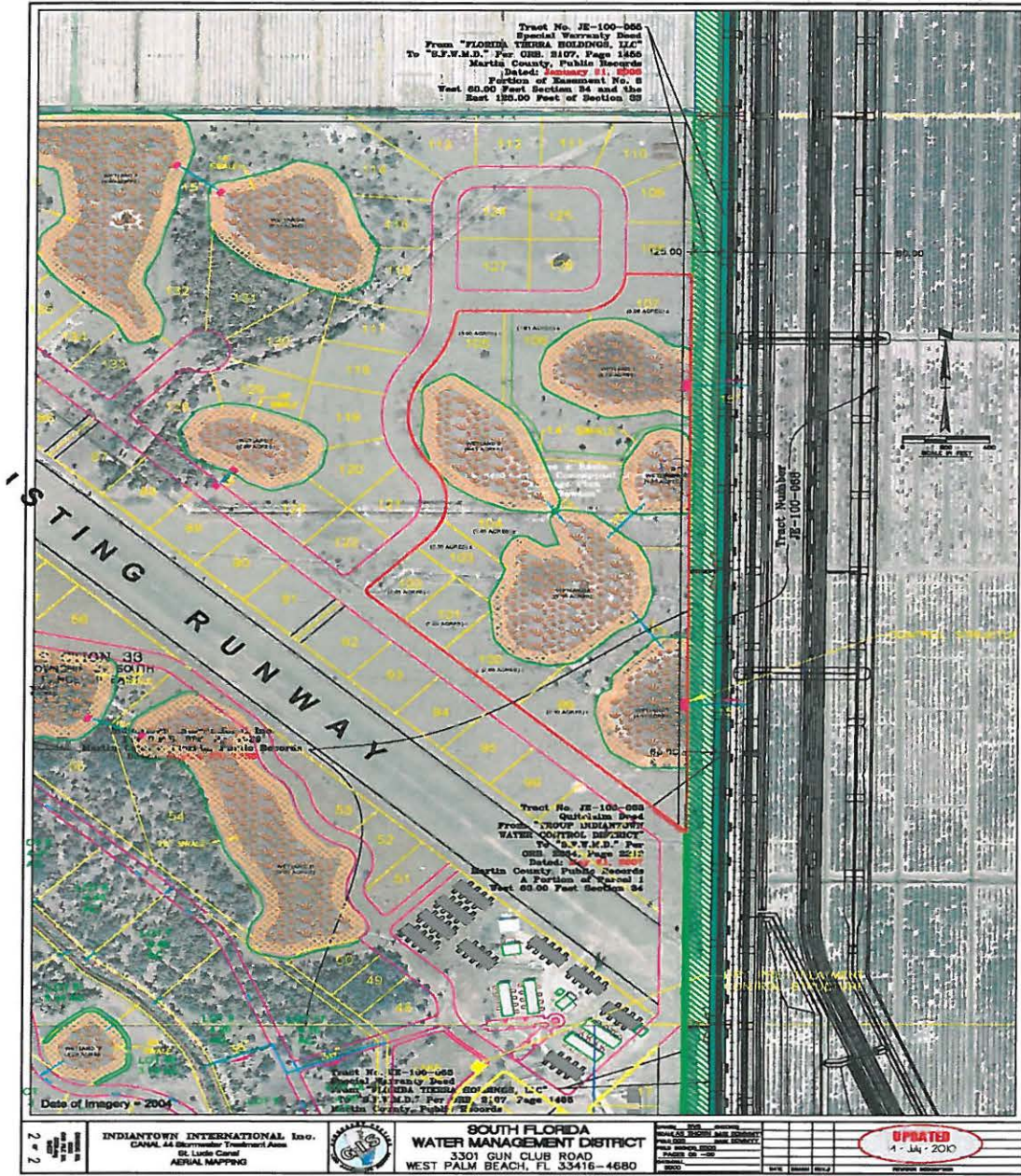


Figure 1. C-44 RSTA Project Components





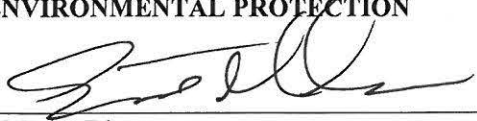
**Figure 2. Adjacent wetland locations that will be mitigated for potential adverse impacts from the C-44 RSTA Intake Canal through land acquisition (Wetlands 1-5) and mitigation bank credits (Wetlands 6-9, 11 and 12), if applicable.**





Permittee: U.S. Army Corps of Engineers  
Project: Indian River Lagoon - South  
Phase: C-44 Reservoir and Stormwater Treatment Area  
File No.: 0297646-003  
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**STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION**



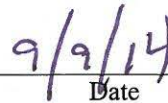
Ernie Marks, Director  
Office of Ecosystem Projects

EM/dn/jp

Executed in Tallahassee, Florida.

**FILING AND ACKNOWLEDGMENT**

FILED on this date, pursuant to 120.52(7) Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

  
Clerk  
Date

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