BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re:	**OGC Case Nos.: 00-0889**
EMERGENCY AUTHORIZATION TO OPERATE THE S-332B, S-332C, AND S-332D PUMP STATIONS AND APPURTENANT STRUCTURES	**and 99-2242**

NINTH AMENDED EMERGENCY FINAL ORDER

Under Section 373.119 of the Florida Statutes and Rule 62-330.200(4)(b), F.A.C. (incorporating by reference Rule 40E-4.451, F.A.C.), the State of Florida Department of Environmental Protection (Department) enters this Emergency Final Order, including findings of fact and conclusions of law, in response to the imminent or immediate danger to the survival of the Cape Sable Seaside Sparrow, an endangered species, made necessary by hydrologic conditions in the vicinity of nesting habitat of this species. This order amends the Eighth Amended Emergency Final Order issued on January 31, 2003.

FINDINGS OF FACT

1. The Cape Sable Seaside Sparrow (*Ammodramus maritimus mirabilis),* (hereafter "endangered sparrow") was added to the list of endangered species in 1967. The population of this isolated, non-migratory species has dropped by 60% since 1981 to less than 3,000 individuals. The entire viable population of this species resides in Everglades National Park.

2. The U. S. Fish and Wildlife Service (USFWS) issued a "jeopardy" Biological Opinion February 19, 1999, concerning six sub-populations (A-F) of the endangered sparrow in

Everglades National Park (hereafter "ENP"). The Biological Opinion includes a recommendation for "reasonable and prudent alternatives" to avoid jeopardizing the endangered sparrow.

3. To meet the requirements of the Biological Opinion, the U.S. Army Corps of Engineers (hereafter "Corps") developed the December 14, 1999, Interim Structural and Operational Plan (hereafter "ISOP"), which involved moving water out of Water Conservation Area 3A eastward via the L-29 Borrow Canal and southward via the L-31N Borrow Canal.

4. The existing S-332D pump station is a pump station constructed by the Corps as a permanent feature of the C-111 project. Construction of the S-332D Pump Station was exempted from the permitting requirements of Chapters 373 and 403, F.S., pursuant to Section 373.4593(3), F.S. on June 4, 1996.

5. The existing S-332B pump station is a temporary pump station and detention area constructed by the Corps as an interim feature of the overall C-111 Project. Construction of the S-332B Pump Station was exempted from the permitting requirements of Chapters 373 and 403, F.S. on January 24, 2000.

6. On April 21, 2000, the Department issued Emergency Final Order No. 00-0889 authorizing the Corps to operate the S-332B pump station and detention area consistent with ISOP. The S-332B pump station was operated to withdraw water from the L-31N borrow canal and discharge westward into a detention area adjacent to ENP. The original expiration date of the Emergency Final Order was June 16, 2000. The expiration date of the Order was subsequently extended to October 26, 2000, through the Department's issuance on June 19, 2000, of a First Amended Emergency Order.

7. On December 30, 2000, the Department issued Emergency Final Order No. 99-2242 authorizing the Corps to operate the S-332D pump station consistent with ISOP. The pump station was operated to withdraw water from the C-111 canal and discharge into the L-31W borrow canal. The L-31W borrow canal is adjacent to ENP. The expiration date of the emergency final order was November 30, 2000.

8. Emergency Final Orders No. 99-2242 and 00-0889 were consolidated and their expiration dates extended through the Department's issuance on October 24, 2000, of a Second Amended Emergency Order. The expiration date of the combined orders were extended again to July 21, 2001, upon the issuance of the Department's Third Amended Emergency Order on July 02, 2001, extended again to January 23, 2002, upon the issuance of the Department's Fourth Amended Emergency Order on July 20, 2001, and extended again to July 23, 2002, upon issuance of the Department's Fifth Amended Emergency Order on January 23, 2002.

9. The Corps, in conjunction with the South Florida Water Management District, ENP, and U.S. Fish and Wildlife Service, developed the Interim Operational Plan (hereafter "IOP") to supersede ISOP. The Final Environmental Impact Statement (hereafter "FEIS") "Interim Operational Plan for the Protection of the Cape Sable Seaside Sparrow", May2002, concluded that construction of the accelerated features would facilitate the Corps' ability to meet the requirements of the Biological Opinion, by providing the hydrologic control necessary to maintain appropriate hydrologic conditions in the vicinity of endangered sparrow nesting habitat, while reducing or eliminating overland flow of surface waters into ENP and maintaining the existing level of flood protection.

10. On March 15, 2002, the Corps requested construction authorization for the C-111 accelerated features, as described in the Scope of Work for the Construction of the IOP

Emergency Contract, Dade County, Florida (attached as Exhibit A of Sixth Amended Emergency Final Order). These features are part of the overall C-111 Project. Elements of the overall C-111 Project that are part of the C-111 accelerated features include: construction of an additional 230 acre detention area to the north of the existing S-332B interim pump station, modification of the existing S-332B detention area, construction of a new 810 acre detention area associated with the existing S-332D pump station, and construction of the S-332B to S-332C Detention Areas Offset Connector and Land Swap Detention Areas.

11. The Department found that an emergency authorization was required to allow the Corps to proceed with construction of the C-111 accelerated project features immediately.

12. The Department found that that modification of the Fifth Amended Emergency Final Order Nos. 00-0889 and 99-2242 was necessary to allow the Corps to continue to operate the S-332B and S-332D pump stations and appurtenant structures consistent with the ISOP and to proceed with construction of the C-111 accelerated project features. Therefore, the Sixth Amended Emergency Order was issued on March 28, 2002 with an expiration date of September 28, 2002.

13. Upon completion of the accelerated features, the Corps requested immediate authorization to operate the S-332B, S-332C, S-332D, and appurtenant structures under the operational guidelines identified in Table 2.11 of the FEIS for IOP (Exhibit A), which identifies the guidance under which these system features will be operated.

14. The IOP was developed to meet the recommendations in the U.S. Fish and Wildlife Service's February 1999 Biological Opinion, while balancing impacts to other purposes of the Central & South Florida project (hereafter "C&SF").

15. There was an urgent need to implement operations of these facilities in accordance with IOP to avoid jeopardy to the critically endangered sparrow, maintain flood protection capability, and address water quality concerns related to direct discharges into ENP. Therefore, the Department issued the Seventh Amended Emergency Order on July 31, 2003, authorizing operations of the S-332B, S-332C, and S-332D pump stations and appurtenant structures consistent with the IOP. The expiration date of the Seventh Amended Emergency Order was January 31, 2003, which was extended to January 31, 2004, upon issuance of the Department's Eight Emergency Order on January 31, 2003.

16. IOP is an interim operating plan that will be superseded by the Combined Structural and Operational Plan (hereafter "CSOP") upon its completion. CSOP is an integrated structural and operational plan for the Modified Water Deliveries (MWD) project and the C-111 project. The purpose of CSOP is to determine if any structural design refinements may be necessary to better integrate operations of the C-111 and MWD projects in accordance with their project purposes and to define the operational plan for these C&SF modifications, which were not included in previous design documents. CSOP is expected to achieve the long-term goals identified for these projects, while IOP was intended to provide a reasonable balance between purposes of the C&SF project and protection of the endangered sparrow during an interim period prior to completion of all structural features. IOP was not intended to represent the ideal structural or operational conditions, but rather, to provide an acceptable interim operational strategy.

