



LAKE WORTH DRAINAGE DISTRICT

GUIDELINES FOR OPERABLE DISCHARGE CONTROL STRUCTURES

General Surface Water Management Systems:

Many residential communities and commercial properties utilize a Discharge Control Structure (DCS) in the design of their surface water management system. The DCS is a permitted structure created to regulate the discharge of water from one water body to another and provide onsite attenuation of stormwater. This is achieved by establishing a bleed down orifice within the DCS that provides for stormwater detention as well as regulating the rate of discharge from the stormwater pond.

During a typical thunderstorm, rainfall will flow into the stormwater pond through swales and catch basins. When the pond's water levels rise in response to rainfall, the excess stormwater will flow through the DCS and into the Lake Worth Drainage District (LWDD) canal. This discharge will continue until the pond's water level is equal to the bleed down orifice of the structure. *(Figure 1)*

DCS Operation and Maintenance:

There are two general types of DCS, fixed (passive) and operable (active). Both provide stormwater detention and flood control without intervention. An operable DCS will have a barrier such as a metal plate or wooden boards that can be raised/opened thus increasing the rate of discharge from the stormwater pond through the structure, and into an LWDD canal. A fixed DCS does not have manual operational capability but still provides for stormwater detention and flood control via the passive overflow of excess water. This guideline is provided for operable DCS users. Users with a fixed structure do not have to take any additional action except for regular maintenance of the structure. *(Figures 2, 3, 4 & 5).*

The most important action to take to prevent flooding is regular maintenance of the stormwater management system. This is to ensure the DCS (fixed or operable), swales, catch

basins, connecting pipes and outfalls have an unobstructed flow. Inspection and maintenance are the sole responsibility of the residential association or commercial property owner. However, LWDD staff is available to assist with questions and can arrange on-site visits to discuss your specific drainage system. *(Figures 6, 7 & 8)*

Purpose of the Operable DCS

In preparation of a pending severe storm, residential associations and commercial property owners may request permission from LWDD to open their operable DCS prior to the event. This function of the DCS allows for an increased rate of discharge to temporarily provide additional storage capacity within the stormwater pond prior to an anticipated heavy rainfall event. It is important to note that water cannot be replaced once it is lost. If the predicted rainfall is not received, pond levels may remain low until additional rainfall occurs. Water from the LWDD canals cannot be used to recharge (fill) stormwater ponds once its been released.

The operable DCS must always remain in the lowered/closed position and locked. Only when authorized by LWDD can the operable DCS be raised/opened. If the operable DCS is opened without authorization and the canal system is at a higher elevation than the stormwater pond, canal water may backflow into the pond which may cause or contribute to local flooding in the community or commercial property. Unregulated discharge through an operable DCS could also contribute to damages to adjacent communities due to high canal stages during significant rain events.

LWDD's Authority:

Pursuant to Order No. 97-32DAO-SWM of the South Florida Water Management District, LWDD has the authority to allow property owners to raise/open their operable DCS in preparation of a tropical weather event, if a roadway is flooded for seventy-two (72) hours or if LWDD has determined there is a serious safety issue. *(Exhibit 1)*

Pre-Designating Contacts:

The residential association or commercial property owner should pre-designate the individual(s) who is authorized to act on behalf of the community or business

regarding the maintenance and operation of its DCS. These individuals may be board members, drainage committee members or individuals from a property management company. It is the residential association or commercial property owner's responsibility to update LWDD with current and complete contact information. It is recommended that contact information be updated at least once each year even if there have been no changes. You can submit new or updated contact information at <https://www.lwdd.net/authorization-contacts>

When to Act:

Due to the increased risk of flooding, no authorization will be given to raise/open an operable DCS during a rain event. Requests must be made before or after the storm. Only in response to severe weather events such as tropical storms and hurricanes are DCS operations typically authorized. Normal Florida rainstorms which may cause temporary street ponding or raise stormwater pond elevations do not require action. Instead, pond water elevations should be allowed to return to normal through the permitted passive progression of drainage.

