

South Florida Water Management District

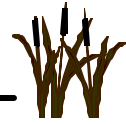


STORMWATER TREATMENT AREA 1EAST

Pollution Prevention Plan

October 25, 2004

**Submitted in accordance with the Everglades Forever Act,
§373.4592, Fla. Stat., and the State of Florida's
National Pollutant Discharge Elimination System Program,
§403.0885, Fla. Stat.**



I. BACKGROUND

The South Florida Water Management District (District), in accordance with the Everglades Forever Act (EFA), §373.4592, Fla. Stat., and an agreement with the federal government, is implementing the Everglades Construction Project (ECP) in an effort to restore the quality of the water entering the Everglades Protection Area (EPA). The ECP consists of the construction of a series of treatment marshes, which will use natural physical, chemical, and biological processes to remove excess nutrients, including total phosphorus (TP), from stormwater runoff and other sources prior to discharge into the EPA.

Stormwater Treatment Area 1 East (STA-1E), which has been constructed under the direction of the U.S. Army Corps of Engineers is located immediately south of the C-51 Canal, immediately east of the STA-1 Inflow and Distribution Works (a.k.a. STA-1 Inflow Basin) and adjacent to the northeastern corner of the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge). STA-1E is one of treatment marshes being constructed as part of the ECP and is intended to improve the quality of waters discharged to the Everglades Protection Area from the C-51 West Basin, together with lesser inflows from other interconnected hydrologic basins including the Everglades Agricultural Area (EAA), the L-8 Basin, and to a limited extent, discharges from Lake Okeechobee. STA-1E is the subject of this Pollution Prevention Plan (PPP).

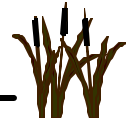
II. MISSION STATEMENT

Recognizing that stormwater runoff from the Western C-51 basin, the EAA and other sources contains excessive levels of phosphorus, the U.S. Army Corps of Engineers and the District are dedicated to implement the STA-1E Project in order to reduce levels of phosphorus and otherwise improve water quality in the EPA to the maximum extent practicable.

III. PURPOSE

This PPP provides a summary of normal operations for STA-1E, and describes factors, which may impact those operations. STA-1E shall be operated in accordance with this document to achieve the design objectives of the ECP for phosphorus and reduce adverse impacts to downstream water quality conditions in the EPA.

This PPP is based upon information from (a) *the Conceptual Design Document for the Everglades Protection Project, Burns and McDonnell Inc., February 15, 1994*, (b) *General Design Document (GDM) for STA-1, Burns and McDonnell Inc., August 1995*, (c) *the Design Document Report, Canal 51 and Stormwater Treatment Area 1 East, U.S. Army Corps of Engineers, January 1999*, (d) *the C-51 and STA-1 East, Design Document Report, U.S. Army Corps of Engineers, October 1999 (revised DDR)*,



(e) *Revised Draft Detailed Design Report, U.S. Army Corps of Engineers, May 2000*, (f) *Redesign of the G-311 Inflow and Distribution Channel, SFWMD, February 2004*, (g) *Long Term Plan for Achieving Water Quality Goals for the EPA, SFWMD, 2003*, (h) Rule 40E-63 of the Florida Administrative Code, (i) the STA optimization research plan, (RAM 5), and (j) the experience gained from operating STA-1W, STA-2, STA 3/4, STA-5 and STA-6, Section 1. By operating in accordance with these documents, the objectives of the ECP for phosphorus will be achieved, in accordance with the EFA, 373.4592(9)(e) and (9)(h), Fla. Stat.

STA-1E is a dynamic system, subject to variation in rainfall, hydraulic and nutrient loading, inflow water quality and interior vegetative conditions. As a result, this PPP is only intended to provide an understanding of the range of conditions under which the STA-1E system has been designed and will be operated. This document is NOT intended to reflect absolute limitations upon operation of STA-1E; instead, system operation will at all times require District operating personnel to exercise their best professional judgment based upon existing regional and on-site conditions and data available at the time.

