



# Florida Department of Environmental Protection

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Rick Scott  
Governor

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Lt. Governor

Herschel T. Vinyard Jr.  
Secretary

**Type of Permit:** Everglades Forever Act Permit  
**Project(s):** Everglades Construction Project  
**Eastern Flow-path:** Stormwater Treatment Area 1 East and Stormwater Treatment Area 1 West (Palm Beach County)  
**Central Flow-path:** Stormwater Treatment Area 2 and Stormwater Treatment Area 3/4 (Palm Beach and Broward Counties)  
**Western Flow-path:** Stormwater Treatment Area 5/6 (Palm Beach, Broward and Hendry Counties)

**Permit No.:** 0311207  
**Applicant:** South Florida Water Management District (District)  
**Applicant Address:** 3301 Gun Club Road  
P. O. Box 24680  
West Palm Beach, Florida 33416-4680

**Issuance Date:** September 10, 2012  
**Expiration Date:** September 09, 2017

This permit is issued in accordance with the Everglades Forever Act, Section 373.4592, Florida Statutes (F.S.), authorizing construction, operation and maintenance activities for Stormwater Treatment Area (STA) 1 East, STA 1 West, STA 2, STA 3/4 and STA 5/6, hereafter referred to as the STAs. This permit is also accompanied by, and issued in reliance upon, Consent Order (Order) OGC# 12-1149<sup>1</sup>. The activities authorized by this permit must be conducted in conformance with all the provisions of this permit. Failure to comply with all the permit's conditions and documents referenced herein shall constitute grounds for revocation of the permit and appropriate enforcement action.

## PROJECT DESCRIPTION:

The STAs are components of the Everglades Construction Project (ECP), construction, operation, and maintenance of which is required by the EFA, Section 373.4592, F.S. The projects consist of various conveyance mechanisms and a complex wetland marsh system which utilizes green technology (biological treatment controls) in the removal of nutrients from stormwater entering the treatment works of each project. Wetland vegetation within the STAs is managed in conjunction with hydrologic operations to maintain optimal performance levels within the project. Operation and maintenance activities authorized by this permit involve maintaining water levels within the STAs to optimize phosphorus uptake effectiveness within the treatment components of the project. Optimization of the treatment wetland is defined by its performance in removing the pollutants, particularly phosphorus, for which the project was designed. Other operation and maintenance activities required by this permit include water quality monitoring, vegetation maintenance, maintenance of water control structures (including levees) and conveyance mechanisms (e.g. canals). The South Florida Water Management District (District or permittee) is the Local Sponsor of the Congressionally-mandated Central and South Florida Project for Flood Control and Other Purposes (C&SF Project). The District is obligated to operate the C&SF Project and other structures as necessary to fulfill its obligations as Local Sponsor, including but not limited to providing flood control and water supply throughout

<sup>1</sup> Because this permit is accompanied by and issued in reliance upon Consent Order OGC #12-1149; this permit shall not be effective until the Order becomes final agency action, is signed by the Respondent, and until the lapse of any stay granted during any judicial review. This permit is also issued in conjunction with NPDES Permit No.: FL0778451 and shall not become effective until the date the NPDES permit becomes effective.

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South Florida. The Department has determined that operation and maintenance of these projects are consistent with the anti-degradation requirements of Rules 62-4.242(1)-(2), F.A.C. and are clearly in the public interest pursuant to Subsection 373.4592(9)(a), F.S.

Surface water discharges from the individual STAs occur to the following receiving water bodies:

STA-1E: Discharges from this facility enter the L-40 Canal which is located within Water Conservation Area 1 (WCA-1; also known as the Arthur R. Marshall Loxahatchee National Wildlife Refuge). Wetlands and surface waters within WCA-1 are Class III Fresh Waters and WCA-1 is an Outstanding Florida Water, pursuant to 62-302.700, Florida Administrative Code (F.A.C.)

STA-1W: Discharges from this facility enter the L-7 Canal which is located within WCA-1. Wetlands and surface waters within WCA-1 are Class III Fresh Waters and WCA-1 is an Outstanding Florida Water, pursuant to 62-302.700, F.A.C.

STA-2: Discharges from this facility enter the L-6 Canal. Water from the L-6 Canal is conveyed either through G-336 A-F to northern Water Conservation Area (WCA) 2A or G-336G and a gap in the L-6 levee, located just north of the S-7 Pump Station, to western WCA-2A. Wetlands and surface waters within WCA-2A are Class III Fresh Waters.

STA-3/4: Discharges from this facility enter the L-5 Canal. Water from the L-5 Canal is conveyed either through the S-7 Pump Station in the North New River Canal to WCA-2A or the S-8 Pump Station in the Miami Canal to western WCA-3A. Water from the L-5 Canal can also enter WCA-3A via the S-150 structure when water levels in the L-5 Canal are higher than the downstream water level in WCA-3A. Wetlands and surface waters within WCA-3A are Class III Fresh Waters.

STA 5/6: Discharges from this facility will be into the STA-5/6 discharge canal along the eastern perimeter of STA-5/6, which is a Class III water. Water from this canal can then be directed to either the Miami Canal, the L-3 Canal or the Rotenberger Wildlife Management Area (WMA) via the G-410 Pump Station. Wetlands and surface waters within the Miami Canal, the L-3 Canal and the Rotenberger WMA are Class III Fresh Waters and the Rotenberger WMA is an Outstanding Florida Water pursuant to Rule 62-302.700, F.A.C.

## PROJECT COMPONENTS:

### I. Upstream Conveyance Features

**S-5A Pump Station.** This structure is located on the south side of State Road 80 and the C-51 Canal in western Palm Beach County. The purpose of the S-5A Pump Station is flood protection, primarily for the upstream S-5A Basin. The S-5A Pump Station may also provide assistance with flood control efforts associated with East Beach Water Control District and Western C-51 Basin, in addition to conveyance of excess water from Lake Okeechobee. The S-5A Pump Station, which has a design capacity of 4,800 cfs, conveys surface waters from several upstream basins into the STA-1 Inflow Basin where water can then be directed to STA-1E and/or STA-1W.

**STA-1 Inflow Basin.** This "basin" located adjacent to the northern extent of WCA-1, south of the S-5A Pump Station and between STA-1E and STA-1W. The primary purpose of this Inflow Basin is conveyance of discharges from the S-5A Pump Station to STA-1E and 1W; however, it may also be used to convey surface waters to or from adjacent areas via control structures G-311 (1,550 cfs), G-300 (1,580 cfs), G-301 (3,080 cfs), G-302 (3,250 cfs), and S-5AS (2,000 cfs).

**S-319 Pump Station.** This pump station is centrally located on the north side of STA-1E and east of the S-5A Pump Station on the C-51 Canal. The purpose of the S-319 Pump Station is flood protection, primarily for the Western C-51 Basin. This pump station, which has a design capacity of 3,980 cfs, directs surface water from the Western C-51

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Basin to the STA-1E Eastern Distribution Cell. The S-319 Pump Station is an inflow monitoring station for the project.

**STA-1E Inflow Distribution Cells.** These two distribution cells are located along the C-51 Canal on the north side of STA-1E. The primary purpose of these two cells is to distribute flows to the downstream treatment works and convey water east or west from the S-319 Pump Station and the G-311 Structure via the S-375 (1,580 cfs) and G-707 (600 cfs) structures.

**S-5AS Structure.** The S-5AS Structure (2,000 cfs), which is located on the south side of the confluence of the L-8 and C-51 Canals, conveys surface waters to or from the STA-1 Inflow Basin.

**G-311 Structure.** This structure is located in the northwest corner of STA-1E between the Western Distribution Cell and the STA-1 Inflow Basin. The primary purpose of this structure is to direct water to or from the STA-1 Inflow Basin and the STA-1E Western Distribution Cell. The spillway has a design capacity of 1,550 cfs (easterly flow) and 3,600 cfs (westerly flow). The G-311 structure is an inflow monitoring station for the project.

**S-155A Structure.** This spillway structure is located in the C-51 Canal east of STA-1E. The primary purpose of this structure is to divide the C-51 Basin into a Western and Eastern Basin. During major storm events, the S-155A Structure may discharge up to 1,500 cfs from the Western C-51 and S-5A Basins to the Eastern C-51 Canal.

**G-341 Gated Spillway.** This structure is located in the Ocean Canal between the S-5A Basin and the S-2/S-6 Basins. The primary purpose of this structure is to manage water between the S-5A and S-2/S-6 basins to the Hillsboro Canal. The G-341 has a minimum design capacity of 600 cfs.

**S-6 Inflow Pump Station.** This pump station is located in the Hillsboro Canal on the west side of the WCAs. The primary purpose of this pump station is conveyance of surface water from the Hillsboro Canal to the STA-2 inflow canal or, alternatively, through the G-338 and G-339 structures. The S-6 Pump Station has a design capacity of 2,925 cfs. The S-6 Pump Station is an inflow monitoring station.

**G-434 Inflow Pump Station.** This pump station is located in the northwest corner of STA-2, Cell 5, adjacent to the North New River Canal. The primary purpose of this pump station is to convey surface water from the North New River Canal to the G-434 distribution canal to serve the Compartment B North Build-out Area (Cells 5, 6, and 4). The G-434 Pump Station has a design capacity of 1,120 cfs. The G-434 Pump Station is an inflow monitoring station.

**G-435 Inflow Pump Station.** This pump station is located in the northwest corner of Cell 7 adjacent to the North New River Canal. The primary purpose of this pump station is to convey surface water from the North New River Canal to the G-435 distribution canal to serve the Compartment B South Build-out Area (Cells 7 and 8). The G-435 Pump Station has a design capacity of 480 cfs. The G-435 Pump Station is an inflow monitoring station.

**G-328 Inflow Pump Station.** This pump station, which is privately owned and operated and is located northeast of the STA, discharges into the distribution canal downstream of the S-6 Pump Station. The pump station has a design capacity of 445 cfs. Also located here is a pump (111 cfs) designed to provide water from the STA-2 inflow canal for water supply to adjacent farms. The G-328 Pump Station is an inflow monitoring station.

**G-370 Pump Station.** This pump station is located in the northeast corner of STA-3/4 on the west side of US 27, delivers water from the North New River Canal west to the STA-3/4 distribution canal. The G-370 Pump Station has a design capacity of 2,775 cfs. The G-370 Pump Station is an inflow monitoring station.

**G-372 Pump Station.** This pump station is located west of STA-3/4 on the Miami Canal, delivers water from the Miami Canal east to the STA-3/4 distribution canal. The G-372 Pump Station has a design capacity of 3,700 cfs. The G-372 Inflow Pump Station is an inflow monitoring station.

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**G-383 Divide Structure.** The G-383 Structure (1,470 cfs), is located in the STA-3/4 Distribution Canal at the northwest corner of Cell 1A and divides the Inflow Distribution Canal into east and west segments for deliveries to STA 3/4.