17. Since hydrologic conditions in the vicinity of the endangered sparrow's habitat continue to threaten the viability of the endangered sparrow, necessitating the continued operation of the existing C-111 project features, and due to the temporary nature of IOP, the

Department finds that modification of the Eighth Amended Emergency Final Order Nos. 00-0889 and 99-2242 is necessary to allow the Corps to continue to operate the S-332B, S-332C, and S-332D pump stations and appurtenant structures consistent with IOP.

18. The Corps shall continue water quality and hydrologic monitoring of the existing C-111 Project features, to identify and evaluate water quality and hydrologic conditions. The monitoring work provides water quality data to evaluate compliance with state water quality standards and the interim and long-term phosphorus concentration limits contained within the Settlement Agreement to the Federal Everglades lawsuit (CASE NO. 88-1886-CIV-HOEVELER), and hydrologic data necessary for the adaptive operation of the pump stations to meet the requirements of the Biological Opinion while minimizing impacts to the water supply and flood protection purposes of the C&SF project.

CONCLUSIONS OF LAW

19. Section 373.119 of the Florida Statutes gives the Department the authority to issue an Emergency Final Order if, as agency head, I find that an emergency exists requiring immediate action to protect the public health, safety, or welfare; the health of animals, fish or aquatic life; a public water supply; or recreational, commercial, industrial, agricultural or other reasonable uses; and the order recites with particularity the facts underlying that conclusion.

20. Based on the above findings, I hereby conclude that discharges from the S-332B, S-332C, and S-332D pump stations are necessary to protect the public health, safety, and welfare; the health of animals, fish or aquatic life; and recreational, commercial, industrial, agricultural and other reasonable uses.

21. Based on the above findings, I hereby conclude that construction of the C-111 accelerated features is necessary to protect the public health, safety, and welfare; the health of animals, fish or aquatic life; and recreational, commercial, industrial, agricultural and other reasonable uses.

22. Suspension of permit conditions, statutes and rules, as noted in paragraph 26 of the following section, is required to prevent any hindrance or delay of necessary action in coping with the emergency.

THEREFORE, IT IS ORDERED:

23. Description of Authorized Project

The Corps is hereby authorized to operate and monitor the S-332B, S-332C, and S-332D pump stations and associated detention areas in accordance with the operational guidelines identified in Table 2.11 of the FEIS for IOP and the attached monitoring plan (Exhibit B). Operation of the S-332B, S-332C, and S-332D pump stations and appurtenant facilities shall only be performed for the purpose of complying with the U. S. Fish and Wildlife Service's February 19, 1999, Biological Opinion while balancing impacts to other purposes of the C&SF project. Operation of the pump stations for any other purpose is not authorized by this order.

The Corps is hereby authorized to construct the remaining C-111 accelerated project features (S-332B to S-332C Detention Areas Offset Connector and Land Swap Detention Areas) as described in the Scope of Work for the Construction of the IOP Emergency Contract (attached as Exhibit A of Sixth Amended Emergency Final Order) and the modified weir scenario identified in Specific Condition 25(g).

24. General Conditions

(a) The Corps shall implement the emergency operation activities for the S-332B, S-332C, S-332D, and appurtenant structures and construction activities for the C-111 accelerated project features and modified weir scenario in a manner that will minimize detrimental impacts (including harmful flooding and degradation of water quality) to the environment, to the public, to adjacent properties, and to downstream receiving waters to the greatest extent practicable, pursuant to federal law and Sections 373.413 and 373.414 of the Florida Statutes. The Corps shall implement the emergency operation activities for pump stations S-332B, S-332C, and S-332D and appurtenant structures and construction activities for the C-111 accelerated project features and modified weir scenario in a manner that will maximize beneficial impacts to the environment to the greatest extent practicable consistent with the hydrological and biological restoration goals of the Everglades Forever Act (Section 373.4592, F.S.) and the Florida Bay Restoration Act (Section 373.4593, F.S.). Should any adverse impacts occur from conducting the emergency activities, the Corps shall be liable for damages to the extent applicable under federal and state law.

(b) The Corps shall avoid any actions that would adversely affect sub-populations C and D of the endangered sparrow. In the event that either the Department or the Corps subsequently determines that the proposed emergency operation activities will adversely affect or are adversely affecting sub-populations C or D of the endangered sparrow, the Corps shall cease emergency operations affecting sub-populations C or D. If the Corps makes the above determination, it shall notify the Department at the addresses and telephone numbers listed below within 24 hours of the date of such determination.

(c) All activities authorized by this Emergency Final Order shall be performed using appropriate best management practices. For activities conducted in or discharging to wetlands or other surface waters, best management practices shall include properly installed and maintained erosion and turbidity control devices, to prevent erosion and shoaling and to control turbidity. These turbidity/erosion controls shall be installed prior to any clearing, excavation or placement of fill material and shall be maintained in an effective conditions at all locations until construction is completed, disturbed areas are stabilized, and turbidity levels have fallen to less than 29 NTUs above background for flows to Class III Waters and to background levels for flows to OFW. The Corps shall be responsible for ensuring that erosion control devices/procedures are inspected/maintained during all phases of construction authorized by this Order. Additional activities, as described in the document entitled, "The Florida Development Manual - A Guide to Sound Land and Water Management" (revised February 1993), shall be conducted as needed to prevent degradation of adjacent wetlands and surface waters, to prevent violations of state water quality standards, and to comply with the provisions of the Stormwater Pollution Prevention Plan required by Specific Condition 27(f).

(d) If, for any reason, the Corps does not comply with any condition or limitation specified in this Emergency Final Order, the Corps shall immediately provide the Department's Office of Ecosystem Projects, Water Quality Standards and Special Projects Program, and Southeast District Office with a written report containing the following information: a description and cause of noncompliance; 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. Reports shall be provided to the above-referenced Department offices at the following addresses:

Florida Department of Environmental Protection
Office of Ecosystem Projects
3900 Commonwealth Boulevard, MS 45
Tallahassee, Florida 32399-3000
Telephone (850) 245-2086; Fax (850) 245-2147

Florida Department of Environmental Protection
Water Quality Standards and Special Projects Program
2600 Blair Stone Road, MS 3560
Tallahassee, Florida 32399-2400
Telephone (850) 245-8416; Fax (850) 412-0681

Florida Department of Environmental Protection
Southeast District Office, Environmental Affairs Program
P. O. Box 15425
West Palm Beach, Florida 33416-5426
Telephone (561) 681-6600 Fax (561) 681-6755

(e) This Emergency Final Order 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 sovereignty land of Florida seaward of the mean high-water line, or, if established, the erosion control line, unless herein provided and the necessary title, lease, easement, or other form of consent authorizing the proposed use has been obtained from the Board of Trustees of the Internal Improvement Trust Fund.

(f) This Emergency Final Order does not convey to the Corps or create in the Corps any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property that is not owned or controlled by the Corps. The issuance of this Emergency Final Order does not convey any vested rights or any exclusive privileges.