While this document characterizes the operational expectations for STA-1E, it also recognizes that operation may fluctuate outside of these predefined ranges. For example, extreme storm events could result in inflows to the STA which exceed the system's hydraulic and treatment capacity. As a result, the PPP describes measures that will be taken by operators in order to minimize any adverse impacts that could occur within and downstream of the STA under those circumstances.

IV. OBJECTIVES

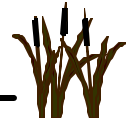
In accordance with the Conceptual Design Document for the Everglades Protection Project, dated February 15, 1994, the primary objectives of the ECP include the following:

A. ACHIEVE A LONG-TERM ANNUAL FLOW-WEIGHTED INTERIM TP DISCHARGE CONCENTRATION OF 50 PPB

In combination with the implementation of the EAA Best Management Practice (BMPs) Program, STA-1E is designed to reduce the long-term, annual flow weighted average concentration of TP in discharges from the EAA and other sources to an interim goal of 50 parts per billion (ppb).

B. SUPPLY BMP MAKE-UP WATER

STA-1E will be operated to the maximum extent practicable to offset reductions in volumetric discharges to the EPA resulting from the implementation of the EAA BMP Program. Replacement water will be provided from Lake Okeechobee and distributed to



the STAs. However, actual volumes sent to each STA cannot be quantified in advance since the quantities depend on temporal and spatial variables: the annual reduction in discharge due to BMP implementation, available treatment capacity in each STA, and water conditions in the downstream water conservation areas.

C. IMPROVE WATER QUANTITY ENTERING THE EPA

STA-1E will be operated in conjunction with STA-1W, to the maximum extent practicable, to increase quantity of water delivered to the EPA through redirection of runoff from the Western C-51, S-5A and L-8 basins.

D. REDUCE DISCHARGES OF FRESH WATER AND ASSOCIATED POLLUTANTS TO LAKE WORTH ESTUARY

STA-1E, in conjunction with STA-1W, will be operated, to the maximum extent practicable, to reduce the amount of freshwater discharged eastward to the Lake Worth estuary. (*Conceptual Design Document for the Everglades Protection Project, February 15, 1994, Burns and McDonnell*)

E. PROVIDE ADDITIONAL FLOOD PROTECTION FOR THE UPSTREAM BASINS

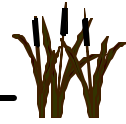
STA-1E will be operated, to the maximum extent practicable, to improve the level of flood protection in the Western C-51 Basin, and maintain flood protection in the S-5A basin, Rustic Ranches and for an interim period the southern L-8 basin.

V. ACTION PLAN

The District intends to meet the design objectives of the STA-1E project to comply with the EFA, §373.4592(9)(e)(h)1, Fla. Stat., by operating within the normal operational guidelines established in subsection (A), below. However, the STA-1E Project and the ECP were not designed to operate under all possible conditions. For example, extreme storm events could create conditions that would necessitate the District to partially divert flows from the STA-1E treatment system in order to prevent damage to the structural and vegetative integrity and prevent upstream flooding. See, Miccosukee Tribe of Indians v. South Florida Water Management District, Fla. DEP Case No. 96-1851, Final Order, Finding of Fact Number 23, (April 21, 1998). Accordingly, subsection (B) describes circumstances requiring deviation from those normal operational guidelines. Finally, subsection (C) provides information on the District's research program directed at improving the treatment efficiency of the STAs.

A. STA-1E NORMAL OPERATIONAL GUIDELINES

As stated in section (IV) above, the STA-1E project, together with the EAA BMPs, was designed to achieve a long-term annual average TP interim outflow concentration of 50



ppb. That objective is expected to be reached by operating the system in accordance with the following guidelines:

1. *Anticipated Rainfall Range (upper and lower limits)*

Based on historical rainfall data (1965-95) for the western C-51 basin, the anticipated rainfall range in which STA-1E shall be operating in a normal operating mode is from 43 to 84 inches.

2. *STA Source Inflow Variations*

The STA-1 project (STA-1W and STA-1E) was developed to take advantage of the difference in timing of runoff events from the S-5A and C-51 West Basins. The combined STA-1W / STA-1E design reduces the required individual capacities of the primary hydraulic components of the treatment facilities compared to operating two independent STAs.