**G-508 Inflow Pump Station and G-342O Structure.** This complex is located in the northwest corner of STA-5/6, Flow-way 3 near the confluence of the L-2/ L-3 and Deer Fence Canals. The primary purpose of the G-508 Pump Station (1,630 cfs), and gated culvert structures (G-342O), is to deliver water from the upstream canals to the STA-5/6 distribution canal.

**G-406 Structure with G-342E & G-342F Structures.** The G-406 gated spillway structure (1,770 cfs) is located within the L-3 Canal at the confluence of the L-2/L-3 and Deer Fence Canals while the G-342E & F gated structures (600 cfs) are located between the seepage canal (L-3) and the STA-5/6 distribution canal. The primary purpose of the G-406 structure is to divide the L-3 Canal; however, delivering water to the STA-5/6 distribution canal via the G-342E and F Structures is possible.

**G-351 Structure.** This gated structure, which is located near the northwest corner of STA-5/6, Cell 6-5, separates the L-3 Canal from the distribution canal; however, delivery of water to the STA-5/6 distribution canal via the G-351 structure (900 cfs) is possible. The G-351 structure has a variable discharge capacity based on hydraulic conditions.

## II. Treatment Works and Inflow/Outflow Structures

### STA-1E

**Flow-way 1/Eastern Flow-way.** Stormwater enters the treatment facility through Cell 1 via the S-363 A-C structures (861 cfs) where it continues in a north-to-south direction into treatment Cell 2 via the S-364 A-C structures. Treated water is routed from treatment Cell 2 into the discharge collection canal via the S-365 A-B structures before discharging into the L-40 Canal through the S-362 Pump Station (4,200 cfs).

**Flow-way 2/Central Flow-way.** Stormwater enters the treatment facility through Cell 3 via the S-366A-E structures (1,540 cfs) where it continues in a north-to-south direction into treatment Cell 4N via the S-367 A-E structures and subsequently Cell 4S via the S-368 A-E structures. Treated water is routed from treatment Cell 4S into the discharge collection canal via the S-369 A-D structures before discharging into the L-40 Canal through the S-362 Pump Station (4,200 cfs).

**Flow-way 3/Western Flow-way.** Stormwater enters the treatment facility through Cell 5 and 7 of the western flow-way (Flow-way 3; Cells 5, 6, & 7) via the S-370 A-C structures (Cell 5, 912 cfs) and the S-373 A & B structures (Cell 7, 668 cfs) and continues in a north-to-south path into treatment Cell 6 via the S-371 A-C and S-374 A-C structures. Treated water is then routed from treatment Cell 6 into the discharge collection canal via the S-372 A-E structures and is discharged into the L-40 Canal through the S-362 Pump Station (4,200 cfs).

**Inflow/Seepage Return Pump Station S-361.** This structure is a secondary inflow pump station (75 cfs) that discharges directly into treatment Cell 4S of STA-1E. S-361 is located on the southeastern perimeter of STA-1E. S-361 serves to preserve permitted drainage for the Rustic Ranches subdivision and agricultural lands located in Section 24, south and east of STA-1E and to return seepage collected along the STA's eastern seepage canal directly into Treatment Cell 4S. The S-376 (6 x 632 cfs) and S-377 (5 x 396 cfs) structures are automated gated structures which function to assist S-361 in maintaining seepage control along the eastern perimeter of STA-1E. The S-376 and S-377 structures may also be operated to convey water supply from the C-51 canal to Rustic Ranches and the agricultural lands described above. The S-377 Seepage Divide Structure is located near the southeast corner of Cell 2 of STA-1E. The S-361 Pump Station is an additional inflow monitoring station for Flow-way 1/Central Flow-way. The S-361 Pump Station is an inflow monitoring station for the project.

**Outflow Pump Station and Discharge Works.** S-362 is the outflow pump station and compliance monitoring station for the STA-1E facility. The S-362 pump station draws treated stormwater from the STA-1E internal discharge collection canal and discharges into the L-40 Borrow Canal. The pump station includes seven pumps, approach and discharge canals, pump station enclosure, and other related civil works. S-362 has five diesel engine-driven pumps (three 960 cfs pumps and two 550 cfs pumps) and two additional 110 cfs electric motor driven pumps. This pump station has a maximum discharge capacity of 4,200 cfs. The S-362 Pump Station is the outflow compliance monitoring station for the project.

### STA-1W

**G-302 Inflow Structure.** Stormwater enters the treatment facility through the G-302 inflow structure (3,250 cfs) and is conveyed throughout the facility by a series of internal structures. Water entering the facility via the G-302 structure, the facility's inflow monitoring station, will be routed to Flow-ways 1 & 2 via the G-303 structure and Flow-way 3 via the G-304 A-J structures.

**Flow-way 1/Eastern Flow-way.** Stormwater enters the G-302 (3,250 cfs) inflow structure and is conveyed to Cell 1A via the G-303 (1,780 cfs) structure where it continues south into treatment Cell 1B via the G-248 A-D structures. Treated water is routed from treatment Cell 1B into Cell 3 via the G-253 A-J structures where it is discharged to the L-7 Canal via the G-251 (450 cfs) or the G-310 (3,040 cfs) Outflow Pump Stations. Treated water can also be routed from treatment Cell 3 through the G-308 or G-259 structures to the western discharge canal where it could then be discharged to the L-7 Canal via the G-310 Pump Station.

**Flow-way 2/ Western Flow-way.** Stormwater enters the G-302 (3,250 cfs) inflow structure and is conveyed to Cell 2A first via the G-303 structure and then via the G-255 structure where it continues south into treatment Cell 2B via the G-249 A-H structures. Treated water is routed from treatment Cell 2B to treatment Cell 4 through the G-254 A-E & A1-D1 structures and is then conveyed through the G-309, G-258, and/or G-307 structures to the western discharge canal where it is discharged to the L-7 Canal via the G-310 Pump Station.

**Flow-way 3/ Northern Flow-way.** Stormwater enters the G-302 (3,250 cfs) inflow structure and is conveyed to Cell 5A via the G-304 A-J (1,470 cfs) structures where it continues in an east to west direction into treatment Cell 5B via the G-305 A-V structures. Treated water is routed through the G-306A-J structures into the western discharge canal where it is discharged to the L-7 Canal via the G-310 Outflow Pump Station.

**G-251 Pump Station.** The G-251 Pumping Station is the primary outflow pump station serving Flow-way 1 and is equipped with six 36-inch diameter pumps, each with a maximum capacity of 75 cfs, for a total discharge capacity of 450 cfs. The G-251 is one of two outflow compliance monitoring stations for the treatment facility. All discharges from the G-251 Pump Stations are delivered to the L-7 Canal within WCA-1.

**G-310 Pump Station.** The G-310 Pump Station is the outflow pump station for Flow-ways 1, 2 and 3. The G-310 can also discharge flows from Flow-way 1. The combined maximum discharge capacity of these pump stations is 3,040 cubic feet per second (cfs). The G-310 is the second outflow compliance monitoring station for the treatment facility. All discharges from the G-310 Pump Stations are delivered to the L-7 Canal within WCA-1.

### STA-2

**Flow-way 1 (Cell 1).** Stormwater enters the treatment facility through Flow-way 1 via G-329 A-D (1,000 cfs) where it continues in a north-to-south direction. Treated water is then routed into the discharge collection canal via G-330 A-E (1,000 cfs) before discharging into the L-6 Canal via the G-335 Pump Station (3,040 cfs) or G-436 Pump Station (1,600 cfs).

**Flow-way 2 (Cell 2).** Stormwater enters the treatment facility through Flow-way 2 via G-331 A-G (1,015 cfs) where it continues in a north-to-south direction. Treated water is then routed into the discharge collection canal via G-332

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(1,000 cfs) before discharging into the L-6 Canal via the G-335 Pump Station (3,040 cfs) or G-436 Pump Station (1,600 cfs).

**Flow-way 3 (Cell 3).** Stormwater enters the treatment facility through Flow-way 3 via G-333 A-E (1,000 cfs) where it continues in a north-to-south direction. Treated water is then routed into the discharge collection canal via G-334 (1,000 cfs) before discharging into the L-6 Canal via the G-335 Pump Station (3,040 cfs) or G-436 Pump Station (1,600 cfs).

**Flow-way 4 (Cells 4, 5 and 6).** Stormwater enters the treatment facility through Flow-way 4 via G-438 A-E (590 cfs) in Cell 5 and G-438 F-J (590 cfs) in Cell 6 where it continues in a north-to-south direction into Cell 4 via G-367 A-F (660 cfs) and G443 A-B (464 cfs). Treated water is then routed from Flow-way 4 into the discharge collection canal via G-368 (1,120 cfs) before discharging into the L-6 Canal via the G-335 Pump Station (3,040 cfs) or the G-436 Pump Station (1,600 cfs).

**Flow-way 5 (Cells 7 and 8).** Stormwater enters the treatment facility through Flow-way 5 via G-440 A-F (480 cfs) where it continues in a north-to-south direction into Cell 8 via G-442 (480 cfs). Treated water is then routed in a south-to-north direction and is routed from Flow-way 5 into the discharge collection canal via G-441 before discharging into the L-6 Canal via the G-335 Pump Station (3,040 cfs) or the G-436 Pump Station (1,600 cfs).

**G-335 Outflow Pump Station.** This pump station is located along the eastern side of STA-2 and adjacent to the L-6 Canal. The primary purpose of this pump station is to convey treated water from Cells 1-8 of the facility. The G-335 Pump Station (3,040 cfs) is one of two outflow compliance stations for the treatment works.

**G-436 Outflow Pump Station.** This pump station is located directly south of the G-335 Pump Station and adjacent to the L-6 Canal. The primary purpose of this pump station is to convey treated water from Cells 1-8 of the facility. The G-436 Pump Station (1,600 cfs) is the second outflow compliance station for the treatment works.

#### STA-3/4

**Flow-way 1/Eastern Flow-way.** Stormwater enters Flow-way 1 via G-374 A-F (2,172 cfs) in Cell 1A where it continues in a north-to-south direction into Cell 1B via G-375 A-F (2,172 cfs). Treated water is then discharged from Flow-way 1 into the L-5 Canal via G-376 A-F (2,172 cfs). The G-376 B and E structures are outflow compliance monitoring stations.

**Flow-way 2/Central Flow-way.** Stormwater enters Flow-way 2 via G-377 A-E (1,980 cfs) in Cell 2A where it continues in a north-to-south direction into Cell 2B and the PSTA Implementation Project via G-378 A-E (1,980 cfs). Treated water is then discharged from Flow-way 2 and the PSTA Implementation Project into the L-5 Canal via G-379 A-E (1,980 cfs) and the G-388 Pump Station (200 cfs). The G-379 B and D structures are outflow compliance monitoring stations.