(g) The Corps specifically agrees to allow authorized Department personnel access to the premises where the authorized activity is located or conducted for the purpose of ascertaining compliance with the terms of the Emergency Final Order; to have access to and copy any records that must be kept under conditions of the Emergency Final Order; to inspect the facility,

equipment, practices, or operations regulated or required under this Emergency Final Order; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this Emergency Final Order.

25. Specific Conditions

(a) The Corps will conduct monitoring activities for the operation of the S-332B, S-332C, and S-332D pump stations and appurtenant structures as described in attached Exhibit B of this Emergency Final Order. All reports and data generated as a result of this monitoring shall be submitted to the Water Quality Standards and Special Projects Program (at the address listed above) upon receipt by the Corps and within a timely manner.

(b) The IOP plan relies heavily on adaptive management and flexible water management operations; therefore, the system must be closely monitored to maximize intended benefit and avoid unintended consequences. Close coordination with the Department shall be maintained to address any potential water quality, flood protection, and environmental resource issues in a timely fashion. To this end, the Corps will submit quarterly operational status reports to the addresses listed in General Condition 24(d), on the operation of the structures (pump stations and reservoirs) relative to canal water levels including details on any overflow events. Reports shall be provided to the Department no later than 14-days after the reporting period ends.

(c) The Corps will conduct biological monitoring activities for the construction of the C-111 accelerated project features in accordance with Section 01410 of IOP Emergency Contract Construction Solicitation and Specifications, RFP No. DACW17-02-R-0014. All reports and data generated as a result of this monitoring shall be submitted to the Department in a timely manner or made available at the Corps ftp site with notice given to the Department as to its availability.

(d) The Corps will conduct turbidity monitoring activities during construction activities in accordance with Section 01411 of the IOP Emergency Contract Construction Solicitation and Specifications, RFP No. DACW17-02-R-0014. All data generated as a result of this turbidity monitoring shall be submitted to the Department on a weekly basis or made available at the Corps ftp site with notice given to the Department as to its availability. In the event of any turbidity exceedances, the Corps shall provide the Department with a report describing the nature of the exceedance and any corrective actions taken to address the problem.

(e) As manatees use many of the canals involved in the C-111 accelerated project, additional protective measures are necessary to protect manatees during construction activities and shall be closely coordinated with the Florida Fish and Wildlife Conservation Commission. The Corps shall designate a manatee observer to advise personnel to cease operation upon sighting of a manatee within 50 feet of any in-water construction activity. Furthermore, blasting is prohibited until a blasting proposal has been submitted and approved by the Bureau of Protected Species Management, Office of Environmental Services, Florida Fish and Wildlife Conservation Commission.

(f) Prior to construction of the C-111 accelerated project features, the Corps shall submit a Stormwater Pollution Prevention Plan to the Department's Water Quality Standards and Special Project Program for approval, pursuant to Rule 62-621.300(4), F.A.C. During the construction of the C-111 accelerated project features, the Corps shall abide by the conditions of the Generic Permit for Stormwater Discharge from Construction Activities that Disturb Five or More Acres of Land (CGP) (DEP Document No. 62-621.300(4)(a)).

(g) The Corps will complete construction of one of the following by the end of dry season 2005: 1) Option 2 of the proposed modified weir scenarios, as long as the necessary lands

have been certified and unless formal consultation under Section 7 of the Endangered Species Act is required by FWS to proceed with the modified weir scenario, or 2) the Land Swap Detention Areas, unless congressional authorization of the Land Swap has not occurred. Both options are subject to Federal appropriations.

An opportunity for interagency input (including the South Florida Water Management District, Everglades National Park, the USFWS, the Department, and the Florida Department of Agriculture and Consumer Services) on detailed design and an appropriate monitoring plan shall be provided prior to proceeding with construction of Option 2 of the proposed modified weir scenarios. In addition during detailed design of Option 2, a weir or berm equivalent to the berm proposed for the east side of the missing portion of the B-C Connector shall be constructed along the west boundary between the missing portion of the B-C connector and the proposed land swap area to encourage detention. The overflow/discharge structure from this western weir/berm shall be set at elevation 10.0 (3.5 feet above grade) or other appropriate elevation and shall be designed to maximize sheetflow from the structure to as broad an area within the land swap area as possible. Upon completion of the weir design and prior to initiation of construction, detailed design information and a proposed monitoring plan shall be submitted to the Department for review and approval.

26. Suspension of Statutes and Rules

The following provisions of permits, statutes and rules are hereby suspended for the activities authorized by this Order for the duration of this Order:

(a) For those activities noted above, subject to the limitations, duration and other provisions of this Order, all requirements for permits, leases, consents of use or other

authorizations under Chapters 253, 373, 376 and 403 of the Florida Statutes, and rules adopted thereunder.

(b) Notice requirements of sections 253.115, and 373.413 of the Florida Statutes and rules 18-21, 62-4, and 62-312 of the Florida Administrative Code; and,

(c) Application fee, lease fee, and easement fee requirements of sections 373.109 of the Florida Statutes and Rules 18-21, and 62-4 of the Florida Administrative Code.

27. Other Authorizations Required

Nothing in this Emergency Final Order shall eliminate the necessity for obtaining any other federal, state, water management district, or local permits or other authorizations that may be required.

28. Adverse Off-Site Impacts

(a) The Corps shall ensure that adverse off-site water resource related impacts do not occur as a result of this Emergency Final Order and shall fully monitor conditions related to the activities authorized by this order.

(b) The correction of any erosion, shoaling, water quality, or flooding problems that result from the operation of the structures authorized by this order shall be the sole responsibility of the Corps. In addition, the Corps shall immediately resolve such problems to the Department's satisfaction.

(c) If any adverse water quality, water quantity, or other negative environmental impacts occur as a result of this Emergency Final Order, the Department reserves the right to immediately revoke or modify this authorization upon written notice.

29. Immunity from Liability

The Department's immunity from liability under Section 373.443 of the Florida Statutes for any damages that might result from the activities authorized by this Emergency Final Order shall not be diminished by the terms of this order or any activities taken pursuant to this order.

30. Water Quality Certification

The Department waives water quality certification for those activities authorized by this Emergency Final Order.

31. Violation of Conditions of Emergency Final Order

Failure to comply with the conditions set forth in this Emergency Final Order shall constitute a violation of a Department Final Order under chapters 373, 376, and 403 of the Florida Statutes, and enforcement proceedings may be brought in any appropriate administrative or judicial forum.

32. Expiration Date

The Department finds that this state of emergency is expected to continue up until implementation of CSOP. Therefore, this Emergency Final Order shall remain in effect until implementation of CSOP, unless rescinded, modified or extended by further order of the Department.

33. Effective Date

This Emergency Final Order shall be effective as of January 31, 2004.

NOTICE OF RIGHTS

Any person to whom this emergency order is directed may petition the Department for a hearing before the agency head in accordance with section 373.119 of the Florida Statutes.

Any party substantially affected by this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 and 9.190 of the Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

DONE AND ORDERED on this 28 day of January 2004 in Tallahassee, Florida.