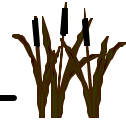
The average annual inflow volume (hydraulic design inflow volume) to STA- 1E over the 1965-95, 31-year period is 133,331 acre-feet. However, during normal operations, annual inflow volumes and associated TP loads into STA-1E are expected to fluctuate in response to variations in upstream rainfall and runoff. For example, the minimum and maximum annual inflow volumes for this period of record were 57,267ac-ft and 253,271 ac-ft, respectively. These minimum and maximum values represent a deviation of -42% to + 89% from the average value. A summary of the variability observed in these flows during the Base Period is presented in Table 1 below.

3. *Phosphorus Load Variations*

The anticipated average annual inflow TP load (design inflow load) is 28,950 kg. During normal project operations this load value is expected to fluctuate with variations in inflow volumes. The minimum and maximum annual inflow TP load values, based on variations in the historic contributing basin discharges for the 31-year period of record were 12,883 kg and 54,996 kg respectively. It is expected that the range in annual average TP inflow load, during which normal project operations occur, will fluctuate accordingly.

4. *Inflow Capacity*

The S-319 Pumping Station is the project's primary inflow structure, drawing water from the C-51 canal. S-319 has a design capacity of 3,980 cfs and will pump an annual estimated volume of 105,202 acre-feet of stormwater. The pump station is located approximately 2 miles east of the S-5A Pump Station and approximately 2 miles west of Flying Cow Road in Wellington Florida.



A secondary inflow Pumping Station, S-361 is located on the southeastern perimeter of the project. This pump station has a design capacity of 75 cfs and will pump an annual estimated volume of 4,946 acre-feet of stormwater into treatment cell 4S. This pumping station became necessary to preserve permitted drainage for Rustic Ranches subdivision and about 430 acres of agricultural lands. This pump station also serves to return collected seepage from portions of the project back into the project.

The G-311 structure, a three bay reinforced spillway situated in the western portion of the distribution cell at the L-40 levee, serves to deliver a net of approximately 22,552 acre feet per year between the STA-1 Inflow Basin and STA-1E. The structure has the capability to accept flows into the western portion of the distribution cell from STA-1 Inflow Basin or divert inflows from the S-319 pump station into STA-1 Inflow Basin.

5. Outflow Capacity

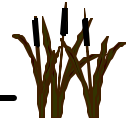
S-362 Pumping Station is the outflow pumping station drawing treated water from the STA-1 E internal discharge canal and releasing into the L-40 canal. This pumping station has the capacity to discharge up to 4,200 cfs. The pumping station includes six pumps, approach and discharge canals, the pumping station enclosure and other related civil works.

6. Anticipated BMP Performance

Approximately 22,552 acre feet per year are anticipated to enter STA-1E from the STA-1 Inflow Basin, which receives water from the EAA and L-8 Basins. The EAA BMP regulatory program requires a minimum 25% TP load reduction from baseline historical EAA discharge loads, adjusted for hydrologic variability. This regulatory program, along with STA-1E when operating in a normal operational mode, is expected to result in a reduction of the long-term, flow-weighted, annual average TP interim concentration in STA-1E discharges to 50 ppb.

7. Anticipated Vegetative Conditions

After the start-up and stabilization phases of operation, otherwise known as normal project operation, the District shall manage interior water levels to maintain marsh vegetation within the treatment system in a mature and productive condition. It is expected that cattail will be the dominant emergent macrophyte species found within the upstream treatment cells (cells 1, 3, 5 and 7) and submerged aquatic vegetation will be the dominant vegetation in the downstream treatment cells (cells 2, 4N, 4S, 6). The percentages of vegetative coverage will fluctuate in response to variations in climatic, biological and inflow water quality and quantity conditions.



8. *Operating Levels*

Subject to water availability, during normal project operation the minimum target operating level for STA-1E is 0.5 feet above average ground elevation. The maximum target operating level for STA-1E during normal project operations is 4.5 feet above average ground elevation. The optimal long-term target depths for STA-1E during normal project operations is between 1.25 above average ground elevation for emergent vegetation cells and 1.5 feet above average ground elevation for submerged aquatic vegetation cells.