**Flow-way 3/Western Flow-way.** Stormwater enters Flow-way 3 via G-380 A-F (1,692 cfs) in Cell 3A where it continues in a north-to-south direction into Cell 3B via G-384 A-F (1,692 cfs). Treated water is then discharged from Flow-way 3 into the L-5 Canal via G-381A-F (1,692 cfs). The G-381B and E structures are outflow compliance monitoring stations.

**Discharge Works.** There are 18 discharge structures in STA-3/4: the G-376 A-F structures (2,172 cfs) in Flow-way 1; the G-379 A-E structures (1,980 cfs) and G-388 in Flow-way 2; and the G-381 A-F structures (1,692 cfs) in Flow-way 3. Of these 18 structures, a subset of structures for each Flow-way was found to be representative of the discharges from the individual flow-ways. Structures G-376 B and E; G-379 B and D; and G-381 B and E were all demonstrated to be representative of the outflow TP concentrations for their respective flow-ways. These six (6) structures are the outflow monitoring compliance stations for the facility.

### STA-5/6

**Flow-way 1.** Surface water enters the facility for treatment through Cell 5-1A via the G-342 A and B (600 cfs) structures, where it continues in a west to east direction through the cell. Treated water is then routed from Cell 5-1A into Cell 5-1B via the G-343 A-D structures before discharging into the STA-5/6 discharge canal along the eastern edge of STA-5/6 via the G-344 A and B structures.

**Flow-way 2.** Surface water enters the facility for treatment through Cell 5-2A via the G-342 C and D (600 cfs) structures, where it continues in a west to east direction through the cell. Treated water is then routed from Cell 5-2A into Cell 5-2B via the G-343 E-H structures before discharging into the STA-5/6 discharge canal along the eastern edge of STA-5/6 via the G-344 C and D structures.

**Flow-way 3.** Surface water enters the facility for treatment through Cell 5-3A via the G-342 G and H (600 cfs) structures, where it continues in a west to east direction through the cell. Treated water is then routed from Cell 5-3A into Cell 5-3B via the G-343 I and J structures before discharging into the STA-5/6 discharge canal along the eastern edge of STA-5/6 via the G-344 E and F structures.

**Flow-way 4.** Surface water enters the facility for treatment through Cell 5-4A via the G-342 I and J (600 cfs) structures, where it continues in a west to east direction through the cell. Treated water is then routed from Cell 5-4A into Cell 5-4B via the G-343 K and L structures before discharging into the STA-5/6 discharge canal along the eastern edge of STA-5/6 via the G-344 G and H structures.

**Flow-way 5.** Surface water enters the facility for treatment through Cell 5-5A via the G-342 K-M (900 cfs) structures, where it continues in a west to east direction through the cell. Treated water is then routed from Cell 5-5A into Cell 5-5B via the G-343 M-O structures before discharging into the STA-5/6 discharge canal along the eastern edge of STA-5/6 via the G-344 I-K structures.

**Flow-way 6.** Surface water enters the facility for treatment through Cell 6-4 via the G-342 N structure (600 cfs), where it continues in a west to east direction through the cell. Treated water is then routed from Cell 6-4 into Cell 6-2 via the G-396 A-C structures before discharging into the STA-5/6 discharge canal along the eastern edge of STA-5/6 via the G-352 A-C structures (669 cfs).

**Flow-way 7.** Surface water enters the facility for treatment through Cell 6-5 via the G-353 A-B (286 cfs) structures and continues in a west to east direction through the cell. Treated water is then routed from Cell 6-5 via the G-354 A-C structures (360 cfs) into the STA-5/6 discharge canal along the eastern edge of STA-5/6.

**Flow-way 8.** Surface water enters the facility for treatment through Cell 6-3 via the G-353C (105 cfs) structure and continues in a west to east direction through the cell. Treated water is then routed from Cell 6-3 via the G-393 A-C structures (140 cfs) into the STA-5/6 discharge canal along the eastern edge of STA-5/6.

**Discharge Works.** There are 20 discharge structures in STA-5/6: the G-344 A and B structures (600 cfs) in Flow-way 1; the G-344 C and D structures (600 cfs) in Flow-way 2; the G-344 E and F structures (600 cfs) in Flow-way 3; the G-344 G and H structures (600 cfs) in Flow-way 4; the G-344 I-K structures (900 cfs) in Flow-way 5; the G-352 A-C structures (669 cfs) in Flow-way 6; the G-354 A-C (360 cfs) in Flow-way 7 and the G-393 A-C (420 cfs) structures in Flow-way 8. Of these 20 structures, a subset of structures for Flow-way 6 and Cells 6-5 and 6-3 were found to be representative of the water quality in the respective flow-way. Structures G-352B, G-354C and G-393B were demonstrated to be representative of the outflow TP concentrations for their respective cells. These three structures and the remaining 11 structures are the outflow compliance monitoring stations for the facility.

### III. Additional Structures, Downstream Conveyance and Miscellaneous Features

#### STA-1E and STA-1W

**Diversion Structures.** The G-300 Structure (1,580 cfs), which is located near the G-311, allows for release of surface waters from the STA-1 Inflow Basin to the L-40 Borrow Canal within WCA-1. The G-301 Structure (3,600 cfs), which is located near the G-302, allows for release of surface waters from the STA-1 Inflow Basin to the L-7 Borrow Canal within WCA-1.

**Seepage Collection and Return Facilities.** The STA-1E seepage collection facilities include a canal along east side of the STA, a control structure at the C-51 Canal (S-376, 50 cfs), a divide structure (S-377, 50 cfs) and the S-361 pump station. Seepage is returned to STA-1E or released to the C-51 Canal. The S-361 is addressed under Section II above. The STA-1W seepage collection facilities include a canal along the north side of the STA, the G-327A (100 cfs) control structure and the G-327B (65 cfs) and G-250S (201 cfs) seepage pumps. Seepage is returned to STA-1W or released to the western discharge canal.

**Recreational Facilities.** Facilities within and around STA-1E and STA-1W include trails, kiosks, composting toilets, public parking areas, etc. for passive recreational use.

#### STA-2

**G-338 Diversion Structure.** This gated spillway structure is located in the Hillsboro Canal downstream of the S-6 Pump Station. The primary purpose of this structure is to convey surface water to and from WCA-1. The G-338 Structure has a design capacity of 975 cfs.

**G-339 Diversion Structure.** This gated spillway structure is located at the confluence of the STA-2 Inflow Canal and the L-6 Borrow Canal. The primary purpose of this structure is to convey surface water from the S-6 and G-328 Pump Stations to the L-6 Canal. The G-339 Structure has a design capacity of 2,000 cfs.

**Seepage Collection and Return Facilities.** The STA-2 seepage collection facilities include a canal along north side of the STA, the G-337 pump station (240 cfs) and seepage pumps at the G-434 Pump Station. Seepage is returned to the STA inflow canal. Seepage collection facilities for the Florida Power and Light parcel south of Cell 8 include the G-445 pump station (26 cfs) which discharge to Cell 8.

**Divide Structures.** The G-337A Structure (1,020 cfs), which is located within the STA-2 Inflow Canal northwest of Cell 3, divides the STA Inflow Canal into east and west segments. A divide structure, G-336G, is located south of G-335 and G-436 pump stations in the L-6 canal. The purpose of this structure is to direct most of the low flows to northern WCA-2A, while allowing a portion of the higher flows from G-335 to pass to the south in WCA-2A near S-7.

**WCA-2A Hydropattern Restoration.** Six structures, G-336A-F (1,800 cfs), which are located south of the G-339 Structure, connect the north segment of the L-6 Canal to WCA-2A while a degraded levee segment at the south end of the L-6 Canal conveys surface water to WCA-2A via G-336G as described above.

**Recreational Facilities.** Facilities within and around STA-2 include trails, kiosks, composting toilets, public parking areas, etc. for passive recreational use.

#### STA-3/4

**Periphyton Stormwater Treatment Area Demonstration Project.** The STA-3/4 PSTA Project is a 445-acre section of Cell 2B in STA-3/4. The primary objective of this project is to evaluate how well the PSTA technology can work when it is implemented at the 100-acre scale. This project consists of three parts, an Upper SAV Cell, PSTA Cell, and Lower SAV Cell. The project includes several inflow and outflow structures:



- Structure G-378E structure (396 cfs) is a gated concrete box culvert which serves as the inflow control structure for the PSTA project.
- G-389A and B are two 84 inch passive culverts that convey discharges from the Upper SAV Cell to the Lower SAV Cell.
- G-390A (a 72 inch square culvert) and B a (36 inch circular culvert within a 72 inch square culvert) are two gated culverts which convey discharges from the upper SAV Cell to the PSTA Cell.
- G-388 is the outflow pump station (200 cfs) to lift discharges from the PSTA Cell across the South Exterior Levee into the west borrow pit.
- G-379E (396 cfs) is a gated concrete box culvert which serves as the outflow control structure for the Lower SAV Cell.

**G-371 and G-373 Diversion Structures.** The G-371 Structure (2,170 cfs), which is located within the North New River Canal between the G-370 Pump Station and the S-7 Structure, allows for conveyance of surface water north to south via the S-7 Pump Station. The G-373 Structure (2,000 cfs), which is located within the Miami Canal between the G-372 Pump Station and the S-8 Structure, allows for conveyance of surface water north to the south via the S-8 Pump Station.

**Recreational Facilities.** Facilities within and around STA-3/4 include trails, kiosks, composting toilets, public parking areas, etc. for passive recreational use.

#### **STA-5/6**

**Downstream Pump Stations.** The G-404 Pump Station (570 cfs), which is located at the confluence of the Miami and the L-4 Borrow Canals, maintains flows westerly to WCA-3A and the Seminole Tribe of Florida's Big Cypress Reservation via the L-4. The G-409 Pump Station (190 cfs), also operated by the District, is located south of STA-5/6 and maintains water supply to the Tribe.

**Seepage Collection and Return Facilities.** The northern seepage collection facilities, which include a canal along north side of Flow-way 1, the G-360B (2 cfs) divide structure and two seepage pump stations, G-349A (44 cfs) and G-349C (45 cfs), are designed to return seepage to Flow-way 1. A seepage canal for private lands extends from the northeast corner of STA-5 adjacent to the discharge canal with a connection to the north seepage canal at the G-348 (18 cfs) structure. Seepage along the west side of Flow-ways 3 through 8 is collected in the STA-5/6 Seepage Canal (formerly the L-3 Canal) by seepage pumps located in the G-508 Pump Station.

**Hydration Pump Stations and Structures.** Pump Stations G-507 (51 cfs) and G-349B (39 cfs), which are located at the northeast corner of STA-5, provide supplemental water to the Cell 5-1B from the discharge canal. Gated structure G-519 connects Cells 1A and 2A. Pump station G-350B (39 cfs), which is located at the southeast corner of Cell 2B, provides supplemental water to 5-2B and 5-3B from the discharge canal via an isolated east-west canal. Gated structures, G-520 and G-521, connect Cells 2A and 3A. Pump station G-509 (100 cfs), which is located at the southeast corner of Cell 4B, provides supplemental water to Flow-ways 5-4B and 5-5B from the discharge canal. Nine gated structures, G-510 through G-518, connect the interior cells.