STATE OF FLORIDA, DEPARTMENT
OF ENVIRONMENTAL PROTECTION

David B. Struhs

DAVID B. STRUHS
Secretary
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

FILING AND ACKNOWLEDGMENT
FILED, on this date under Section 120.52 of the Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Cynthia L Kinsey
Deputy Clerk

1/29/04
Date

CERTIFICATE OF SERVICE

I, _____, HEREBY CERTIFY that a true and correct copy of this Emergency Final Order was sent electronically to the following persons on this 29 day of January 2004:

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Exhibit A- Table 2.11 IOP Operations

	No WCA-3A Regulatory Releases to SDCS or Shark Slough	WCA-3A Regulatory Releases to SDCS
Regulation Schedule	Deviation schedule for WCA-3A, November 2000 WCA-3A interim regulation schedule) as specified by USACE including raising Zone D to Zone C from Nov 1 to Feb 11. No deviation in WCA-2A regulation schedule.	Deviation schedule for WCA-3A, November 2000 WCA-3A interim regulation schedule) as specified by USACE including raising Zone D to Zone C from Nov 1 to Feb 11. No deviation in WCA-2A regulation schedule.
S-343 A/B and S-344	Closed Nov 1 to July 15 independent of WCA-3A levels.	Closed Nov 1 to July 15 independent of WCA-3A levels.
S-12 A/B/C/D Sandbag culverts under Tram Road by 1 February if necessary.	S-12A closed Nov 1 to Jul 15; S-12B closed Jan 1 to Jul 15; S-12C closed Feb 1 to Jul 15; S-12D no closure dates. Follow WCA 3A regulation schedule after Jul 15. Note: If closure requires regulatory releases to SDCS then switch to operations for regulatory releases to SDCS.	S-12A closed Nov 1 to Jul 15; S-12B closed Jan 1 to Jul 15; S-12C closed Feb 1 to Jul 15; S-12D no closure dates. Follow WCA 3A regulation schedule after Jul 15.
S-333: G-3273 < 6.8' NGVD Degrade the lower four miles of the L-67 extension	55% of the rainfall plan target to NESRS and 45% through the S-12 structures When WCA-3A is in Zone E1 or above, maximum practicable through S-333 to NESRS per WCA-3A deviation schedule.	55% of the rainfall plan target to NESRS, plus as much of the remaining 45% that the S-12s can't discharge to be passed through S-334; and subject to capacity constraints, which are 1350 cfs at S-333, L-29 maximum stage limit, and canal stage limits downstream of S-334. When WCA-3A is in Zone E1 or above, maximum practicable through S-333 to NESRS per WCA-3A deviation schedule.
S-333: G-3273 > 6.8' NGVD	Closed	Match S-333 with S-334 flows
L-29 constraint	9.0 ft	9.0 ft
S-355A&B	Follow the same constraints as S-333. Open whenever gradient allows southerly flow.	Follow the same constraints as S-333. Open whenever gradient allows southerly flow.
S-337	Water Supply	Regulatory releases as per WCA-3A deviation schedule.
S-151	Water Supply	Regulatory releases as per WCA-3A deviation schedule.
S-335	Water Supply The intent is to limit the volume of water passed at S335 to pre-ISOP conditions and not use S332B, S332C, or S332D or other triggers to pass additional flows. Note: It is recognized that under	When making regulatory releases through S-151, limit S-335 outflows to not exceed inflows from the S-151/S-337 path Use S-333/S-334 before S-335/S-151/S-337

	these conditions operations of S-335 would be infrequent.	
S-334	Water Supply	Pass all or partial S-333 flows Depending on stage at G-3273
S-338	Open 5.8 Close 5.5	Open 5.8 Close 5.4
G-211 Tailwater constraint 5.3	Open 6.0 Close 5.5	Open 5.7 Close 5.3
S-331	Angel's Criteria	Angel's Criteria
S-332B Note 1: There will be two 125-cfs pumps and one 75-cfs pump directed to the west seepage reservoir. The remaining two 125-cfs pumps will be directed to the north seepage reservoir. Note 2: A new indicator will be established for Subpopulation F. Operations will be modifed as necessary to achieve desired habitat conditions consistent with the restoration purposes outlined in the C-111 GRR.	Pumped up to 575 cfs* On 5.0 Off 4.7** *Pump to capacity if limiting conditions within the Sparrow habitat are not exceeded. There will be no overflow into the Park when the project (i.e., the S-332B north seepage reservoir and the partial S-332B/S-332C connector) is complete and when it is practical to do the construction necessary to raise the western levee. There may be overflow during emergency events until the project is complete and the western levee is raised. **If, after the first 30 days of operation, there is no observed drawdown at the pump, this stage level will be raised to 4.8	Pumped up to 575 cfs* On 4.8 Off 4.5 *Pump to capacity if limiting conditions within the Sparrow habitat are not exceeded. There will be no overflow into the Park when the project (i.e., the S-332B north seepage reservoir and the partial S-332B/S-332C connector) is complete and when it is practical to do the construction necessary to raise the western levee. There may be overflow during emergency events until the project is complete and the western levee is raised.
S-332B North Seepage Reservoir	The north reservoir is the new 240-acre reservoir located to the north of the pump station with a weir discharging to the east. Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if the Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0 feet when possible.	The north reservoir is the new 240-acre reservoir located to the north of the pump station with a weir discharging to the east. Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if the Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0 feet when possible.

S-332B West Seepage Reservoir	The west reservoir is the existing 160-acre reservoir and is to the west of the pump station. There will be no overflow into the Park when the project (i.e., the S-332B north seepage reservoir and the partial S-332B/S-332C connector) is complete and when it is practical to do the construction necessary to raise the western levee. There may be overflow during emergency events until the project is complete and the western levee is raised. Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if the Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0 feet.	The west reservoir is the existing 160-acre reservoir and is to the west of the pump station. There will be no overflow into the Park when the project (i.e., the S-332B north seepage reservoir and the partial S-332B/S-332C connector) is complete and when it is practical to do the construction necessary to raise the western levee. There may be overflow during emergency events until the project is complete and the western levee is raised. Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if the Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0 feet.
S332C The S-332C pump capacity is temporary. A new indicator will be established and a new gauge will be installed in Rocky Glades. Operations will be modifed as necessary to achieve desired habitat conditions consistent with the restoration of Taylor Slough based on the C-111 GRR.	Pumped up to 575 cfs* On 5.00 Off 4.70** * Pump to capacity unless habitat conditions are not being achieved within the Rocky Glades. There will be no overflow into the Park. **If, after the first 30 days of operation, there is no observed drawdown at the pump, this stage level will be raised to 4.8	Pumped up to 575 cfs* On 4.8 Off 4.5 * Pump to capacity unless habitat conditions are not being achieved within the Rocky Glades. There will be no overflow into the Park.
S-332C Seepage Reservoir	300 acres with overflow to the east Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of	300 acres with overflow to the east Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of