NOTE: The perimeter or exterior levees have been designed and constructed to provide for adequate freeboard to maintain levee structural integrity and to withstand the effects of severe rainfall events, wind setup and wave action.

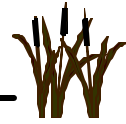
9. *Preventive Maintenance*

Preventive maintenance of STA-1E project features may be required on a routine basis to avert severe property damage, maintain upstream flood protection and ensure continued functionality and efficiency of the conveyance and treatment systems. During preventive maintenance, individual treatment cells may be temporarily taken off-line and/or water levels within treatment cells may be adjusted through operations of various project structures. To minimize the impacts to operation during times of preventive maintenance, the District shall lower stages to minimal levels and/or take treatment cells off-line independently, for as short a period of time necessary to complete maintenance activities. Specific maintenance activities will include:

a. *Water Control Structure Maintenance*

STA-1E pump stations S-319, S-361 and S-362 will require limited maintenance operation, because failure to operate these pumps could lead to premature breakdown and loss of manufacture's warranty. Based on these mechanical requirements, the District will periodically operate the STA-1E pump stations for approximately 2 to 4 hours per month, as necessary, to fulfill manufactures requirements and maintain their mechanical integrity. The District shall operate the STA-1E outflow pump stations accordingly to maintain water levels in the discharge collection canal. All temporary discharges will be reported in accordance with the monitoring requirements of the STA-1E permit.

The District shall also maintain other project water control structures to ensure that culverts and risers are conveying prescribed volumes and that gated weirs are functioning properly. Similarly, the District shall service pump stations routinely to ensure that pumps are functioning properly and not leaking contaminants into upstream or downstream waters.



b. Levee and Canal Maintenance

The District shall maintain all above ground dikes, levees and water control structures to best ensure continued structural integrity and functionality. Activities shall include maintenance of cover vegetation through regular mowing and/or appropriate use of herbicides. Levees and dikes will also be inspected regularly in response to factors such as rapid changes in flow rates, high water stages, normal wear and tear, or any other factor which could cause levee destabilization. Water control structures shall be maintained and operated regularly to insure proper they are proper working order. Project canals will be maintained via periodic dredging, as needed to restore water conveyance and depths to design criteria.

c. Vegetative Maintenance

The District shall control invasive and/or exotic plant species through periodic use of approved herbicides both inside the treatment system and along the project perimeter. Vegetative maintenance shall also include physical removal of excess vegetation at inflow, outflow and interior locations to ensure adequate conveyance.

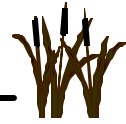
B. DEVIATION FROM NORMAL OPERATIONAL GUIDELINES

Under some circumstances operation of STA-1E may deviate from normal operation guidelines. Under those circumstances, including those defined below, the District shall take measures to minimize adverse impacts both within and downstream of the treatment area and to avoid continued deviations from the normal operation of the STA-1E project.

1. Excessive Rainfall or Flooding Conditions.

When waters at the interior of the treatment cells reach critical depths as identified below, or when an oncoming storm event is expected to cause interior waters to approach or exceed these depths, the District may divert some water from the STA-1E treatment cells by operating the S-319 pump station and routing this water through the Western Distribution Cell, to the STA-1 Inflow Basin via the G-311 structure and to STA-1W if capacity exists. If capacity does not exist in STA-1W, diversion shall occur to the Refuge via the G-300 and G-301 water control structures. Accordingly, the District may divert inflows to STA-1E when any of the four factors listed below occur, creating unavoidable conditions that could cause loss of life, personal injury, or severe property damage.

Also when potential flood conditions exist in the Western G-51 canal, S-5A and L-8 basins and waters in the interior of the STA-1E treatment cells reach critical depths as identified below, or when an oncoming storm event is expected to cause interior waters to



approach or exceed these depths. Structure S-155A is designed to pass flood discharges from these basins to the east.

Since the STA-1E Distribution Cells and the S-155A structure are not part of the treatment system, the inflow diversions described above will not constitute bypass as defined in the general condition of the STA-1E NPDES permit. However, the District shall keep records of all diversions, including the date, flow, duration, and conditions warranting the diversion. Those records will be included in the annual report submitted to the Department.

a. Maximum Stage Elevations.