**Access Roads and Bridges.** A bridge over the Deer Fence Canal at County Road 835 along with a section of paved road provides access to STA-5/6. A surface water management system and culverts are included as part of these improvements. Two bridge structures provide maintenance access across the STA-5/6 Discharge Canal; one is located northeast of the Rotenberger WMA and the other is near the L-3 Canal by the G-407 Structure.

**Diversion Structures.** The G-406 and G-407 structures, located within the L-3/Seepage Canal allow for conveyance of surface water from the north to the southwest of STA-5/6. The northernmost structure, the G-406 (1,770 cfs), is located just south of the Deer Fence Canal and the G-407 Structure (2,000 cfs) is located at the south end of the L-3 Canal.

**G-411 Structure.** This structure (1,080 cfs), located within the STA-5/6 discharge canal on the eastern perimeter of STA 5/6 northeast of Flow-way 3, Cell 3B, divides post-treatment water from the STA into north and south segments.

**Rotenberger Hydropattern Restoration.** The G-410 Pump Station (240 cfs) which is located within the STA-5/6 discharge canal along the eastern perimeter of STA-5/6, north of the G-411 Structure, delivers surface water to the Rotenberger Wildlife Management Area (RWMA). Discharges out of Rotenberger WMA are directed into the Miami Canal via three 54-inch diameter gated culverts (G-402 A-C) and one 42-inch diameter gated culvert (G-402D), along the east side of Rotenberger WMA. Other features include spreader and collection canals along the perimeter and within the RWMA for routing water.

**Recreational Facilities.** Facilities within and around STA-5/6 include trails, kiosks, composting toilets, public parking areas, boardwalks/platforms, etc. for passive recreational use.

#### **LOCATION:**

The project's components are located within or partially within the following property descriptions in Palm Beach , Broward and Hendry Counties:

##### **Eastern Flow-path: STA-1E and STA-1W (Palm Beach)**

Section 32, Township 43 North, Range 40 East  
Section Government Lot 5, Township 43.5, Range 40 East.  
Sections 1-4, 9-14, 15, 16, 21- 23, 26, 27, 28, 33, 34 Township 44 South, Range 39 East.  
Section 32, 35 and 36, Township 43 South, Range 40 East.  
Sections 1-7, 9-12, 14, 15, and 23, Township 44 South, Range 40 East

##### **Central Flow-path: STA-2 (Palm Beach)**

Sections 4, 5, and 6, Township 44 South, Range 39 East  
Hiatus lots 4, 5, and 6 between Townships 43 and 44 South, Range 39 East  
Sections 1, 2, 3, 4, 5, 7, 8, 17, 18, 20, 28, 29, 33 and 34, Township 44 South, Range 38 East  
Hiatus lots 1, 2, 3, and 4 between Townships 43 and 44 South, Range 38 East  
Sections 2, 3, 4, 10, 11, 13, and 14, Township 45 South, Range 38 East  
Sections 3,4, 8, 9, 16, 17, 19, 20, 30 and 31, Township 46 South, Range 39 East  
Sections 19, 20, 21, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36, Township 46 South, Range 38 East  
Sections 1- 6, 8-11, 14, 15, 16, 17, 21, 22, Township 47 South, Range 38 East  
Section 23-25 and 36, Township 46 South, Range 37 East  
Section Government Lot 5, Township 43.5, Range 40 East.

##### **Central Flow-path: STA-3/4 (Palm Beach and Broward)**

Sections 35 and 36, Township 46 South, Range 35 East  
Sections 31, 32, 33, 34, 35, 36, Township 46 South, Range 36 East  
Section 31, Township 46 South, Range 38 East  
Section 2, Township 47 South, Range 35 East  
Sections 18, 19, 30-36, Township 46 South, Range 37 East  
Sections 1-16, 22-24 and 27-30 Township 47 South, Range 37 East  
Sections 6-8, 16- 22 and 28, Township 47 South, Range 38 East  
Sections 7, 8, 9, 10, 11, and 12, Township 48 South, Range 36 East.

**Western Flow-path: STA-5/6 (Palm Beach, Broward and Hendry Counties)**

Sections 21, 22, 23, 24, 25, 26, 27, 28, 31-33, 34, 35, and 36, Township 46 South, Range 34 East  
Sections 1- 4, 9-16, 21-27, 35 and 36, Township 47 South, Range 34 East  
Sections 19, 20, 21, 22, 26, 27, 28, 29, 30 and 35, Township 46 South, Range 35 East  
Section 2, Township 47 South, Range 35 East  
Sections 6 and 7, Township 48 South, Range 36 East  
Section 6 and 9, Township 48 South, Range 35 East  
Section 1, 12, Township 48 South, Range 34 East

**GENERAL CONDITIONS:**

In accordance with Subsection 373.4592, F.S., this permit may include any standard conditions provided by Department rule which are appropriate and consistent with the EFA.

**1. Enforcement.** The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 373.129, 403.141, 403.727 and 403.859 through 403.861 F.S. The permittee is placed on notice that the Department will conduct periodic compliance review of this permit and may initiate enforcement action for any violation of these conditions.

**2. Scope of permit.** This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

**3. Limitation of rights.** The issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the proposed activities which are not addressed in this permit. However, this permit is in lieu of other permits under Part IV of Chapter 373, F.S., pursuant to Subsection 373.4592, F.S.

**4. Limitations upon title.** This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

**5. Liability.** This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.

**6. Operation and Maintenance Responsibilities.** The permittee shall properly operate and maintain the STAs systems of treatment and control and related appurtenances that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules and the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

**7. Access Rights.** The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

- A. Have access to and copy any records that must be kept under conditions of the permit;
- B. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- C. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

**8. Noncompliance.** If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- A. A description of and cause of noncompliance; and
- B. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

**9. Records as Evidence.** In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111, F.S. and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

**10. Changes in Law.** The permittee agrees to comply with changes in applicable Department rules and applicable Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida law.

**11. Transferability.** This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-343.130, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

**12. Permit at Work Site.** This permit or a copy thereof shall be kept at the work site of the permitted activity. For the purposes of this permit the work site shall be defined as the South Florida Water Management District Headquarters located at 3301 Gun Club Road in West Palm Beach, Florida.

**13. Records Retention.** The permittee shall comply with the following:

- A. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department;
- B. The permittee shall hold, at the STAs or other location(s) designated by this permit records of all monitoring information required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, and application unless otherwise specified by Department rule; and,

**C. Records of monitoring information shall include:**

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed and the appropriate code as required by Chapter 62-160, F.A.C.;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used, including but not limited to MDL (Method Detection Limit); and,
6. the results of such analyses, including identification of potential outlier values.

**14. Requests for Information.** When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

**15. External Agency Requirements.** Should any other regulatory agency require changes to the permitted system, the permittee shall notify the Department in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.

**16. Sovereign Lands.** The permittee is hereby advised that Florida law states: No person shall commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund or the Department of Environmental Protection under Chapter 253, until such person has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

**17. Artifacts.** 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 permittee shall immediately stop all activities which disturb the soil and notify the Department and the State Historic Preservation Officer.

**SPECIFIC CONDITIONS:**

**1. Addresses.** Unless otherwise specified, copies of reports and notices required by this permit shall be submitted electronically to the Department at [RPPS\\_Comp@dep.state.fl.us](mailto:RPPS_Comp@dep.state.fl.us). Written correspondence or required written submittals may be submitted to the Department's Office of Ecosystem Projects, Program Coordination and Regulation Section, 3900 Commonwealth Boulevard, MS 24, Tallahassee, Florida, 32399-3000, telephone no. (850) 245-3166.

**2. Related Permits.** The Department and the permittee acknowledge the issuance of other permits related to the operation of the projects authorized through this permit. Related permits include the National Pollutant Discharge Elimination System Permit No.: FL0778451, the Dewatering/ General Water Use Permit No. 0289306 which authorizes dewatering activities to construct and modify the STAs and associated works and the U.S. Army Corps of Engineers 404 Permit Nos. SAJ-1994-4532, SAJ-2008-3641 and SAJ-2008-3642. This permit, upon issuance, shall supersede and replace the former Everglades Forever Act permits for these projects previously issued by the Department.

**3. Public Use.** The recreational facilities located within the project footprint(s) shall be maintained to ensure compatibility with the restoration goals of the ECP and the water quality and hydrological purposes of the STAs. This permit does not absolve the permittee from the responsibility of obtaining other permits (federal, state, or local) which may be required for the activities occurring at these sites.

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**4. Project Construction.** The permittee shall ensure that components authorized herein are constructed consistent with the approved design documents and any approved modifications thereto. During any construction or modification of the STAs, the permittee shall take all reasonable precautions to minimize the suspension and transport of soils, levee materials, and roadway materials into waters adjacent to or downstream of the construction site. In addition, during construction, the permittee shall perform turbidity monitoring in accordance with Specific Condition 21.

**5. Project Operation and Maintenance.** The permittee shall operate and maintain the STAs consistent with the design documents (as may be modified and reflected on the record drawings), approved operational plans, and in conjunction with any regional water management activities designed to optimize STA operations in order to meet the requirements and conditions included within this permit. Modifications to operational criteria and operation plans as a result of any regional water management activities or facility modifications shall be submitted in accordance with the requirements of Specific Condition 10.

**6. As-Built Certification and Record Drawings.** Within 60 days after completion of any construction contracts for the STA(s), the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law. The statement of completion and certification shall be based on on-site observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the Department that the STA(s) are ready for inspection. Additionally, if deviation from the approved drawings is discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawing. All surveyed dimensions and elevations shall be certified by a registered surveyor.

**7. Pump Station and Structure Maintenance.** Maintenance requirements for the pump stations and structures include operation of the components, as necessary, to maintain their mechanical integrity. Temporary operation of the components for maintenance purposes is allowed; however, discharges from the STAs are subject to the discharge criteria of the specific conditions of this permit. The permittee shall document temporary maintenance operations of discharge and diversion structures, and shall include all such discharge flows and concentrations as a part of the monitoring requirements of this permit.