	2.0 feet. However, if the Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0 feet.	2.0 feet. However, if the Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0 feet.
S-332B/S-332C Connector	141 acres partial 206 acres full 1,262 acres with the land swap Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0' The Corps, FWS, ENP, and SFWMD will jointly develop a rule for emergency operations that is consistent with C-111 project purposes before the land swap B/C connector is used.	141 acres partial 206 acres full 1,262 acres with the land swap Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin. This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to 4.0'. The Corps, FWS, ENP, and SFWMD will jointly develop a rule for emergency operations that is consistent with C-111 project purposes before the land swap B/C connector is used.
S-332D	Pumped up to 500 cfs from Jul 16 (or the end of the breeding season, as confirmed by FWS) to Nov 31; 325 cfs from Dec 1 to Jan 31; and 165 cfs* from Feb 1 to Jul 15. Meet Taylor Slough Rainfall formula consistent with marsh restoration (No L-31W constraint) On 4.85 Off 4.65 *New information will be sought to evaluate the feasibility of modifying the 165 cfs constraint	Pumped up to 500 cfs from Jul 16 (or the end of the breeding season, as confirmed by FWS) to Nov 31; 325 cfs from Dec 1 to Jan 31; and 165 cfs* from Feb 1 to Jul 15. Meet Taylor Slough Rainfall formula consistent with marsh restoration (No L-31W constraint) On 4.7 Off 4.5 *New information will be sought to evaluate the feasibility of modifying the 165 cfs constraint
Frog Pond Seepage Reservoir	810 acres with overflow into Taylor Slough Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin.	810 acres with overflow into Taylor Slough Normal operations will be targeted to achieve marsh restoration. However, this provision does not include a requirement to maintain water levels in the reservoirs during dry conditions by bringing water in from outside the drainage basin.

	This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if Corps determines that a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to a maximum of 4.0 feet. However, a depth of 4.0 feet in the Frog Pond is not possible at this time due to the constraint of the S-332D pump station outlet elevation.	This seepage reservoir will have a normal maximum depth of water of 2.0 feet. However, if Corps determines a flood emergency exists similar to an event like the "No Name" storm, the depth of water would be increased to a maximum of 4.0 feet. However, a depth of 4.0 feet in the Frog Pond is not possible at this time due to the constraint of the S-332D pump station outlet elevation.
S-332	Closed	Closed
S-175	Closed	Closed
S-194	Open 5.5 Close 4.8	Operated to maximize flood control discharges to coast Open 4.9 Close 4.5
S-196	Open 5.5 Close 4.8	Operated to maximize flood control discharges to coast Open 4.9 Close 4.5
S-176	Open 5.0 Close 4.75	Open 4.9 Close 4.7
S-177	Open 4.2 (see S-197 open) Close 3.6	Open 4.2 (see S-197 open) Close 3.6
S-18C	Open 2.6 Close 2.3	Open 2.25 Close 2.00
S-197	If S-177 headwater is greater than 4.1 or S-18C headwater is greater than 2.8 open 3 culverts If S-177 headwater is greater than 4.2 for 24 hours or S-18C headwater is greater than 3.1 open 7 culverts If S-177 headwater is greater than 4.3 or S-18C headwater is greater than 3.3 open 13 culverts Close gates when all the following conditions are met: 1. S-176 headwater is less than 5.2 and S-177 headwater is less than 4.2 2. Storm has moved away from the basin 3. After Conditions 1 and 2 are met, keep the number of S-197 culverts open necessary only to match residual flow through S-176. All culverts should be closed if S-177 headwater is less than 4.1 after all conditions are satisfied.	If S-177 headwater is greater than 4.1 or S-18C headwater is greater than 2.8 open 3 culverts If S-177 headwater is greater than 4.2 for 24 hours or S-18C headwater is greater than 3.1 open 7 culverts If S-177 headwater is greater than 4.3 or S-18C headwater is greater than 3.3 open 13 culverts Close gates when all the following conditions are met: 1. S-176 headwater is less than 5.2 and S-177 headwater is less than 4.2 2. Storm has moved away from the basin 3. After Conditions 1 and 2 are met, keep the number of S-197 culverts open necessary only to match residual flow through S-176. All culverts should be closed if S-177 headwater is less than 4.1 after all conditions are satisfied.
S-356	When conditions permit (i.e., G-3273 and L-29 constraints),	When conditions permit (i.e., no S-334 regulatory releases and G-3273

	discharges from S356 will go into L-29. Pumping will be limited to the amount of seepage into L-31N in the reach between S-335 and G-211. A technical team will evaluate pumping limits and operations. The pumps will be operated accordingly.	and L-29 constraints), discharges from S356 will go into L-29. Pumping will be limited to the amount of seepage into L-31N in the reach between S-335 and G-211. A technical team will evaluate pumping limits and operations. The pumps will be operated accordingly.

Note: Prestorm drawdown will be the same as in the Oct 01 SDEIS with the additional language….

Operations for other than named events. SFWMD will monitor antecedent conditions, groundwater levels, canal levels and rainfall. If these conditions indicate a strong likelihood of flooding, SFWMD will make a recommendation to the Corps to initiate pre-storm operations. The Corps will review the data, advise ENP, FWS of the conditions, consult with the Miccosukee Tribe and make a decision whether to implement pre-storm drawdown or otherwise alter systemwide operations from those contained in the table.

Note: The Chairman of the Miccosukee Tribe of Indians of South Florida or his designated representatives, will monitor the conditions in WCA3A and other tribal lands and predicted rainfall. If the Tribe determines these conditions indicate jeopardy to the health or safety of the Tribe, the Chairman will make a recommendation to the Corps to change the operations of the S12 structures or other parts of the system. The Corps will review the data, advise appropriate agencies of the conditions, and the District Commander will personally consult with the Chairman prior to making a decision whether to implement changes to the S12 operations.

Exhibit B

WATER QUALITY MONITORING PLAN

IOP EMERGENCY OPERATIONS FOR THE
CAPE SABLE SEASIDE SPARROW BREEDING SEASON

1.0 Introduction

The following monitoring plan is an excerpt from a more comprehensive monitoring plan for this project that has been proposed by the South Florida Water Management District (District) and the U.S. Army Corps of Engineers (Corps) currently titled "SFWMD C-111 Project Monitoring Plan" dated November 11, 2002. The Corps and SFWMD will operate the structures and monitor the implementation of the IOP under the terms and conditions of the C-111 Project Cooperation Agreement (PCA) executed in 1995. As local sponsor, the District has agreed to operate and maintain the C-111 Project facilities. The Corps and the District have agreed to jointly develop a monitoring plan that will assess the hydrologic, environmental and water quality changes that may occur as a result of the IOP. The aforementioned plan is a result of intra-agency discussions and was submitted by the Corps in their C-111 permit application. For the purposes of this Emergency Order, only portions of the monitoring plan that address DEP regulatory requirements have been incorporated (Functional Section 1).