When waters at interior structures within the STA-1E Project reach stage elevations at a depth of 4.5 feet.

b. Threats to Structural Integrity

When stage elevations of waters, or the rates of inflows threaten the structural integrity of the interior and exterior project levees; or

c. Threats to Vegetative Survival and Treatment Efficiency

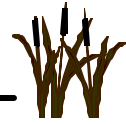
When stage elevations of waters, rates of inflows, or the duration of sustained inundation creates conditions threatening the survival of marsh vegetation and the treatment efficiency of the project.

d. Inflow Pump Station

In the unforeseeable event that the S-319 pump station would become inoperable or when the rate of inflows at the S-319 reach the structures capacity of 3,890 cfs, and discharges through the S-5A pump station exceed 3,890 cfs, the District may divert some or all of the pump stations inflow through the S-155A or STA-1 Inflow basin.

Example: Operation of STA-1E When Experiencing Excessive Rainfall or Flooding Conditions

1. Operation of the S-319 inflow pump station would be manipulated to decrease inflows into the project in order to maintain project Treatment Cell water levels below maximum design limitation of 4.5 ft deep. By decreasing inflows rather than immediately discontinuing all inflows in response to above conditions, the District shall be minimizing adverse interior conditions while also considering downstream impacts.
2. Alternatively, when flooding conditions prevail and water levels at the interior of the treatment cells approached the critical level of 4.5 feet deep, the operation of S-319 would be completely discontinued and water diverted to STA-1W via the G-311 structure, the Refuge via the G-300 and G-301 structures and/or downstream to the Eastern C-51 basin via the S-155A structure. At this time all interior flow control structures will be opened to convey flows originating solely from precipitation.



2. Emergency Discharges.

The District shall discharge water from STA-1 E in accordance with Section 373.439, F.S., including when water conditions within STA-1 E may damage existing marsh vegetation. The District shall notify the Department within 48 hours of such an occurrence. Such notification shall contain information regarding the circumstances related to the discharge, as well as a projection regarding the anticipated duration of the discharge. In the event any such discharge extends beyond the period specified in the original notification, the District shall notify the Department within 48 hours of the continuation of the discharge, and such notice shall contain additional information regarding the circumstances causing the need for the discharge.

3. Drought Conditions.

In order to preserve the continued viability of the marsh vegetation within STA-1E treatment cells the District shall maintain a minimal static water level of 0.5 feet above average interior ground elevation to the maximum extent practicable. The District's ability to maintain this minimum water elevation is determined primarily by the availability of water from rainfall within the project and the upstream watershed.

Example: Operation of STA-1E During Low Flow or Drought Conditions

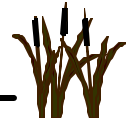
To maintain minimum static water levels to the maximum extent practicable, inflow pump station will be operated to allow for any available inflows to enter the project. Treatment cell interior structures will be manipulated to detain available water within the treatment cells. Outflow pump station S-362 will not discharge until desirable water levels and vegetation conditions within the treatment cells have improved. In the extreme case that there is no water available from the upstream watershed and/or from rain for extended periods of time, the treatment cells may dry out.

4. Vegetative Conditions.

Deviation from normal operation may be caused or necessitated by vegetative conditions as follows:

a. Failure to Achieve Design Performance Criteria

Within 6 months of start-up operation of the STA-1E project, a baseline vegetation coverage map shall be created, using on ground-truthed aerial photographs, and color coded for vegetation coverage types consistent with those identified in the annual vegetation coverage maps for the ENR project. After stabilization phase of operation, the vegetation is expected to consist of cattail and open waters with associated submerged aquatic vegetation in upstream cells (1, 3, 4N, 5 and 7) and submerged aquatic vegetation with associated periphyton in downstream cells (2, 4S and 6).