**8. Contaminated Sites and Residual Agrichemicals.** The permittee shall address all contaminated sites within the project footprint in accordance with all applicable Department statutes and rules including but not limited to Chapters 62-770, 62-780, and 62-785, F.A.C. The Permittee shall address any agricultural chemical residuals in the project footprint in accordance with the "*Protocol For Assessment, Remediation And Post-Remediation Monitoring For Environmental Contaminants On Everglades Restoration Projects*" (Protocol) dated March 14, 2008 so that risk to the environment is minimized based upon the projected use of the property. Regardless of any remedial action plan, the Chapter 62-777, F.A.C. cleanup target levels, or the Protocol, the Permittee shall address all contamination within the project footprint, to minimize to the maximum extent practicable any detrimental impacts to Threatened or Endangered species. As a corrective action, the Department may require limitations on property access or use as part of the Permittee's Land Management Plan for the project area. All corrective actions must be completed prior to initial operation or use of the project. Documentation of completion of corrective actions must be submitted 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. The Permittee shall secure written concurrence from the Department that the corrective actions have been completed based upon applicable protocols and the projected land use, prior to initial operation of the completed project. If contamination is discovered after initial operations, the Permittee shall send to the Department at the address listed in Specific Condition No. 1 an assessment and remedial action plan for Department approval. Upon the Department's approval, the Permittee shall implement the assessment and remedial action plan and provide quarterly reports to the Department on the progress of the remediation until the cleanup is completed to the Department's satisfaction.

**9. Vegetation and Operational Enhancements.** Vegetation and operational enhancements shall be implemented to optimize performance as needed to achieve the discharge limitations required by this permit. Vegetation and

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operational enhancements shall be coordinated with the Department to determine whether a modification to the permit is required.

**10. STA Operation Plans and Modifications.** Within 90 days of completion of any authorized improvements or enhancements to the facility or upon completion of any regional water management activity (such as, but not limited to, construction and operation of any capital projects designed to work in concert with the STAs) that may affect operation and/or treatment efficiency of the STA(s), the permittee shall submit to the Department at the addresses listed in Specific Condition No. 1 an updated Operation Plan for the affected STA(s). Until the updated Operation Plans are submitted by the permittee and approved by the Department, the previously existing Operating Plan(s) shall remain in effect, subject to modification under the conditions set forth below.

If at any time changes to the STA Operation Plans are warranted to optimize facility operation or meet the requirements of this permit, and upon verification of data to be supplied by the permittee that justifies the need for such modification, the Operation Plans may be modified as mutually agreed upon by the Department and the permittee. The Operation Plans shall also include the information described in A-D, below.

- A. Minimum Water Level Targets to Avoid Dryout.** In accordance with the relevant design documents, the permittee shall, to the maximum extent practicable, maintain a minimum static water level of 0.5 feet above the average ground elevation of the treatment cells to avoid dryout of the treatment cells, subject to available water from the upstream watershed.
- B. Responding to Dryout Conditions.** The permittee shall evaluate and correct potential adverse dryout effects on the water quality performance of the STA(s). If the compliance requirements in this permit are not met due to dryout conditions, the permittee shall evaluate facility operations and report to the Department whether modifications to the Operations Plan(s) are warranted. If additional modifications are warranted, the permittee shall coordinate the proposed modifications of the Operations Plan(s) with the Department and submit the revised plan(s) to the Department for review and approval.
- C. Maximum Water Level Targets.** The permittee shall ensure, to the maximum extent practicable, that sustained water depths of 4.0 feet above the average ground elevation of the treatment cells will be avoided in order to reduce the potential for long-term damage to the treatment vegetation and protect project infrastructure (e.g. levees).
- D. Phosphorus Uptake Optimization.** Operations shall be conducted to distribute the flows and water levels within the STA(s) to optimize the phosphorus reduction performance.

Under emergency conditions that threaten the safety of life or property, the permittee may modify the operations of the STA(s) and immediately employ any remedial means to protect life and property in accordance with the emergency provisions of Chapter 373, F.S. The permittee shall notify the Department orally within 24 hours of such occurrence and shall provide written justification of the need to employ the emergency modifications to operations of STA(s) within 5 days.

**11. Hydropattern Restoration.** In accordance with Subsection (4)(b) of the EFA, the permittee shall operate the STA(s) in order to improve Everglades water supply and hydroperiod. The STAs shall be operated to achieve the goals of the EFA and shall, to the maximum extent practicable, be coordinated with and consistent with the Lower East Coast Water Supply Plan, the Lake Okeechobee and Water Conservation Area Regulation Schedules, the Comprehensive Everglades Restoration Plan (CERP), and the entitlement of the Seminole Tribe of Florida to surface water withdrawals under the Water Rights Compact (P.L. 100-228).

**12. Rotenberger Wildlife Management Area (RWMA) Restoration.** This permit authorizes operation of the G-410 Pump Station, downstream from STA-5/6, according to the following terms and conditions:

- A. Project Operation and Maintenance.** The permittee shall operate and maintain the RWMA Hydropattern Restoration Project consistent with the Department approved RWMA Operation Plan and the objectives of the ECP, as outlined in the EFA, 373.4592(9)(e) and 373.4592(9)(h), F.S. To the extent that there is a conflict with the above documents, the permit conditions shall control.

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1. **Emergency Releases into Rotenberger.** Water releases from STA-5/6 or other sources, if available, into Rotenberger may be made on an emergency basis for the purpose of extinguishing wildfires within Rotenberger.
2. **Pump Stations Testing and Maintenance.** Maintenance requirements for the pump stations include operation of the pumps for approximately 2 to 4 hours per month, as necessary, to maintain their mechanical integrity. Therefore, temporary operation of the pump stations for testing and maintenance purposes is authorized.

If the permitted facilities are demonstrated to not be achieving compliance with the requirements of this permit, the permittee shall modify the Operations Plan as appropriate. The RWMA Hydropattern Restoration Project, including applicable operation and maintenance activities, may be further modified for standard engineering practices pursuant to Subsection 373.4592(9)(j)(3) of the EFA.

#### **B. Monitoring and Reporting.**

1. The permittee will monitor headwater and tailwater stages, and pump information at the G-410 pump station and utilize appropriate pump discharge relationships to estimate surface inflow to the RWMA.
2. The permittee will monitor headwater and tailwater stages at the G-402 structures and utilize appropriate stage discharge relationships to estimate surface outflows from the Rotenberger.
3. The permittee will monitor rainfall and ET at nearby stations in order to estimate these components of the Rotenberger water budget.
4. Annual estimates of inflows and outflows will be reported in the annual South Florida Environmental Report.

**13. Minimization of Wetland Impacts.** In accordance with Subsection 373.4592(9)(e)3, F.S., of the EFA, the permittee shall provide reasonable assurances that any wetland impacts associated with STA construction and/or maintenance activities will be minimized to the maximum extent practicable and consistent with the documents on file with the Department.

**14. Water Quantity and Flooding Impacts.** The permittee shall be responsible for ensuring that STAs are operated so as not to adversely affect adjacent lands with regard to flooding impacts and water supply needs of the region. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities that may arise from water quantity and/or flooding impacts resulting from the construction, maintenance and/or operation of the STAs.

**15. Phosphorus Criterion.** The water quality based effluent limit (WQBEL, See Exhibit A) included in Table 1 of the "Monitoring Required" section of this permit was developed to be protective of the Everglades Protection Area and allow for the achievement of the phosphorus criterion established in Rule 62-302.540, Florida Administrative Code. The criterion, and therefore the WQBEL, was based on the best available science and the understanding of the biogeochemical processes of the receiving waterbody at the time the criterion was adopted. Compliance with the WQBEL shall be determined based on the criteria set forth in Table 1. For purposes of this paragraph, the term annual flow-weighted mean (AFWM) means the annual flow-weighted mean for the all of the combined outflow structures for an individual STA shown in Table 1, as described in footnote 3. The permittee shall provide the following reports, as applicable:

- A. Beginning on July 28th after the permit effective date and each July 28th thereafter, the permittee shall report the total phosphorus (TP) AFWM outflow concentrations for each facility in accordance with Table 1 using data collected for the previous water year (May 1st through April 30th) to the Department at the address identified in



Specific Condition 1. In addition, beginning on July 28th after the permit effective date and each July 28th thereafter, the permittee shall report the TP AFWM concentrations for each of the STA's previous four water years.

**B.** The permittee shall provide a mid-year report of the flow-weighted mean (FWM) of all TP outflow values for the current water year for each STA (outflow values through October 31<sup>st</sup> including provisional data). The report shall be submitted to the Department on the 28th day of December of that water year at the address identified in Specific Condition 1. The mid-year TP FWM should be calculated in accordance with Table 1, and if the mid-year TP FWM of the outflow values for an STA exceeds 19 ppb, the permittee shall include, as part of the report, an assessment of the conditions responsible for the observed concentrations and any immediate steps that shall be taken to address future compliance for that STA with the TP AFWM component of the WQBEL.

**C.** In the event that the TP AFWM for an STA exceeds 19 ppb, the permittee shall submit, as part of the annual report required by paragraph A, an assessment that identifies the circumstances that led to the exceedance. The report shall include what actions were taken based on the mid-year report, if applicable, to address the findings of that assessment and a Recovery Plan that identifies specific strategies and milestones to address future compliance with the TP AFWM component of the WQBEL, which may include petition for relief pursuant to 40 C.F.R. §131.10(g).

**D.** In a water year following any two water years within a five year period where the TP AFWM for an STA exceeds 13 ppb, the permittee shall provide the Department a mid-year report as required in Paragraph B. As part of the mid-year report, the permittee shall provide an assessment of the conditions responsible for the observed concentrations during the two water years when the exceedances occurred, and any steps that shall be taken to address future compliance with the TP long-term flow-weighted mean (LTFWM) component of the WQBEL. If the TP AFWM for an STA meets 13 ppb in a water year following the second exceedance of 13 ppb within a five year period, the assessment portion of the mid-year report is not required for that STA in the subsequent water years' mid-year report.

**E.** In a water year following any three water years within a five year period where the TP AFWM exceeds 13 ppb, the permittee shall provide the Department a mid-year report as required by Paragraph B. As part of the mid-year report, the permittee shall provide an assessment of the conditions responsible for the observed concentrations during the three water years when the exceedances occurred, what actions were taken based on the previous mid-year report required in Paragraph D above to address the findings of that assessment and a Recovery Plan that identifies specific strategies and milestones to address future compliance with the TP LTFWM component of the WQBEL.

If the TP AFWM for an STA meets 13 ppb in a water year following the third exceedance of 13 ppb within a five year period, the mid-year report of the subsequent year within a five year period where the potential for non-compliance with the LTFWM component of the WQBEL exists shall provide an assessment of the conditions observed, a description of what actions were taken based on the previous mid-year report and under the established Recovery Plan, and what steps will be taken during that five year period to address future compliance with the TP LTFWM component of the WQBEL.

**F.** In the event that the TP LTFWM is exceeded, the permittee shall submit, as part of the annual reporting period identified in paragraph A, an assessment that identifies the circumstances that led to the exceedance, what actions were taken based on the mid-year reports required in paragraph D and E above to address the findings of those assessments and a revised Recovery Plan that identifies specific strategies and milestones to address future compliance with the WQBEL, which may include petition for relief pursuant to 40 C.F.R. §131.10(g).