However despite the fact that the other portions of the monitoring plan (Functional Sections 2, 3, and 4) are not explicit requirements of this Emergency Order, the Department expects these portions of the comprehensive C-111 monitoring plan to be implemented as well. Some portions of the comprehensive plan (Functional Sections 2 and 3) are currently being implemented by existing contracts the District has executed/funded with FIU through the end of Fiscal Year 2003 (FY 03). In the event that those contracts are not renewed for the following fiscal year (FY 04), the Department may have to reevaluate the requirements of the Emergency Order monitoring plan to ensure that the remaining portions of the monitoring plan are sufficient. The comprehensive monitoring plan is important for evaluating project performance and downstream effects of the project and subsequently to optimize operations. This type of monitoring is critical for an environmental restoration project such as this. Therefore, the Corps shall provide the Department with bimonthly (every two months) reports on the status of the other portions of the comprehensive monitoring plan including an expected or initial implementation date, explanation of monitoring efforts being conducted, and results of these monitoring efforts.

2.0 Monitoring Required

The intent of this monitoring plan is to demonstrate compliance with applicable water quality standards at the point of discharge. Specifically the goal of the plan is to quantify water quality and provide sufficient data to develop a mass balance for constituents of interest. To accomplish these goals the monitoring plan must

1. Measure a water budget for each detention area.
2. Measure concentrations of phosphorus and nitrogen entering and leaving the detention areas.
3. Calculate the loads of phosphorus and nitrogen entering and leaving the detention areas through surface water and groundwater.
4. Measure and evaluate sources of pesticides and other pollutants to and from the detention areas.

A familiarity with the physical structure and features of the detention areas is required to comprehend the monitoring plan. Figure 1 presents a conceptual map of the project with labels for all of the major physical components and structures. These labels are interim designations to facilitate the discussion of monitoring. At the current time, there are two distinct detention areas. The S332D Detention Area is supplied with water from the S332D pump station and is comprised of four distinct cells: Head Cell, Cell 4, Cell 5, and the Flow Way. The Head Cell is separated from Cell 4 by a concrete berm (B1). Cell 4 is separated from Cell 5 by an earthen berm (B2). Cell 5 is separated from the Flow Way by a concrete berm (B3). The Flow Way discharges into ENP through a degraded portion of the L31N levee, however, depending on water levels, water may flow from ENP into the Flow Way. Given the problems with measuring flow at the degraded levee, berm B3 will be used as a surrogate for both flow and nutrient discharges into ENP. The second detention area has been labeled the S332B Detention Area and S332C Detention Area, which are hydrologically linked. The S332B Detention Area is supplied with water from the S332B pump station and is comprised of two cells. Water from S332B is pumped into either Cell 1 or Cell 2. Water from the Cell 2 may then flow out into the Connector Cell. The Connector Cell then discharges into the Cell 3. Cell 3 and the Connector Cell are also directly supplied with water from the S332C Pump Station. In the future, all the detention areas may be redesigned and linked hydrologically.

In an effort to reduce the repetition of the descriptions of monitoring components, this plan treats the detention areas as a single project with multiple cells, three inflows, a single outflow, and four diversion structures.

Particular interest is paid to hydrologic monitoring. This project is based on the control and management of interactions between surface water and groundwater. Consequently, it would seem necessary to have a thorough understanding of the movement of water in and out of the detention area. Towards this end, a water budget must be developed. Additionally, a water budget will provide the necessary basis for the construction of a nutrient budget, which is key to understanding possible impacts to downstream areas.

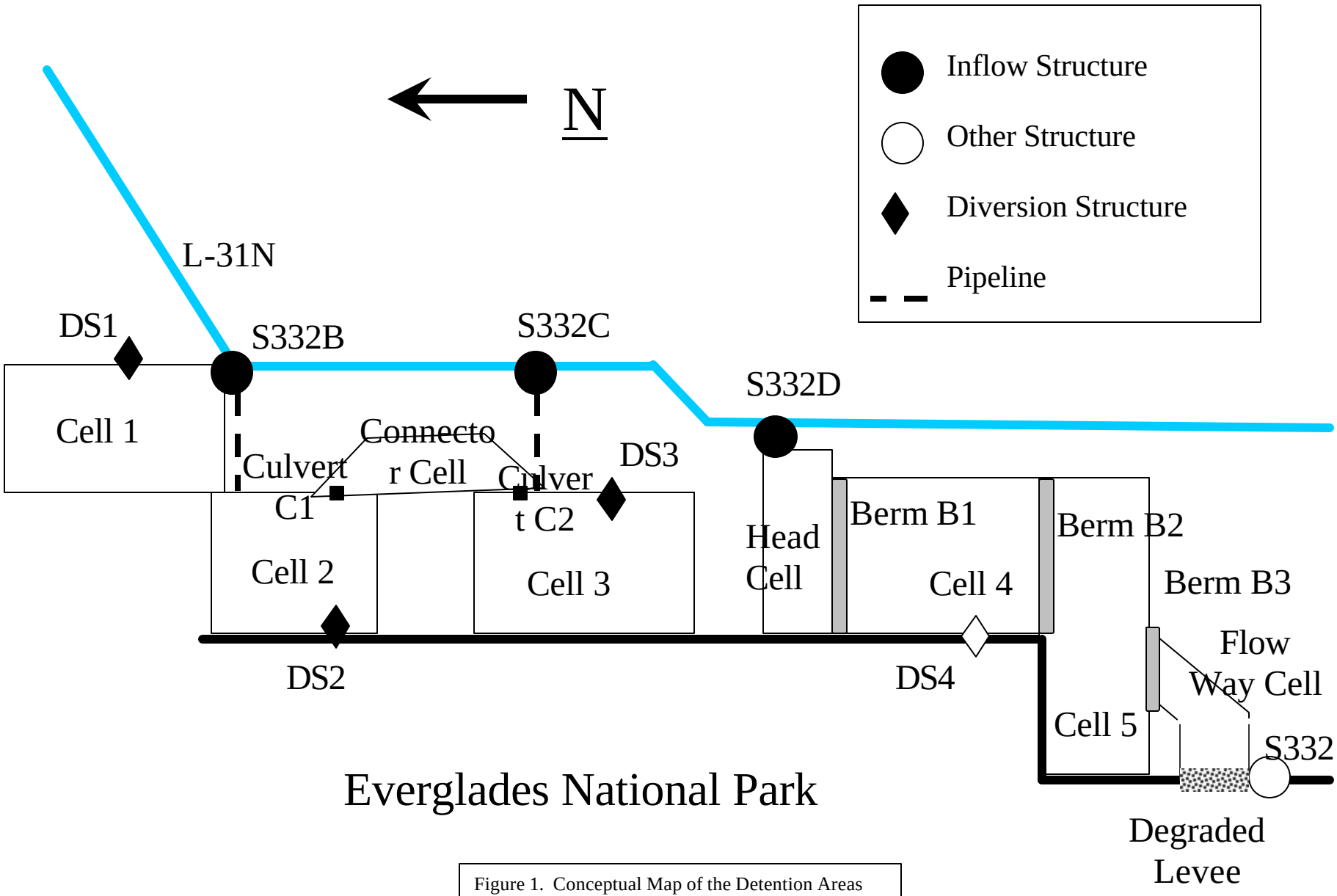

Figure 1. Conceptual Map of the Detention Areas

2.1 Hydrologic Monitoring

2.1.1 Surface Water Flows

Surface water flows will be measured at the inflows to the project at S332B, S332C, and S332D. Surface water flows will be measured at the outflow Berm B3. Water flow over the diversion structures (DS1, DS2, DS3 and DS4) will be calculated using staff gauges in each of the cells.

