

**FACT SHEET
APPLICATION FOR A PERMIT
TO DISCHARGE TO WATERS**

Permit No.: FL0300195

Permit Writer: Temperince Morgan

Application No.: FL0300195-001-IW1N

Application Date: December 17, 2001

Additional Information: August 12, 2002

I. SYNOPSIS OF APPLICATION

A. Name and Address of Applicant

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

For:

Stormwater Treatment Area 3/4 (STA-3/4 Project)
3301 Gun Club Road
West Palm Beach, Palm Beach County, FL 33406

B. Type of Facility

Primary SIC 9511 AIR & WATER RES & SOL WSTE MGT

Stormwater Treatment Area (STA) 3/4 (STA-3/4) is a designed and engineered flow-through marsh system utilizing natural biological processes to remove excess phosphorus from jurisdictional waters of the S-7/S-2 and S-8/S-3 basins.

C. Design Capacity of Facility

Treated water from STA-3/4 will be discharged into the L-5 Borrow Canal from the G-376 A-F, G-379 A-E, and G-381 A-F structures, then will be pumped back to the North New River and Miami Canals by means of existing pump stations S-7 on the North New River and S-8 and G-404 on the Miami Canal. Pump Station S-7 discharges to WCA-2A, Pump Station S-8 discharges to WCA-3A and Pump Station G-404 discharges to western WCA-3A via the L-4 Borrow Canal, the South L-4 Levee Gap and L-3 extension canal. G-404 was part of the STA-5 permit, and will function to move treated water from both STA-3/4 and STA-5. Treated water from STA-3/4, once discharged into the L-5 Canal can also be released to WCA-3A via structure S-150 when water levels in the North New River Canal are higher than the downstream water level in WCA-3A.

D. Applicant's Receiving Water

Monitoring Group D-001: Discharges to L-5 Canal, Class III Fresh waters, via the G-376 A-F structures.

Latitude: 26° 20' 08" N Longitude 80° 33' 21" W

Monitoring Group D-002: Discharges to L-5 Canal, Class III Fresh waters, via the G-376 A-F structures.

Latitude: 26° 20' 06" N Longitude 80° 34' 42" W

Monitoring Group D-003: Discharges to L-5 Canal, Class III Fresh waters, via the G-379A-E structures.

Latitude: 26° 20' 07" N Longitude: 80° 36' 26" W

Monitoring Group D-004: Discharges to L-5 Canal, Class III Fresh waters, via the G-379 A-E structures.

Latitude: 26° 20' 23" N Longitude: 80° 37' 25" W

Monitoring Group D-005: Discharges to L-5 Canal, Class III Fresh waters, via the G-381 A-F structures.

Latitude: 26° 21' 35" N Longitude: 80° 38' 55" W

Monitoring Group D-006: Discharges to L-5 Canal, Class III Fresh waters, via the G-381 A-F structures.

Latitude: 26° 21' 48" N Longitude: 80° 40' 24" W

See attached map(s) for discharge locations.

E. Description of Water Treatment Facilities

STA-3/4 is located immediately east of and adjacent to Holey Land Wildlife Management Area, west of the North New River Canal, and immediately north of and adjacent to WCA-3A. STA-3/4 consists of three parallel treatment paths flowing from north to south that will provide an effective treatment area of 16,544 acres. STA-3/4 is designed to treat an average of approximately 645,222 acre-feet of runoff annually. These waters are currently being discharged untreated primarily to Water Conservation Areas 2A and 3A via the S-7 and S-8 pump stations.

The treatment cells are designed to have an operational depth of between 6 inches and 4.5 feet to encourage colonization and continued viability by wetland plants and maximize (to the greatest extent possible utilizing available technology) uptake and removal of phosphorus from the water passing through the cells. Long-term storage of the phosphorus is expected to be provided by peat accretion in STA-3/4. The treated water from STA 3/4 will be discharged into the L-5 Borrow Canal from the G-376 A-F, G-379 A-E and G-381 A-F structures, and subsequently discharged via the S-7 and S-8 pump stations into the Miami and North New River Canals and ultimately into WCA 2A and WCA 3A.

F. Description of Discharges (as reported by applicant)

Monitoring Group D-001, D-002, D-003, D-004, D-005, and D-006: Treated surface waters from the S-7/S-2 and S-8/S-3 basins.