**16. Diversion.** Diversion, or the delivery of surface water to the Everglades Protection Area without entering the treatment works, occurs when water is routed through the G-300, G-301, G-338, G-339, G-371, G-373, G-406

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and/or G-407 structures. Diversion shall, at no time, be permitted for the purposes of achieving compliance with WQBEL for TP. Diversions may occur under one or more of the following scenarios: maintenance, flood control, to avoid substantial damage to the treatment facilities, to address conflicts with the Endangered Species Act, to address conflicts with the Migratory Bird Treaty Act and for low flow water supply purposes.

**A. Low Flow Water Supply Diversion.** The permittee may divert water through the G-300, G-301, G-338, G-339, G-371, G-373, G-406<sup>2</sup> and/or G-407 diversion structures for the purposes of low flow water supply consistent with the Lower East Coast Water Supply Plan and the Lake Okeechobee and the Water Conservation Area Regulation Schedules. All water supply deliveries shall occur only when water levels in canals being utilized to deliver the water are lower than the canal banks. Diversions for water supply shall be monitored in accordance with Table 2 of this permit.

**B. Other Diversion.** Prior to undertaking a diversion for the purposes of flood control, to avoid substantial damage to the treatment facilities, to address conflicts with the Endangered Species Act (ESA) or the Migratory Bird Treaty Act (MBTA), the permittee shall assess the following options for avoidance. In the event that a conflict remains, the permittee shall report on such diversions in accordance with the requirements below.

**1. Diversion to Maintain Flood Control.** To maintain flood control in tributary basins, a tiered approach for decision making will be used. The approach may vary based upon specific rainfall and runoff conditions or infrastructure constraints, but would generally be as follows:

- a. If insufficient capacity exists in the applicable STA, then direct stormwater to another available STA, as long as redirection would not cause substantial damage to the receiving STA
- b. If insufficient capacity exists, then direct stormwater runoff to other District works (e.g. canals, reservoirs, rock pits). The permittee shall also evaluate and determine whether water can be directed to Lake Okeechobee, consistent with system capabilities and regulatory authorizations.
- c. After exhausting options, a. and b. to the extent practicable, divert water around STAs to the Everglades Protection Area if no other alternatives exist.

**2. Diversion to Avoid Substantial Damage to the Treatment Facilities.** To avoid substantial damage to the treatment facilities, including infrastructure (e.g. levee and structure integrity) and treatment works (e.g. vegetation integrity), then a tiered approach for decision making will be as follows:

- a. If insufficient capacity exists in the applicable STA, then direct stormwater to another available STA, as long as redirection would not cause substantial damage to the receiving STA
- b. If insufficient capacity exists, then direct stormwater runoff to other District works (e.g. canals, reservoirs, rock pits). The permittee shall also evaluate and determine whether water can be directed to Lake Okeechobee, consistent with system capabilities and regulatory authorizations.
- c. After exhausting options, a. and b. to the extent practicable, divert water around STAs to the Everglades Protection Area if no other alternatives exist.

**3. Diversion to Address Conflicts with the Endangered Species Act (ESA) and Other Federal Species Protection Requirements.** Once aware that STA operations or related activities may affect the breeding/nesting success of a protected species verified to have an active breeding/nesting location within the facility, the Permittee shall coordinate with United States Fish and Wildlife Service (USFWS) to determine optimal water levels and other operations to maximize breeding success. Permittee shall

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<sup>2</sup> G-406 is only considered a diversion structure when operated in concert with G-407.

establish appropriate buffer zones around the breeding/nesting areas and shall communicate status to all parties entering the STAs.

If a storm event requires the District to operate STAs containing active breeding/nesting locations within the facility which would be impacted by such operation, then Permittee shall initiate a communications call to designated points of contact from the Department and the USFWS to discuss the sequence of operational decisions to protect the breeding/nesting success of an endangered or threatened species. In the event that the designated points of contact are not available or cannot be reached, the Permittee will proceed with operational decision-making consistent with this tiered approach. The tiered approach for decision making will be as follows:

- a. Direct stormwater runoff to other Cells without verified active breeding/nesting areas for protected species within the STAAs long as such a redirection of water would not cause substantial damage to the receiving Cells of the STA.
- b. Direct stormwater runoff to another STA as long as such a redirection of water would not cause substantial damage to the receiving STA.
- c. Direct stormwater runoff to other District works (e.g., canals, reservoirs, rock pits) in the event there is insufficient capacity available within the STAs.
- d. After exhausting options a. through c. to the extent practicable, divert water around the STAs to the Everglades Protection Area if no other alternatives exist.

**4. Diversion to Address Conflicts with the Migratory Bird Treaty Act (MBTA).** The permittee shall follow steps consistent with the SFWMD Avian Protection Plan (APP) for EAA Stormwater Treatment Areas (September 2008) to reduce mortality of MBTA protected ground nesters (e.g. black-necked stilt). As outlined in the 2008 APP, the black-necked stilt and the Florida burrowing owl will be used as indicator species for nesting occurring within individual STA cells. A tiered approach for decision making will be as follows:

- a. If possible, keep all STAs inundated to a minimum depth of 0.5 ft during breeding season to discourage nesting.
- b. If a storm event requires the District to operate STAs containing active nests, Permittee shall initiate a communications call to designated points of contact from the Department and the USFWS to discuss the sequence of operational decisions to minimize flooding Cells with active nests. In the event that the designated points of contact are not available or cannot be reached, the Permittee will proceed with operational decision-making consistent with this tiered approach. The tiered approach for decision making will be as follows:
  - i. Direct stormwater runoff to other Cells within the STA as long as such a redirection of water would not cause substantial damage to the receiving Cells of the STA
  - ii. Direct stormwater runoff to another STA as long as such a redirection of water would not cause substantial damage to the receiving STA
  - iii. Direct stormwater runoff to other District works (e.g., canals, reservoirs, rock pits) in the event there is insufficient capacity available within the STAs
  - iv. After exhausting all options a. through c. to the extent practicable, either operate Cells containing active nests to provide flood control and water quality protection to the region, or divert water around the STAs to the Everglades Protection Area if no other alternatives exist.

### C. Reporting Requirements.

**1. Anticipated Diversions.** If the permittee knows in advance of the need to undertake a diversion, the permittee shall submit notice to the Department at the address in Specific Condition 1. If possible, such

notice shall be provided at least 10 days prior to undertaking the diversion. The permittee shall also provide notice to the Refuge for diversions to WCA-1 at this time. If it is not possible to provide notice 10 days prior to undertaking such a diversion, the permittee shall provide notice as soon as possible before undertaking a diversion.

**2. Unanticipated Diversion.** If the permittee commences with diversion in order to maintain flood control or to avoid substantial damage to the treatment facilities, the permittee shall notify the Department and the Refuge orally within 24 hours of the diversion. The permittee shall submit written notice of the unanticipated diversion within five days of the diversion to the Department at the address in Specific Condition 1.

**3. Duration.** In the event that an Anticipated Diversion or an Unanticipated Diversion are expected to take place over or continue in excess of 10 days, the permittee shall consult with affected stakeholders (i.e. Tribes, Federal, and State entities) within a reasonable timeframe with regard to the events that led to the diversion, the anticipated duration of the diversion and to gather additional information which may aid the permittee in making operational decisions.

- D. Monitoring Requirements.** All diversions shall be monitored in accordance with the Table 2. Monitoring results and a summary of the tiered decision making efforts that result in any diversion to the EPA shall be reported as part of the annual reporting requirements in Specific Condition 15 and 25 of this permit. Monitoring data shall be reported in a manner that distinguishes between the type of diversion (e.g. flood control vs. water supply). As soon as practicable after cessation of all diversions, the District shall submit a summary of the data collected and identify the total duration of the diversions.

**17. Comparison of Outflows to Inflows.** For all water quality parameters in Table 2 other than pH, total phosphorus, mercury, dissolved oxygen, turbidity, flow and temperature, inflow and outflow samples collected at the structures shall be used to determine compliance with this Specific Condition. Compliance with this Specific Condition shall be evaluated as follows:

- A.** If the annual average outflow concentration does not cause or contribute to violations of applicable Class III water quality standards, then the STA shall be deemed in compliance with this condition.
- B.** If the annual average concentration at the outflow station causes or contributes to violations of applicable Class III water quality standards, but is of equal or better quality than, the annual average concentration at the inflow stations, then the STA shall be deemed in compliance with this condition.
- C.** If the annual average concentration at the outflow causes or contributes to violations of applicable Class III water quality standards, and also exceeds the annual average concentration at the inflow station, then the STA shall be deemed out of compliance with this condition.

**18. Dissolved Oxygen.** The compliance test set forth in the Everglades Marsh Dissolved Oxygen Site Specific Alternative Criteria (DO SSAC, Exhibit B) shall be used to evaluate dissolved oxygen levels at marsh monitoring sites in the EPA. If marsh stations influenced by an STA's discharge is determined to be out of compliance (upon application of the test identified in the DO SSAC), DO concentrations from the facility, which are monitored in accordance with this permit, and data used to determine compliance with the DO SSAC will be compared with existing and historical facility and marsh data to determine whether discharges from the facility may have influenced compliance at applicable stations.

**19. Factors Outside the Permittee's Control.** In the event that non-compliance or failure to achieve the conditions of this permit results for any reason, other than those described below, the permittee shall take appropriate remedial measures.

- A. **Other Factors.** Events beyond the permittee's control that may prevent or delay compliance, including natural disasters as well as unavoidable legal barriers or restraints, including those arising from actions or regulations not under the control of the permittee.
- B. **Emergency Conditions.** Discharges from STA structures shall be allowed in accordance with the emergency provisions of Chapter 373, F.S. When such an event or series of events occur, the permittee shall orally notify the Department within 24 hours of the initiation of such measures and provide justification and supporting information for such actions within 5 days to the address identified in Specific Condition 1.

**20. Endangered Species/Migratory Bird Treaty Act.** Should a non-compliance event occur due to a conflict with the Endangered Species or Migratory Bird Treaty Acts, the permittee shall notify the Department as soon as practicable and describe whether operation of the STA has been impacted by, or constrained due to, requirements of the Act(s). The notification should include the species involved, an estimate of the number of individuals animals and species involved, actions taken to avoid deleterious impacts on the endangered species, the affect those actions had on compliance with any condition of this permit, and an estimate of when facility operation will no longer be impacted or constrained. An assessment of the non-compliance and the effect on the permittee's ability to meet the annual limits established under this permit shall also be provided as part of the annual reporting requirements in Specific Condition 15 and 25.