In the event that the STA-1E project fails to achieve specified performance criteria, and vegetative composition is suspected to be a potential factor, a second vegetative coverage map shall be prepared for comparison with baseline vegetative conditions. If necessary, the District shall modify STA-1E operations in order to respond to undesirable vegetative conditions.

b. Vegetative Management

During the start-up period, water levels will be kept low to encourage growth of desirable vegetation until the system is capable of achieving its design performance objectives. Thereafter, operational changes may not be made based upon perceived stress to the vegetation unless there is also a drop in system performance or new information is obtained as a result of the District's STA optimization research program.

5. By-Pass

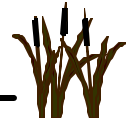
The S-319 Inflow Pump station can also be operated to lower water levels in the treatment cells by back-siphoning water in the C-51 canal.

C. INTERIM OPERATIONS

1. Operations During the Start-Up Period.

The construction of STA-1E is presently being finalized by the U.S. Army Corps of Engineers. Upon the EFA and NPDES permit application being deemed complete by the Department (July 29, 2004), the STA was allowed to initiate start-up operations. Until STA-1E is operating in a flow-through capacity, it is anticipated that an average of 27,498 acre feet per year of S-5A basin runoff scheduled to go to STA-1E will continue to go through the S-5A pump station. Prior to STA-1E ability to accept these waters, they may continue to flow to the Refuge, either as treated discharge from STA-1W or as untreated discharge through the STA-1 Inflow Basin.

Consistent with the Settlement Agreement and the EFA, the District is also required to offset flow reductions in EAA runoff due to BMPs. For the S-5A basin, some of this BMP make-up water is also contemplated to be diverted to STA-1E. Consistent with the intended operations guidelines in the 1994 Conceptual Design, the BMP make-up water will be delivered to the STAs only if available treatment capacity exists. The District's BMP Replacement rule contains the flexibility to reduce delivery to the STAs "when the delivery is likely to cause hydraulic bypass around the STA or otherwise hinder its performance." It is anticipated that minimal BMP replacement water deliveries will be made during the Interim Period.



During the 1979-1988 base period, approximately 50,700 acre feet (with an associated 3.5 metric tons of phosphorus) from the L-8 basin were discharged into the Refuge. District planning efforts underway include construction of diversion works that send waters from the L-8 basin to other areas, instead of the Refuge where the runoff goes today. In accordance with the load reduction targets of the proposed modified settlement agreement and conceptual design, the L-8 basin water will be diverted, with a current schedule of 2006. Prior to completion of STA-1E and the diversion works, these waters may; 1) continue to flow to the Refuge, either as treated discharge from STA-1W or STA-1E or as untreated discharge through the STA-1 Inflow Basin or, 2) be directed to the Lake Worth Lagoon via the S-555A structure when conditions in the G-51 canal permit.

2. Comparison of Interim Operation to Historic Flows

It is important to note that not all of the Stormwater earmarked for treatment by STA-1E historically flowed to the Refuge. STA-1E will treat waters from the Western C-51, L-8 and S-5A basins. BMP make up waters come from Lake Okeechobee to compensate for the reduction in volume of waters reaching the Refuge because of the implementation of Best Management Practices. Finally, waters which will eventually be diverted to Lake Okeechobee or other points through the L-8 Diversion Projects have historically reached the Refuge. A summary of operations is presented in the Table 1 below.

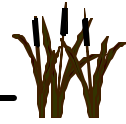
3 Mitigating Increases in Phosphorus Loads or Concentrations During the Interim Period.

In order to maximize reductions in phosphorus to the Refuge and the EPA during the interim period prior to the L-8 Diversion Project is complete the District shall, to the maximum extent practicable and to the extent consistent with its responsibilities as the local sponsor of the C&SF Project:

- (1) reduce phosphorus loading to the Refuge and the EPA compared to 1979-1988 base period;
- (2) optimize the quantity of waters sent through the STAs, subject to their hydraulic, structural and biologic design limitations (with respect to STA-1E, waters flowing into STA-1E cannot exceed the inflow capacity of 3,980 cfs and water depths cannot exceed 4.5 feet unless during extreme rainfall events).

4. Conclusions.

The District is committed to achieving the performance measures of the Settlement Agreement and the design objectives of the ECP, and ultimately, the restoration of the Everglades. During the interim period prior to completion of all Long Term Plan



components, the District is further committed to maximizing the treatment of phosphorus in the watershed. The above proposal reflects the District's best efforts to achieve those interim and long term objectives.