Pollutants which are present in significant quantities or which are subject to effluent limitations in the permit are as follows:

Report Data from the ENR Project

<u>Effluent Characteristics</u>	<u>Data Range</u>
Total Phosphorus (mg/l)	0.02-0.04
pH Range (std. units)	6.5-8.5
Dissolved Oxygen (mg/l)	0.3-9.0

G. Background and Overview of the Everglades STA-3/4 Project

It has been determined that the STA-3/4 Project requires a wastewater permit under the authority of Section 403.0885, F.S. since the facility will be discharging treated water into waters of the United States.

The attached permit is accompanied by an Administrative Order (AO). This AO establishes a schedule for achieving compliance with all permit conditions and regulates operation of the STA during the Start-Up and Stabilization phases of operation, pursuant to Subsection 403.088(2)(f), F.S. The AO also has conditions that require operation of and discharges from the STA to be consistent with the requirements of Subsection 373.4592(9)(h) of the EFA.

The attached permit includes specific permit conditions needed to assure that discharges from the project do not cause or contribute to violations of State Water Quality Standards.

The applicant, South Florida Water Management District, applied on May 30, 1994 and December 17, 2001, to construct and operate STA-3/4. The STA is known as Project ECP-4 of the larger Everglades Construction Project, a monumental program to restore the water quality and hydrology of the Everglades ecosystem. This program represents the largest environmental restoration program of its kind ever undertaken (to date), and is required by the Everglades Forever Act (EFA), Section 373.4592, Florida Statutes. Subsection 373.4592(9)(b) of the EFA provides that the applicant may begin construction of the Everglades Construction Project, including STA-3/4, prior to final agency action, or notice of intended agency action, on permits to be issued by the Department under the authority of the Everglades Forever Act. Subsection 373.4592(4)(a)6. of the EFA further requires the applicant to complete construction of STA-3/4 by October 1, 2003. To facilitate construction, short-term dewatering of the project site is required, for which a water use permit in accordance with Part II of Chapter 373, F.S. would normally be required. The Department issued an Individual Water Use Permit (Permit No. 0178018) March 9, 2001, authorizing the commencement of short-term dewatering activities for the construction of facilities within the STA-3/4 and STA-2 Hydropattern Restoration Projects, pursuant to Subsection 373.4592(9) of the EFA, and the Individual Water Use Permit described in Rule 40E-2.041, Florida Administrative Code (F.A.C.). Limiting conditions issued with the Department's permit include requirements to control erosion and turbidity at the project site. These requirements are also included in Section 02435 (Turbidity and Erosion Control) of the "Technical Specifications" for the construction of the project which are included in the contract documents.

STA-3/4 is expected to perform similarly to the ENR project, a prototype STA which was permitted by the Department February 18, 1994 (Permit No. 502232569) and later incorporated into STA-1W (Permit No. 503074709). It was designed to serve three major functions:

- a. Reduce phosphorus entering from WCA-1
- b. Provide design, operation, and management experience necessary for larger scale application of wetland treatment technologies; and,
- c. Implement optimal nutrient-removal technology.

The STA-3/4 project monitoring plan requires water quality monitoring at several stations representative of inflows and outflows at STA 3/4. A summary and analysis of this data is required to be submitted in annual monitoring reports. Similar reports, which were submitted annually from 1995 to 1998, indicated that the ENR Project was very successful in obtaining, and even surpassing, its design objectives, as phosphorus load reductions of greater than 80% between the inflow and outflow have been recorded for all monitoring periods. Since it began operation, more than 562,560 acre-feet of water that would have previously been pumped directly into the Refuge (WCA-1), was diverted into the ENR Project, resulting in the retention of more than 70 metric tons of phosphorus. This prototype STA was very successful in preventing high levels of phosphorus from entering the Everglades Protection Area. Performance data that has been collected to date from all of the existing STAs (*i.e.*, STA-1W, STA-2, STA-5, STA-6) has further confirmed the phosphorus removal capabilities of these stormwater treatment areas. During the 2002 Water Year, the STAs retained an average of 71 percent of inflowing phosphorus and decreased concentrations to an average below 40 ppb, well below the long-term design target of 50 ppb. Since 1994 the STAs have reduced phosphorus loads by approximately 198 metric tons. The STA-3/4 Project is expected to achieve similar positive results.