**21. Turbidity Monitoring.** Effective means of turbidity control, such as, but not limited to, turbidity curtains or the discontinuance of flow activity to and from the affected STA(s) cell(s), shall be employed during all maintenance activities that may create turbidity so that turbidity shall not exceed 0 NTUs above background in receiving waters which are classified as Outstanding Florida Waters (OFW), and 29 NTUs above background in waters which are classified as Class III waters. Turbidity controls and/or preventive operation procedures shall remain in place until all turbidity has subsided and the turbidity level at the point of discharge to receiving waters meets state standards

Turbidity monitoring equipment and personnel trained to use it shall be available on site at all times during maintenance activities that result in project-generated turbidity levels in the receiving water body. The permittee shall monitor turbidity levels at least twice daily at a minimum of 4 hours apart during these activities as follows:

- A. Monitoring samples shall be taken at the following locations:
  - 1. Background Sample(s): At the project inflow monitoring station.
  - 2. Compliance Sample(s): Upstream of the project outflow monitoring stations.
- B. Turbidity monitoring results shall be summarized quarterly (every three calendar months) by project component, beginning with the first calendar month in which construction or maintenance projects occur that could generate turbidity in receiving waters and continuing until all maintenance is completed. Monitoring data with supporting documents shall be submitted to the Department quarterly during the period of actual construction. The reports shall clearly identify the following information:
  - 1. Permit number;
  - 2. Dates and time of sampling and analysis;
  - 3. A statement describing the methods used in collection, handling, storage and analysis of the samples;
  - 4. A clear description of project component activities taking place at the time of sampling;
  - 5. A map indicating the sampling locations; and,
  - 6. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data.

C. Monitoring reports shall also include the following information for each sample that is taken:

1. Water depth;
2. Depth of sample;
3. Weather conditions; and,
4. Water level stage and direction of flow.

In the event that project-generated turbidity levels in receiving waters exceed the standard 0 NTUs above background in an OFW or 29 NTUs above background in Class III waters, project component activities contributing to elevated turbidity levels shall immediately cease, and the Department shall be notified immediately. Work shall not resume until the work can be conducted in compliance with the aforementioned turbidity standard. In such cases where turbid conditions will be attributed to activities associated with dewatering, the District shall comply with the turbidity requirements set forth in the dewatering permit issued by the Department in lieu of the above requirements.

**22. Transect Monitoring.** The permittee shall conduct monthly monitoring for total phosphorus and specific conductivity at a series of sites located along transects downstream of the G-410 Pump Station and within the Rotenberger Wildlife Management Area (Rotenberger). Transect monitoring shall occur to characterize the effects of the STA-5 discharge on adjacent marsh areas of Rotenberger. The table below identifies three sampling sites located along a transect originating at ROTC1 sampling site directly downstream of G-410 and extending further into the marsh at sampling sites ROTC2 and ROTC3. Upon demonstration that an additional sampling site or removal of an existing sampling site is warranted, the permittee may request a modification to the monitoring program as appropriate. The Department shall review and approve such requests on a case by case basis.

Transect Monitoring Locations

SITE	LAT_DEC	LONG_DEC
ROTC1	26°26'09.132" W	80°52'47.711" N
ROTC2	26°25'56.64" W	80°51'32.688" N
ROTC3	26°25'49.989" W	80°50'27.492" N

**23. Monitoring Program.** Monitoring performed in accordance with this permit shall, at a minimum, include the following;

- A. Mercury Monitoring Program.** The permittee shall monitor mercury in accordance with the Department approved mercury monitoring plan. Any modifications to the plan shall be developed in accordance with "A Protocol for Mercury and Other Toxicants" dated April 2011; and any subsequent revisions. Any proposed changes to the plan shall be submitted to the Department for review and approval and shall include the STA's (or individual components of the STA) current phase, tier, data and analysis supporting any proposed plan modification. All changes to the plan shall be provided in track change format. Results and analysis from the monitoring required by the plan shall be reported in the annual report required by Specific Condition 25.
- B. Long Term Monitoring.** The permittee shall conduct long-term monitoring at the inflow and discharge monitoring compliance stations listed in Table 1 and 2 of the "Monitoring Required" section of this permit. Results from these monitoring efforts shall be summarized and the data reported as part of the annual report required under Specific Condition 25 of this permit.

**24. Levee and Structure Inspections and Reports.** The permittee shall submit annual and periodic levee inspection reports to the Department evaluating the integrity and functionality of the above-ground levees and structures, including pump stations. 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 the District's Dam Safety Officer shall review and approve major repair plans associated with the levee system. Inspection Reports, both annual and periodic, shall be submitted to the Department no later than the dates identified in the table below.

**A. Annual Levee and Structure Inspections and Reports.** After commencement of routine operations, annual levee and structure inspections shall be conducted by field staff trained by a Professional Engineer. The annual inspection report shall be reviewed and signed by a supervisor, such as a Bureau Chief, and submitted to the Department.

**B. Periodic (5-year) Levee and Structure Inspections and Reports.** Periodic levee and structure inspections shall be conducted every fifth year by, or under the supervision of, a Professional Engineer registered in the State of Florida. The periodic inspection report shall be signed and sealed by that Professional Engineer and submitted to the Department. The initial periodic levee inspection reports for each of the STAs are scheduled as follows:

Project	Annual Report	Periodic (5 yr) Report
STA-1E	March	2016
STA-1W	March	2016
STA-2 (Cells 1-3)	March	2013
STA-2 w/Build-outs	March	2018
STA-3/4	March	2015
STA-5/6 (Flow-ways 1-3 and Cells 6-3, 6-5 and 6-2)	December	2012
STA-5/6 w/ Build-out	March	2017

**25. Annual Monitoring Reports.** All studies, monitoring reports, and technical submittals required by this permit shall be submitted to the Department in an "Annual Report." The annual reporting requirements under this permit shall be incorporated into the South Florida Environmental Report (SFER) and submitted to the Department no later than March 1<sup>st</sup> of each year. Each Annual Report shall present the information for the previous water year, from May 1<sup>st</sup> to April 30<sup>th</sup>. If additional reporting modifications are required, and upon approval by the Department, the permittee may modify the Annual Report submission date to coincide with multiple reporting requirements and time periods needed for data acquisition and analysis. In addition to the permit number, and name of the permit administrator, the Annual Reports shall contain, at a minimum, the following information:

**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 certified by the 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 approved 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. Water Quality Data.** Records of monitoring information shall include all applicable laboratory information specified in Rule 62-160.340(2), F.A.C. including the following:

1. Date, location, and time of sampling or measurements;
2. Person responsible for performing the sampling or measurements;
3. Dates analyses were performed and the appropriate code as required by Chapter 62-160, F.A.C.;
4. Laboratory/Person responsible for performing the analyses;
5. Analytical methods used, including MDL and PQL;
6. Results of such analyses, including appropriate data qualifiers, and all compounds detected;

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7. Depth of sampling;
8. Flow conditions and weather conditions at time of sampling; and,

In addition, the following records must be kept on file for reference during the duration of the project but are not required to be submitted in annual reports.

9. Monthly flow volumes.
10. Field sampling and laboratory quality manuals
11. Sampling and analysis notes, as required under Chapter 62-160, F.A.C. and NELAC Quality Systems (2003), respectively.

**C. Performance Evaluation.**

1. Records of the operations status of the STAs during the water year, stating whether each STA (or particular cells or flow-ways therein) have been off-line for any reason and whether any new cells or flow-ways initiated operation;
2. A comparison of inflow water quality data with outflow water quality data, in accordance with Specific Condition 17, using an appropriate statistical test with a 95% confidence interval and based on statistical distributional assumptions (e.g., Student's t-test or Mann-Whitney test);
3. A comparison of outflow phosphorus concentrations with the WQBEL for the current reporting year and previous 4 years.

**D. Herbicide and Pesticide Tracking.** The permittee shall provide, in each annual report, information regarding the application of herbicides and pesticides used to exclude/eliminate undesirable vegetation and pests within the STAs. Such reporting shall include the names, concentrations, locations, and quantities of all herbicides and pesticides used, and a statement certifying that the permittee has adhered to manufacturer application guidelines.

**E. Implementation Schedules.** The Annual Report shall provide details on the following:

1. Implementation of activities required by this permit, any Department issued enforcement or consent order and regional activities by Basin, (i.e., best management practices implementation, including current phosphorus loads and trend analysis of flows and loads to the facilities);
2. Facility design modifications which may affect the activities required by this permit;
3. Improvements, enhancements, and/or regional water management projects that have been initiated and/or completed within the previous year;
4. Any delays in the implementation of the requirements of this permit, the duration of the delays, the reason(s) for the delays, and the expected timeframe for their resolution;
5. The implementation status of facility recovery plans in accordance with Specific Condition 15 and/or following a major event outside the control of the permittee (e.g. hurricane) which has affected the operational status or the ability to satisfy the requirements of this permit;
6. For any noncompliance with permit conditions, an evaluation of the cause(s) and the status of remedial measures required by this permit to resolve any noncompliance with permit conditions;
7. All reports and other information signed in accordance with requirements of Department Rule.
8. For any downstream transect station, a compilation of the water quality, sediment, and vegetation monitoring data collected, as appropriate, and an assessment of whether conditions in the receiving waterbody remain unchanged, improved, or worse than the previous year/monitoring.



9. Whether revisions and/or improvements and enhancements to the facility or regional water management system are recommended, as necessary, to ensure compliance with the conditions of this permit;
10. Summary of the reports required under Specific Condition 15;
11. A summary report describing whether operation of the STA(s) has been impacted by or constrained due to requirements of the Endangered Species Act or Migratory Bird Treaty Act.

**26. Removal of Parameters.** Upon demonstration that a specific parameter(s) in Table 1 or Table 2 of the "Monitoring Required" section below is not present or is found consistently to be in compliance with water quality standards, the permittee may request a modification to the permit 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 and/or permit. Parameters sampled semi-annually or annually will be examined on a case-by-case basis. The Department may approve a reduction of the monitoring frequency or waive the monitoring requirement for parameters that are consistently reported as being in compliance with state water quality standards if adequate information is provided to support such a reduction.

**27. Public Health, Safety, or Welfare.** Data from existing STAs and the monitoring and compliance requirements of this permit provide reasonable assurances that discharges authorized by this permit will not cause or contribute to violations of water quality standards or pose a serious danger to public health, safety, or welfare. If warranted by additional information, the Department may require monitoring in addition to those parameters and frequencies included as part of this permit.

**28. Temporary Suspension of Sampling.** Under hurricane or tropical storm warnings, or other extreme weather conditions, the permittee's normal sampling schedule may be suspended if necessary. The permittee shall notify the Department of any anticipated sampling suspension associated with hurricanes, tropical storms, or other extreme weather events that may require deviation from the normal sampling schedule. Within 7 days following the cessation of conditions that warranted a suspension of sampling efforts, the permittee shall notify the Department of when normal sampling is expected to resume.

**29. 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 5 years in accordance with Subsection 373.4592(9)(f) of the EFA.