D. STA OPTIMIZATION

The EFA, Section 373.4592(4)(d)3., Fla. Stat., requires the District to conduct research on optimizing the treatment performance of the STAs, recognizing that additional reductions in TP outflow concentrations, beyond the interim goal of 50 ppb, may be beneficial to the EPA. In accordance with this requirement, the Long-Term Plan includes research activities designed to enhance STA performance. Based upon the results of these and other research efforts, the operation of STA-1E may be periodically adjusted to optimize treatment efficiency of the project, in accordance with the EFA, §373.4592(9)(j)3., Fla. Stat.

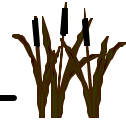
VI. COMMITMENT TO WATER QUALITY IMPROVEMENT

A. COMPLIANCE WITH WATER QUALITY STANDARDS

The District is committed to the implementation of its responsibilities pursuant to the EFA, §373.4592, Fla. Stat., and its agreements with the federal government. Water quality conditions both upstream and downstream of the STA-1E project will be monitored through a series of programs, including the Best Management Practices permit programs required by Rule 40E-63, F.A.C., the Everglades Stormwater Program required by Florida DEP permit no. 06, 502590709, and the operational permits for this project. While this project is directed toward compliance with interim water quality goals, the District is implementing vegetation and operational measures designed to achieve compliance with all water quality standards by December 31, 2006. Currently, the District has submitted a permit application, required by section 373.4592(10), Fla Stat., which includes the *Long Term Plan for Achieving Water Quality Goals for the EPA*.

B. EMERGENCY SUSPENSION AND RESCHEDULING OF SAMPLING

Under hurricane, tropical storm warnings, or other extreme weather conditions, the District's normal water quality sampling schedule may be suspended and rescheduled, as necessary. The District shall notify the Department's Southeast District and the Water Quality Standards and Special Projects Program section at the addresses and telephone numbers listed in the STA-1E permit, of any anticipated sampling suspension or rescheduling associated with hurricanes, tropical storms, or other extreme weather events that may require deviation from the normal sampling schedule. The District shall resume the normal sampling schedule as soon as possible. Within 14 days following the cessation of emergency conditions, the District shall notify the Department of when normal sampling is expected to resume.



VII. POLLUTION PREVENTION TEAM

Numerous District personnel will be responsible for the management of this project during the operational phase of the project including; Gary Goforth of Water Resources, John Mitnik of the Ecosystem Restoration Department, Maxine Cheesman, Bahram Charkhian, and Linda Lindstrom of the Environmental Resources Assessment Department, Ron Mierau, George Hwa, Bob Howard, Karen Estock, Tom Kosier and Christy Combs of the Operation & Maintenance Department and Kirk Burns of the Office of Counsel. The permit administrator for this project is Ron Bearzotti of the Ecosystem Restoration Department and can be reached at (561) 682-6291.

VIII. BASELINE CONDITIONS

A great deal of data and documents which include pre STA-1E water quality information for the Refuge have been previously completed and widely distributed. The District provided historical data to the Department during the EFA and NPDES permit application process. Documents that have been widely circulated to the Department and others include but are not limited to: *Water Quality Criteria in the Everglades Protection Area*, SFWMD (Bechtel, Krupa, Hill, Xue), May 1996, *the Everglades Nutrient Removal Project Annual Monitoring Report*, SFWMD, 1995, 1996 and 1997, and *the Everglades Consolidate Report*, SFWMD, 2000, 2001, 2002, 2003 and 2004.

	TABLE 1		
	Base Period (1965-1995)		
	Data used as basis for		
	2003 Lon-Term Plan		
Source of Water to			
STA-1E	Average	Minimum	Maximum
	acre-feet/yr	acre-feet/yr	acre-feet/yr
Western C-51 basin	105,202	65,779	186,924
L-8 / S-5A basin	22,552	560	59,222
Rustic Ranches	4,946	1,603	7,100
Total flows to STA 1E	133,331	57,267	253,271
Deviation from Average Total Flow s to STA-1E	0%	-42%	189%