2. PROPOSED EFFLUENT WATER LIMITATIONS

- a. During the period beginning upon placing the system into operation and lasting through the expiration date of this permit, the permittee is authorized to discharge treated water from Outfalls D-001, D-002, D-003, D-004, D-005, and D-006. Such discharge shall be limited and monitored by the permittee as specified below:

Parameters (units)	Discharge Limitations			Monitoring Requirements		
	Daily Minimum	Daily Maximum	Annual Average	Monitoring Frequency	Sample Type	Sample Point
Phosphorus, Total (as P) (MG/L)	--	--	Report * (See c. below)	Weekly	7-day flow proportioned composite	EFF-1, EFF-2, EFF-3, EFF-4, EFF-5, and EFF-6
Phosphorus, Total (as P) (MG/L)	--	--	Report *	Weekly	7-day flow proportioned composite	SWU-001 & SWU-002
Oxygen, Dissolved (DO) (MG/L)	5.0	--	--	Weekly	Meter	EFF-1, EFF-2, EFF-3, EFF-4, EFF-5, and EFF-6
Oxygen, Dissolved (DO) (MG/L)	Report	--	--	Weekly	Meter	SWU-001 & SWU-002
Flow (CFS)	--	Report	Report	Continuous	Recorder	EFF-1, EFF-2, EFF-3, EFF-4, EFF-5, and EFF-6
pH (SU)	6.0	8.5	--	Weekly	Meter	EFF-1, EFF-2, EFF-3, EFF-4, EFF-5, and EFF-6

* Monitoring for this parameter shall be reported as a 12-month moving flow-weighted average. No violations for the annual average limit will be deemed to have occurred until data have been compiled for this first 12 months after the issuance date of the permit. For the first 11 months after issuance of this permit, the monitoring results for this parameter shall be recorded on the DMR as NODI=9. Starting with the 12th month and lasting until the expiration of this permit, the monitoring results for this parameter shall be recorded on the DMR as a 12-month moving flow-weighted average.

- b. Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.2. and as described below:

Sample Point	Description of Monitoring Location
EFF-1	Sampling location for Outfall D-001 at the G-376B structure
EFF-2	Sampling location for Outfall D-002 at the G-376E structure

Sample Point	Description of Monitoring Location
EFF-3	Sampling location for Outfall D-003 at the G-379B structure
EFF-4	Sampling location for Outfall D-004 at the G-379D structure
EFF-5	Sampling location for Outfall D-005 at the G-381B structure
EFF-6	Sampling location for Outfall D-006 at the G-381E structure
SWU-001	Upstream background sampling location at the G-370 Pump Station.
SWU-002	Upstream background sampling location at the G-372 Pump Station.

- c. The discharge shall not cause phosphorus concentrations in the receiving waters to be altered so as to cause or contribute to an imbalance in natural populations of aquatic flora or fauna. The permittee may not be able to immediately comply with this condition and therefore, this permit is issued pursuant to Subsection 403.088(2)(e) of the Florida Statutes and is consistent with the Everglades Forever Act (EFA), §373.4592, Fla. Stat. By operation of the EFA, a numeric effluent limit for phosphorous shall be derived in accordance with state policy as contained in the EFA, § 373.4592(4)(e), Fla. Stat., which provides that if the Department does not adopt by rule a revised phosphorus water quality criterion by no later than December 31, 2003, the numeric criterion for phosphorus shall be 10 parts per billion (ppb) in the Everglades Protection Area. Upon adoption of a revised criterion or the default criterion becoming effective, and upon approval by EPA, an effluent limitation shall be established for this permit, in a manner consistent with the EFA, the federal Consent Decree in USA v. SFWMD, Case No. 88-1886-CIV-HOEVELER, as may be modified, and other applicable state and federal laws and that recognizes the relationship between waters discharged to, and the resulting water quality in the Everglades Protection Area. If an effluent limitation is established for this permit based upon the default criterion, that effluent limitation will be replaced with a new effluent limit based on the approved numeric interpretation of the narrative phosphorous criterion once rulemaking for the phosphorous criterion and an appropriate effluent limitation is promulgated under the requirements of the EFA and the Consent Decree. The new effluent limit will be based on the numeric phosphorous criterion, the associated implementation strategy, and the relationship between waters discharged to, and the resulting water quality in, the Everglades Protection Area in a manner consistent with the EFA, the federal Consent Decree in USA v. SFWMD, Case No. 88-1886-CIV-HOEVELER, as may be modified, and other applicable state and federal laws.

Governor Bush, in his letter of February 26, 1999, to Administrator Carol Browner of EPA, has committed that the State of Florida will make every effort to move forward the time frames for establishing water quality standards in the Everglades under the EFA. Additionally, the Governor has encourage the District to accelerate incorporation of Phase II technologies into Phase I as quickly as possible.