**30. Permit Modifications.** The permittee may submit proposed modifications to the Department for review and approval. Within 30 days after receipt of such a submittal, the Department shall notify the permittee as to whether a permit modification is necessary. The Department shall determine whether the modification is minor or major based on the nature and magnitude of the proposed modification and the potential for the modification to have environmental impacts that are significantly different from those previously considered by the Department for the activity. The permittee may be required to publish a notice of application pursuant to Subsections 373.413 (3) and (4), F.S., for any requested permit modifications determined to be major.

**31. Department Review and Approval.** Where conditions in this permit require Department review and approval of remedial actions or plan modifications to be implemented pursuant to this permit, the Department will 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 will be deemed final agency action.

**32. Reopener Clause.** The permit may be reopened to adjust effluent limitations or monitoring requirements should future determinations, water quality studies, Department approved changes in water quality standards, or other information show a need for a different limitation or requirement.

**MONITORING REQUIRED:**

In addition to any other monitoring requirements set forth in this permit, the permittee shall conduct monitoring as set forth for the specified parameters in the following tables. Reporting of results shall be as required through the applicable conditions of this permit.

**Sample Type:** G = Grab  
 FPC = Flow proportionate composite  
 INSITU = In Situ field sample  
 CAL = Calculated parameter  
 PR = Pump record

**Key for Table 1**

**Sample Frequency:** W = Weekly  
 WF = Weekly when recorded flow  
 DAL= Daily

TABLE 1: DISCHARGE LIMITATIONS and MONITORING REQUIREMENTS						
Discharge Limitations				Monitoring Requirements		
Parameters (units)	Daily Minimum	Daily Maximum	Other	Monitoring Frequency	Sample Type	Sample Point
Phosphorus, Total (as P) (ppb)	--	--	Shall not exceed: 13 ppb <sup>3</sup> as an annual flow weighted mean (FWM) in more than 3 out of 5 water years on a rolling basis; and  19 ppb <sup>3</sup> as an annual flow-weighted mean (AFWM) in any water year.	WF/W	G/FPC	STA-1E: S-362 STA-1W: G-251 and G-310 STA-2: G-335 and G-436 STA-3/4: G-376B and E, G-379B and D, G-381B and E STA-5/6: G-344A-K, G-352B, G-354C and G-393B

<sup>3</sup> All TP monitoring results shall be reported as annual flow-weighted mean (AFWM) concentrations for discharges from the facility using data it collected for the previous water year (May 1st through April 30th). The results shall be reported as an AFWM (rounded to the nearest whole number) that is calculated based on flow-weighted mean (FWM) of weekly samples that are not rounded to the nearest whole number. (i.e., a calculated AFWM of 13.5 ppb shall be reported as 14 ppb; 13.49 ppb shall be reported as 13 ppb).

TABLE 1: DISCHARGE LIMITATIONS and MONITORING REQUIREMENTS						
Discharge Limitations				Monitoring Requirements		
Parameters (units)	Daily Minimum	Daily Maximum	Other	Monitoring Frequency	Sample Type	Sample Point
			See Specific Condition 15 <sup>4</sup>			
Phosphorus, Total (as P) (ppb)	--	--	Report <sup>2</sup>	WF/W	G/FPC	STA-1E: S-319, G-311 and S-361 STA-1W: G-302 STA-2: S-6, G-328, G-434 and G-435 STA-3/4: G-370 and G-372 STA-5/6: G-342 A-D, and G-508
Phosphorus, Total (as P) (ppb)	--	--	Report <sup>2</sup>	WF	G	G-406

<sup>4</sup> Compliance with the QBEL shall be determined for an individual facility based on the combined flow and water quality from representative discharge monitoring sites for the individual facilities upon completion of the water year. Compliance with the QBEL for STA-1E shall be determined based on the water year (May 1<sup>st</sup> through April 30<sup>th</sup>) flow and water quality collected at the G-362. Compliance with the QBEL for STA-1W shall be determined based on the water year (May 1<sup>st</sup> through April 30<sup>th</sup>) combined flow and water quality collected at the G-251 and G-310. Compliance with the QBEL for STA-2 will be based on the water year (May 1<sup>st</sup> through April 30<sup>th</sup>) combined flow and water quality collected from the G-335 and G-436. Compliance with the QBEL for STA-3/4 will be based on the water year (May 1<sup>st</sup> through April 30<sup>th</sup>) combined outflow from the entire facility and water quality collected at the G-376 B&E, G-379 B&D, G-381 B&E. Compliance with the QBEL for STA-5/6 will be based on the water year (May 1st through April 30th) combined outflow from the entire facility and water quality collected at the G-344 A-K, G-352B, G-354C and G-393B.

TABLE 1: DISCHARGE LIMITATIONS and MONITORING REQUIREMENTS						
Discharge Limitations				Monitoring Requirements		
Parameters (units)	Daily Minimum	Daily Maximum	Other	Monitoring Frequency	Sample Type	Sample Point
Flow (CFS)	--	Report	Report	DAL	CAL/PR	STA-1E: S-362 STA-1W: G-251 and G-310 STA-2: G-335 and G-436 STA-3/4: G-376B and E, G-379B and D, G-381B and G-381E STA-5/6: G-344A-K, G-352B, G-354C and G-393B

**Key for Table 2**

**Sample Type:** G = Grab sample  
 FPC = Flow proportionate composite sample  
 INSITU = In Situ field sample  
 CAL = Calculated parameter  
 PR = Pump record  
 RG = Rain Gauge

**Sample Frequency:** W = Weekly  
 BI-WF = Once every other week when recorded flow  
 WF = Weekly when recorded flow  
 DAV = Daily averages of continuous sampling  
 DAC = Daily accumulation of continuous sampling

TABLE 2: ROUTINE MONITORING				
PARAMETER	UNITS	SAMPLE TYPE	SAMPLING FREQUENCY	SAMPLING POINT
Alkalinity	µg/l	G	BI-WF	Inflow: S-319, G-311, G-361 and G-302 Outflow: S-362, G-251 and G-310
Dissolved Oxygen	mg/l	INSITU	WF, See Condition 18	Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, 381B and E, G-344 A-K, G-352B, G-354C and G-393B
Mercury	Per Approved Mercury Monitoring Plan			
pH	SU	INSITU	WF	Inflow: S-319, G-311, G-361, G-302, S-6, G-328, G-434, G-435, G-370, G-372, G-342 A-D, G-508 (also representative of the G-342O structure) and G-406 Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, 381B and E, G-344 A-K, G-352B, G-354C and G-393B
Specific Conductance	µmhos	INSITU	WF	Inflow: S-319, G-311, G-361, G-302, S-6, G-328, G-434, G-435, G-370, G-372 G-342 A-D, G-508 (also representative of the G-342O structure) and G-406 Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, G-381B and E, G-344 A-K, G-352B, G-354C and G-393B
Temperature	Deg C	INSITU	WF	Inflow: S-319, G-311, G-361, G-302, S-6, G-328, G-434, G-435, G-370, G-372 G-342 A-D, G-508 (also representative of the G-342O structure) and G-406 Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, 381B and E, G-344 A-K, G-352B, G-354C and G-393B
Total Phosphorus (Water)	ppb	FPC/G	W/WF	Inflow: G-410, S-319, G-311, G-361, G-302, S-6, G-328, G-434, G-435, G-370, G-372 G-342 A-D, and G-508 (also representative of the G-342O structure) . Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, 381B and E, G-344 A-K, G-352B, G-354C and G-393B

Permittee: South Florida Water Management District

Project: Everglades Construction Project: Stormwater Treatment Area (STA) 1 East, 1 West, 2, 3/4, 5 and 6.

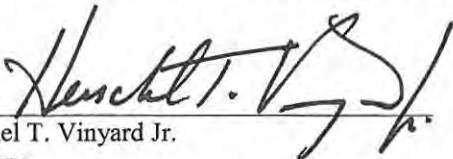
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		G	WF	Inflow: G-406 Diversion: G-300, G-301, G-338, G-339, G-371, G-373, G-406 and G-407
Total Nitrogen	µg/l	G	BI-WF	Inflow: S-319, G-311, G-361, G-302, S-6, G-328, G-434, G-435, G-370, G-372 G-342 A-D, G-508 (also representative of the G-342O structure) and G-406 Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, G-381B and E, G-344 A-K, G-352B, G-354C and G-393B
Turbidity	NTU	G	See Specific Condition 21	Inflow : to affected cell(s) or flow-ways Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, G-381B and E, G-344 A-K, G-352B, G-354C and G-393B
Nitrate + Nitrite	µg/l	G	BI-WF	Inflow: S-319, G-311, G-361, G-302, S-6, G-328, G-434, G-435, G-370, G-372 G-342 A-D, G-508 (also representative of the G-342O structure) and G-406 Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, G-381B and E, G-344 A-K, G-352B, G-354C and G-393B
Sulfate	µg/l	G	BI-WF	Inflow: S-319, G-311, G-361, G-302, S-6, G-328, G-434, G-435, G-370, G-372 G-342 A-D, G-508 (also representative of the G-342O structure) and G-406 Outflow: S-362, G-251, G-310 G-335, G-436, G-376B and E, G-379B and D, G-381B and E, G-344 A-K, G-352B, G-354C and G-393B
Flow	CFS	CAL/PR	DAV	All Inflow, Outflow and Diversion Monitoring Sites
Rainfall Volume	in	RG	DAC	Rainfall Sampling Stations


DONE AND ORDERED on this 10<sup>th</sup> day of September in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
\_\_\_\_\_  
Herschel T. Vinyard Jr.  
Secretary

**FILING AND ACKNOWLEDGMENT**

FILED, on this date, under Section 120.52(7), F.S., with the designated deputy clerk, receipt of which is hereby acknowledged.

 Clerk      9/10/12 Date

**Parties Requesting Notice:**

Micosukee Tribe of Indians of Florida, c/o Bernardo Roman III, Esq.  
United States Sugar Corporation, c/o Rick J. Burgess, Esq.  
Seminole Tribe of Indians of Florida, c/o Stephen A. Walker, Esq.  
Sugar Cane Growers Cooperative, Roth Farms, Inc., and Wedgeworth Farms, Inc.,  
c/o Gary V. Perko, Esq.  
Friends of the Everglades, c/o Paul Schwiep, Esq. Coffey Burlington  
Keith Saxe, Esq., U. S. Department of Justice  
Jay Gelderman, Esq., U.S. Department of Justice  
Michael Stevens, U.S. Department of the Interior  
Jeffrey J. Ward, Sugar Cane Growers Cooperative  
Philip S. Parsons Esq., Landers & Parsons  
Tom MacVicar, MacVicar Consulting  
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Shelley Vana, Commissioner, Palm Beach County  
Tris Chapman, Commissioner, Hendry County

John E. Rodstrom, Jr., Commissioner, Broward County  
Sharon Kocis, U.S. Fish and Wildlife Service  
Ray Eubanks, Dept. of Economic Opportunity  
Michael Hart, Dept. of State, Div. of Historical Resources  
Ray Scott, Dept. of Agriculture and Consumer Services  
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