2.1.2 Surface Water Stage

Staff gauges will be installed in all eight cells.

2.1.3 Groundwater Exchange

Seepage from each cell will be estimated by difference.

2.1.4 Meteorological Parameters and Evapotranspiration

Rainfall monitoring sites exist at S174 and S332. Weather stations exist at S331W and in Joe Bay. Evapotranspiration will be calculated using data from these stations. The average evapotranspiration for these two sites will represent evapotranspiration for the detention areas, as will averages for other meteorological parameters.

2.2 Surface Water Monitoring

The following are the parameters and frequencies to be monitored during routine operations. Additionally, surface water pesticides and mercury data collected by the Corps must be evaluated to determine if pesticides and mercury need to be sampled at the inflow and outflow sites on a more frequent basis.

2.2.1 Inflows and Outflows of Detention Areas

The three inflows to the project (S332B, S332C, and S332D) and Berm B3 will be monitored as follows:

2.2.1.1 Inflow/Outflow Macronutrients (weekly autosamplers)

Continuous monitoring for TP and TN (calculated from TKN and NOx) using autosamplers set for flow proportional, weekly composite sampling[1]. (Rather than duplicating the SFWMD monitoring efforts at S-332D, the Corps will utilize the SFWMD data at this station as part of this monitoring program.)

Table 2.2.1.1 Parameter list for weekly flow proportional composite autosamplers[1] at the inflow and outflow of the Detention Areas.

Sampling Type	Number of Sites	Parameter	Frequency	Annual # of Samples
Autosampler	4	Tot P [2]	Weekly	208
	4	Tot N (tkN +NOx)	Weekly	208

2.2.1.2 Inflow/Outflow Nutrients (biweekly grabs)

Biweekly monitoring using grab samples for the following:

Table 2.2.1.2 Parameter list for biweekly grab samples at the inflow and outflow of the Detention Areas.

Sampling Type	Number of Sites	Parameter	Frequency	Annual # of Samples
In situ	4	D.O.	Biweekly	104

In situ	4	pH	Biweekly	104
In situ	4	Temperature	Biweekly	104
In situ	4	Sp. Conductivity	Biweekly	104
Grab	4	Turbidity	Biweekly	104
Grab	4	Tot P [2]	Biweekly	104
Grab	4	Dis OPO4	Biweekly	104
Grab	4	Dis P	Biweekly	104
Grab	4	Tot NH4	Biweekly	104
Grab	4	Tot kN	Biweekly	104
Grab	4	Tot NOx	Biweekly	104
Grab	4	Dis Cl	Biweekly	104
Grab	4	Tot Susp. Solids	Biweekly	104

2.2.1.3 Inflow/Outflow Metals and Pesticides (quarterly grabs)

On a quarterly basis the biweekly collection will be expanded to include a suite of parameters including mercury, pesticides, ions and metals. Following one to two years of monitoring, this data should be reviewed and reduced where appropriate. (Rather than duplicating the SFWMD monitoring efforts at S-332D, the Corps will utilize the SFWMD data at this station as part of this monitoring program.)

Table 2.2.1.3 Parameter list for quarterly grab samples at the inflow and outflow of the Detention Areas.

Sampling Type	Number of Sites	Parameter	Frequency	Annual # of Samples
Grab	4	Alkalinity	Quarterly	16
	4	Dis Na	Quarterly	16
	4	Dis K	Quarterly	16
	4	Dis Ca	Quarterly	16
	4	Dis Mg	Quarterly	16
	4	Dis Fe	Quarterly	16
	4	Dis SiO2	Quarterly	16
	4	Dis SO4	Quarterly	16
	4	Dis Cd	Quarterly	16
	4	Dis Cu	Quarterly	16
	4	Dis Zn	Quarterly	16
	4	Dis Solids	Quarterly	16
	4	Dis. Organic C	Quarterly	16
	4	Hardness (calculated)	Quarterly	16
	4	Tot Hg [3]	Quarterly	16
	4	Pesticide Suite [4]	Quarterly	16

2.2.2 Interiors of Detention Areas

Normally, monitoring the transport of nutrients between cells would be relegated to an optimization plan. However, in the case of these detention areas, monitoring of some parameters has been included in the permit compliance monitoring section. The purpose of this monitoring is to measure the influence of groundwater exchange on the surface water quality within the northern cells. This monitoring may also capture the effect of leaching of nutrients and other parameters from the levee material. The sites to be monitored are the culverts between Cell 2 and the Connector Cell (C1), and Cell 3 and the Connector Cell (C2).

2.2.2.1 Interior Waters Nutrients and Mercury (monthly Grabs)

The two surface water sites will be monitored for physical parameters, nutrients and ions on a monthly basis. Additionally, mercury in surface water will be monitored quarterly.

Table 2.2.2.1 Parameter list for monthly grab samples in interior of the Detention Areas.				
Sampling Type	Number of Sites	Parameter	Frequency	Annual # of Samples
In situ	2	D.O.	Monthly	24
In situ	2	PH	Monthly	24
In situ	2	Temperature	Monthly	24
In situ	2	Sp. Conductivity	Monthly	24
Grab	2	Turbidity	Monthly	24
Grab	2	Tot P [2]	Monthly	24
Grab	2	Tot OPO4	Monthly	24
Grab	2	Dis P	Monthly	24
Grab	2	Tot NH4	Monthly	24
Grab	2	Tot kN	Monthly	24
Grab	2	Tot NOx	Monthly	24
Grab	2	Dis Cl	Monthly	24
Grab	2	Dis Organic C	Monthly	24
Grab	2	Dis SO4	Monthly	24
Grab	2	Tot Susp Solids	Monthly	24
Grab	2	Tot Hg	Quarterly	8

2.2.2.2 Interior Fish (quarterly)

On a quarterly basis, mosquitofish will be collected from cells 1,2,3,4,5, the Connector Cell, and the Flow Way Cell and will be analyzed in triplicate for THg (21 samples). Additionally, 40 largemouth bass (or other available top predators) will be collected annually from the 8 cells of the project and analyzed for THg, if sufficient quantities are available. The level of effort for the mercury sampling in fish may be adjusted in the future based upon the results obtained in the first year of the monitoring program.

Table 2.2.2.2 Parameter list for sampling of fish interior of the Detention Areas.				
Sample Type	Number of Sites	Parameter	Frequency	Annual # of Samples
Mosquitofish	7x3=21	Tot Hg [3]	Quarterly	84
Bass	40	THg	Annually	40

2.2.2.3 Biological and Sediment Monitoring

It is generally agreed that sediment, periphyton, macrophyte and invertebrate monitoring may be key in helping to understand the optimization of the detention areas for possible water treatment. Such monitoring will be part of any potential PSTA performance plans.