3. BASIS FOR EFFLUENT LIMITS AND MONITORING REQUIREMENTS

The following table provides the basis for Part I. A. provisions.

Outfalls D-001, D-002, D-003, D-004, D-005, and D-006

Parameter	Units	Limit	Statistical Basis	Rationale
Oxygen, Dissolved (DO)	MG/L	5.0	Daily Minimum	Rule 62-302.530(31), FAC
pH	SU	6.0	Daily Minimum	Rule 62-302.530(52), FAC
pH	SU	8.5	Daily Maximum	Rule 62-302.530(52), FAC
Phosphorus, Total (as P)	MG/L	Report *	See * and c. above	Section 373.4592, FS; Rule 62-302.530(48)(b), FAC

Parameter	Units	Limit	Statistical Basis	Rationale																		
Flow	CFS	--	Daily Minimum																			
The following were used as the basis of the permit limitations/conditions:																						
A. FAC refers to various portions of the Florida Administrative Code.																						
The effective dates of FAC Rule Chapters cited in the permit and in this document are as follows:																						
<table><tr><td><u>Chapter</u></td><td><u>Effective Date</u></td></tr><tr><td>62-4</td><td>07-08-02</td></tr><tr><td>62-302</td><td>05-15-02</td></tr><tr><td>62-520</td><td>12-09-96</td></tr><tr><td>62-522</td><td>08-27-01</td></tr><tr><td>62-550</td><td>11-27-01</td></tr><tr><td>62-620</td><td>04-17-02</td></tr><tr><td>62-650</td><td>12-26-96</td></tr><tr><td>62-660</td><td>10-01-98</td></tr></table>					<u>Chapter</u>	<u>Effective Date</u>	62-4	07-08-02	62-302	05-15-02	62-520	12-09-96	62-522	08-27-01	62-550	11-27-01	62-620	04-17-02	62-650	12-26-96	62-660	10-01-98
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62-550	11-27-01																					
62-620	04-17-02																					
62-650	12-26-96																					
62-660	10-01-98																					
B. FS refers to various portions of the Florida Statutes																						
C. CFR refers to various portions of the Code of Federal Regulations, Title 40																						
D. BPJ refers to Best Professional Judgment																						

* Monitoring for this parameter shall be reported as a 12-month moving flow-weighted average. No violations for the annual average limit will be deemed to have occurred until data have been compiled for this first 12 months after the issuance date of the permit. For the first 11 months after issuance of this permit, the monitoring results for this parameter shall be recorded on the DMR as NODI=9. Starting with the 12th month and lasting until the expiration of this permit, the monitoring results for this parameter shall be recorded on the DMR as a 12-month moving flow-weighted average.

Sampling results from the ENR Project have indicated that several parameters have been detected. These specific parameters include beryllium, selenium, silver and specific conductance. The activities of the stormwater treatment areas do not contribute any of these parameters. Therefore, there is reasonable assurance that the activities of STA-3/4 will not cause or contribute to violations of the water quality standards for these parameters and thus, this permit does not contain monitoring requirements for these parameters.

The District is conducting a monitoring program under the EFA permit (permit no. 0192895). If data from this concurrent monitoring program indicate that discharges from the STA-3/4 Project have a reasonable potential to cause or contribute to violations of water quality standards, this permit shall be revised to include effluent limits for the parameter(s) of concern.

4. GROUND WATER MONITORING REQUIREMENTS

This Section is not applicable to this facility.

5. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

No variances were requested for this facility.

6. COMPLIANCE SCHEDULE AND EFFECTIVE DATE OF PROPOSED EFFLUENT LIMITS

The Everglades Forever Act (the EFA, Chapter 373.4592, Florida Statutes) has established a process by which a numeric phosphorus criterion will be established and in the absence of a criterion being established by the Department, a default criterion of 10 ppb will become effective. Additionally, the EFA sets forth timelines for compliance for all STAs, including the STA-3/4 Project authorized by Permit Number 0192895. A detailed compliance schedule

consistent with the requirements of the EFA are included in Administrative Order AO-007-EV which is accompanying this permit.

7. NEW OR EXPANDED DISCHARGES TO SURFACE WATERS; ANTIDegradation INFORMATION

The Department has determined that construction, operation, and maintenance of the project is consistent with the anti-degradation requirements of Rules 62-4.242(1) and 62-302.300, F.A.C. and is clearly in the public interest pursuant to Chapter 373.4592(9)(a), F.S. and the requirements of Rule 62-4.242(2), F.A.C. The Department has further determined that the applicant has provided reasonable assurance that the construction and operation of the project will not cause or contribute to degradation of water quality. As the project entails the treatment of waters of the U.S. and design standards require that the discharge be of equal or better quality than the inflow, the Department has determined that the requirements of Rule 62-4.242(1)(b), F.A.C. have been met. In making these determinations, the Department relied on water quality monitoring and other operations data from the ENR Project and existing STAs. Data generated from the operation of the ENR Project and existing STAs to date demonstrate that similarly designed STAs can be operated to achieve the design objectives of the Everglades Construction Project to significantly improve water quality and hydrology of downstream receiving waters. The Department also reviewed additional water quality data collected in accordance with the requirements of permit No. 50-00018-E issued by the applicant to USSC for the operation of the existing agricultural water management system. This information included total water column phosphorus concentrations for time-weighted samples collected during flow events for the period July 1993 through February 1997. In addition, the primary objective of the Everglades Construction Project is to reduce the levels of excess nutrients in the Everglades, in accordance with Subsections 373.4592(1)(d) and (g) of the EFA. This objective is consistent with anti-degradation requirements, which acknowledge excessive nutrients as one of the most severe water quality problems facing the state, Rule 62-302.300(13), F.A.C.

8. EFFECTS OF SURFACE WATER DISCHARGE ON THREATENED OR ENDANGERED SPECIES

The Department does not anticipate adverse impacts on threatened or endangered species as a result of permit issuance.

9. FDEP CONTACT

Additional information concerning the permit may be obtained by contacting Temperince Morgan at the address and during the hours noted in Item 10 below.

10. THE ADMINISTRATIVE RECORD

The administrative record including application, intent to issue, draft permit, fact sheet, public notice (after release), documents cited herein, comments received and responses thereto, and other documents contained in the supporting file for the permit, is available by writing FDEP or for public inspection at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 between the hours of 8 A.M. and 5 P.M., Monday through Friday. Copies will be provided at a minimal charge per page.

11. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Application Complete.....	September 11, 2002
Draft Permit to Applicant and USEPA...	October 14, 2003
Applicant to Publish Public Notice by...	October 21, 2003
Public Comment Period.....	November 21, 2003
Notice of Intent to Issue.....	November 28, 2003

II. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Public Comment Period

The Department of Environmental Protection proposes to issue an NPDES facility permit to this applicant subject to the aforementioned effluent limitations, conditions, and compliance schedule. The draft permit will be open for public comment for 30 days after the notice has been published by the applicant. Comments received during this time, or during the public meeting (if requested), will be used to formulate the final agency position on this application.

Copies of the Draft Permit and associated documents will be available for review at the address noted in Item 10.

Interested persons are invited to submit written comments regarding permit issuance on the proposed permit limitations and conditions to the following address:

Water Quality Standards and Special Projects Program
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 3560
Tallahassee, FL 32399-2400
Attn.: Frank Nearhoof, Program Administrator

All comments received within 30 days following the date of public notice, pursuant to Rule 62-620.550, F.A.C., will be considered in the formulation of the final decision with regard to permit issuance.

b. Public Meeting (If requested)

Any person may submit oral or written statements and data concerning this draft permit at the public meeting. Public notice of the public meeting will be given at least 30 days before the meeting.

c. Preparation of a Proposed Permit

Following receipt of any public comments in accordance with A. and B. above, the Department will consider all significant comments in revising the draft permit and making a final decision to issue a final permit. If the draft permit is substantially revised based on public comment, it will be submitted to the U.S. Environmental Protection Agency as a proposed permit for EPA's concurrence in the Department's decision. Following receipt of any comments or objections from USEPA, the Department will either issue the proposed permit, issue a modified proposed permit, or deny the permit in accordance with the EPA objections.

d. Issuance of the Permit

The Department will prepare and send a public notice of the final permit to the applicant for publication in a local newspaper published in the vicinity of the project. That notice will advise the applicant and all affected persons of their right to petition for an administrative hearing pursuant to Chapter 120, Florida Statutes. Substantially affected persons will have 14 days from receipt of public notice to request an administrative hearing. If no administrative hearing is held, the Department will issue a final permit to the applicant.

- End of Fact Sheet-