2.2.3 Diversion Structures from Detention Areas

There are four diversion structures in the detention areas, which may be used to overflow out of the detention areas during flood events, or during droughts to move water directly into ENP. These are located on the eastern edge of Cell 1(DS1), on the western edge of Cell 2 (DS2), on the eastern edge Cell 3 (DS3), and on the western edge of Cell 4 (DS4). DS1 and DS3 discharge onto SFWMD properties, which drain into the C-111 canal. DS2 and DS4 discharge into ENP. From a regulatory perspective, only DS2 and DS4 are of

concern. In the event that the diversion structures to ENP are necessary, samples for physical parameters, nutrients, ions, pesticides and mercury will be collected once during the event. This data will be compared to inflow data from S332B and S332D.

Table 2.2.3 Parameter list for surface water monitoring at the Diversion Structures.				
Sample Type	Number of Sites	Parameter	Frequency	Annual # of Samples
Grab	2	D.O.	1	2
Grab	2	PH	1	2
Grab	2	Temperature	1	2
Grab	2	Sp. Conductivity	1	2
Grab	2	Turbidity	1	2
Grab	2	Tot P [2]	1	2
Grab	2	Tot kN	1	2
Grab	2	Tot NH4	1	2
Grab	2	Tot NOx	1	2
Grab	2	Tot Susp Solids	1	2
Grab	2	Dis Solids	1	2
Grab	2	Tot Organic C	1	2
Grab	2	Dis Organic C	1	2
Grab	2	Dis Cl	1	2
Grab	2	Alkalinity	1	2
Grab	2	Dis SO4	1	2
Grab	2	Tot Hg [3]	1	2
Grab	2	Pesticide Suite [4]	1	2

[1] It is acknowledged that the flow-proportioned autosampling will require set up of instrumentation and telemetry and therefore may not be implemented immediately. However, this installation should be made a priority and set up should occur in a timely manner.

[2] Required MDL for total phosphorus is .004 mg/L

[3] Required MDL for total mercury is 0.1 ng/L

[4] The Corps recognizes that low-level surface water pesticides analysis is desirable, but has indicated that it is not available as an analysis option to the Corps at this time. Therefore, the Department is working with the Corps to identify appropriately stringent pesticide MDLs for this project and to locate a laboratory with whom the Corps can contract to have acceptable analyses done.

2.3 Groundwater Monitoring

Tables 2.3.1 and 2.3.2 contain the locations, parameters, and frequencies for groundwater monitoring. It should be noted that a team of groundwater experts will be convened to evaluate the existing groundwater monitoring network and available data in an effort to optimize the network, if deemed necessary. This team will focus on opportunities to coordinate IOP groundwater monitoring with the groundwater monitoring needs for the CSOP and L-31N Seepage Management projects where possible. The team will be tasked with avoiding duplication of efforts and minimizing number of wells and frequency of data collection, while ensuring that the monitoring purposes of each of these projects is met. If the team's evaluation results in

recommendations to modify the existing groundwater monitoring plan, procedures for making changes to the monitoring plan can be found in Section 3.0 below.

Table 2.3.1 Existing Groundwater Wells		
Station ID	Well Description	General Location
S332BES	S-332B East Shallow	Shallow well immediately east of S-332B detention area
S332BED	S-332 B East Deep	Deep well immediately east of S-332B detention area
S332BWS	S-332B West Shallow	Shallow well immediately west of S-332B detention area
S332BWD	S-332B West Deep	Deep well immediately west of S-332B detention area
S332CES	S-332C East Shallow	Shallow well immediately east of S-332C detention area
S332CED	S-332C East Deep	Deep well immediately east of S-332C detention area
S332CWS	S-332C West Shallow	Shallow well immediately west of S-332D detention area
S332CWD	S-332C West Deep	Deep well immediately west of S-332C detention area
S332DES	S-332D East Shallow	Shallow well immediately east of S-332D detention area
S332DED	S-332D East Deep	Deep well immediately east of S-332D detention area
S332DWS	S-332D West Shallow	Shallow well immediately west of S-332D detention area
S332DWD	S-332D West Deep	Deep well immediately west of S-332D detention area

Table 2.3.2 Parameter list for ENP groundwater wells		
Sample Type	Parameter	Frequency
Groundwater	Water Level	Quarterly
	Odor	Quarterly
	Color	Quarterly
	D.O.	Quarterly
	pH	Quarterly
	Temperature	Quarterly
	Sp. Conductivity	Quarterly
	Turbidity	Quarterly
	Dis P	Quarterly
	Dis KN	Quarterly
	Dis NO_x	Quarterly
	Dis NH_4	Quarterly
	Alkalinity	Quarterly

	Dis Na	Quarterly
	Dis K	Quarterly
	Dis Ca	Quarterly
	Dis Mg	Quarterly
	Dis Fe	Quarterly
	Dis SiO_2	Quarterly
	Dis SO_4	Quarterly
	Dis Cl	Quarterly
	Dis Solids	Quarterly
	Pesticide Suite	Semi-Annual

3.0 Changes to the Monitoring Plan

This monitoring plan is expected to evolve as more information becomes available and as analysis of the collected data suggests adjustments to frequencies, parameters, sample locations, etc. Requested changes to the monitoring plan do not require amendment of the Emergency Final Order, however they must be submitted to the Department Offices listed in paragraph 26(d) of the Order, and must be approved in writing by the Department's Water Quality Standards and Special Projects Program prior to implementation.

4.0 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 monitoring plan 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 I and Class III surface water quality standards as specified in Chapter 62-302, F.A.C., and groundwater standards as specified in Chapter 62-530, F.A.C., whichever is more stringent. 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 DEP-SOP-001/01 (January 2002). 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. In accordance with Rule 62-4.246(4), FA.C., the Department has established and published a method detection limit (MDL) and practical quantification limit (PQL) for each approved analytical method for a parameter. The resulting list should provide guidance as to the minimum reporting levels for each parameter required by the Department to demonstrate compliance with this authorization, with the exception of total phosphorus for which a MDL of .004 mg/L is required.

5.0 Reporting Requirements

The CORPS shall provide the Department with monthly reports and a final summary report (at the conclusion of emergency operations) on the results of the data analysis associated with the monitoring required herein, as they relate to effects on water quality and compliance with the Everglades Settlement Agreement. Each monthly report submitted to the Department shall include the OGC Case number and, at a minimum, the following information:

Records of monitoring information shall include all applicable laboratory information specified in Rule 62-169.340, 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 or the appropriate code as required by Chapter 62-160, F.A.C.;

4) Person responsible for performing the analyses;

5) Anlytical techniques or methods used, including MDL and PQL;

6) Results of such analyses, including appropriate data qualifiers;

7) Depth of samples;

8) Flow conditions and weather conditions at time of sampling; and,

9) Monthly flow volumes.

Water quality data collected during flow events shall be flagged as such or reported separately from non-flow data. Surface water pesticides should be sampled during flow events.

6.0 Removal of Parameters

Upon determination that a specific parameter(s) is not present or is found consistently in compliance with Class III Water Quality Standards, the Corps may request a modification to the monitoring plan 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. 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 consistently are reported as in compliance with state water quality standards.

7.0 Addition of Parameters

If the Department has reason to believe that additional parameters exist, which may cause or contribute to water quality violations in the project area, the monitoring plan may be modified accordingly.