Authorization Procedure:

- **Pre-Storm Authorization** – The pre-designated individual(s) must call LWDD for authorization prior to opening a DCS. To obtain authorization, call LWDD main phone number 561-498-5363. LWDD district-wide authorizations will be sent out via email to pre-designated individual(s) who is authorized to act on behalf of the community or business. Authorizations will designate the time over which the gate may remain open. For life threatening emergencies always call 911.
- **Post Storm Authorization** – After the storm event, the pre-designated individual(s) may request to reopen the DCS as described above under section *Pre-Storm Authorization*. The authorization will designate the time over which the gate may remain open. Authorizations will only be given if the LWDD canal system has a water elevation that can safely accept the additional discharge, or the property has an emergency as described above under section *LWDD's Authority*.

- Closing DCS – If you raised/opened a DCS you must accept the responsibility to lower/close the DCS at the designated time. Also, you should check the DCS while in the raised/opened position to ensure its proper operation and that water is discharging to the LWDD canal system and not toward the stormwater pond.
- Reclaimed Water User – Property owners which discharged reclaimed water into stormwater ponds should review their drainage permit or agreement and abide by any special conditions set forth by LWDD and other local, state, or federal requirements.

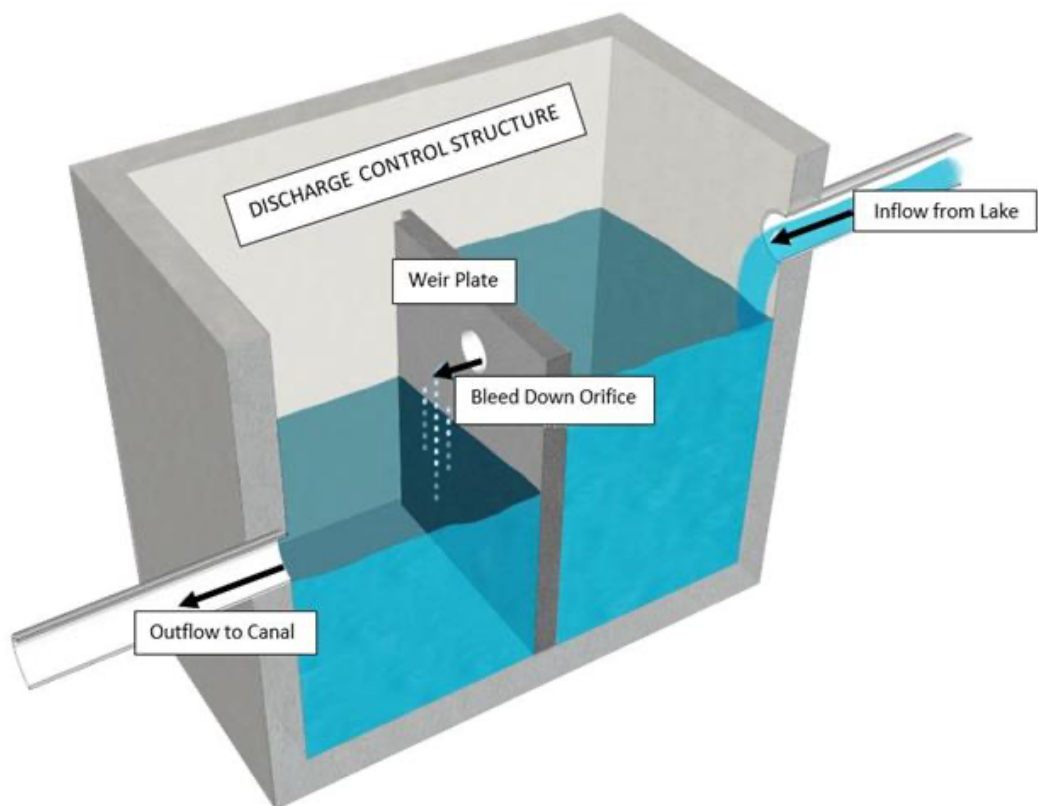
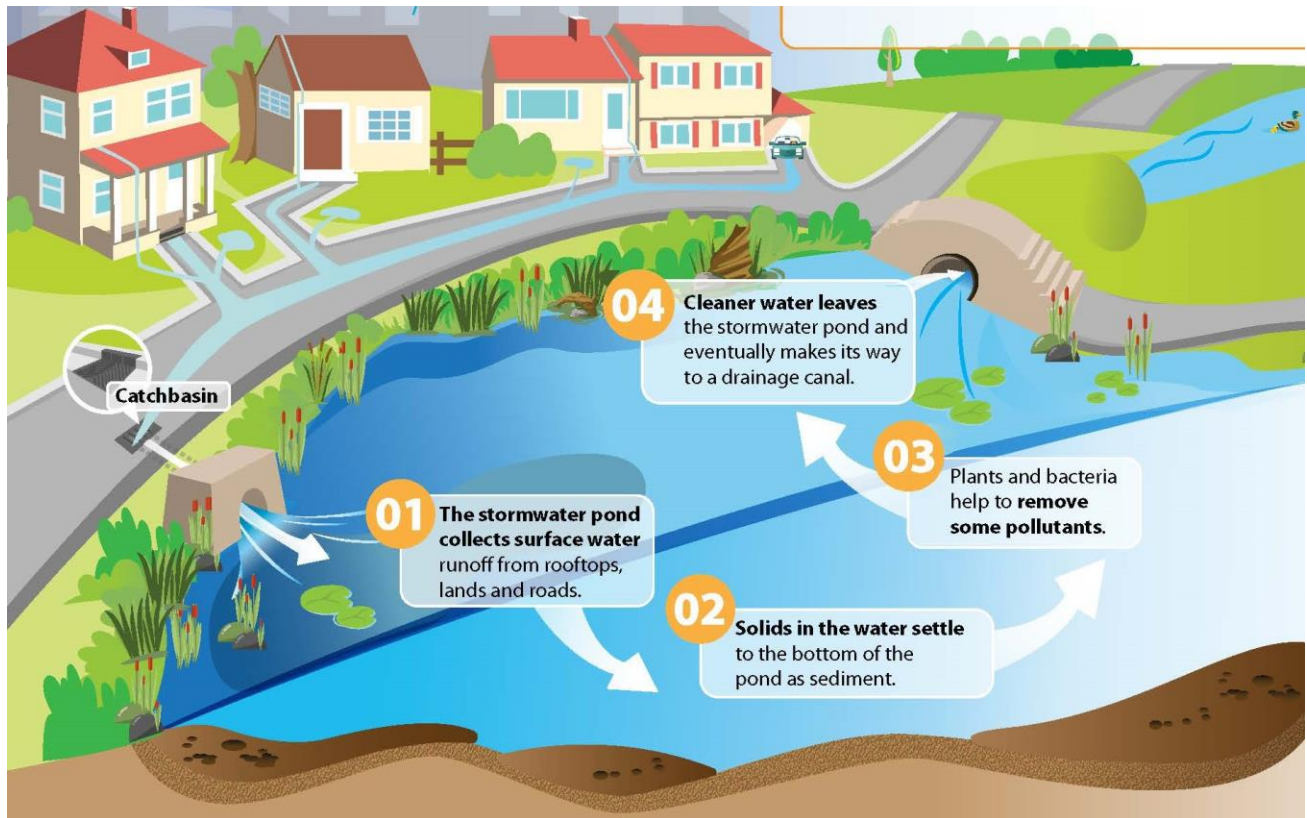
Non-compliance:

Pursuant to Order No. 97-32DAO-SWM of the South Florida Water Management District (*Exhibit 1*), LWDD has the authority to disable the operable portion of the DCS if these guidelines are not followed or are abused.

Additional Information:

- For questions, contact LWDD at info@lwdd.net or 561-498-5363
- Visit LWDD website www.lwdd.net for information on flood control
- View the video *Getting to Know Your Drainage System* at www.lwdd.net/resources/videos-publications
- Follow LWDD on [Facebook](#) and [Twitter](#)
- Obtain a copy of your South Florida Water Management District permit at <https://my.sfwmd.gov/ePermitting>

Figure 1



Figures 2 through 5



Figure 2: Operable DCS With Above Ground Mechanism



Figure 3: Operable DCS with Below Ground Mechanism



Figure 4: Operable DCS In the Raised/Opened Position



Figure 5: Operable DCS With Wooden Boards

Figures 6 through 8



Figure 6: Example vegetation obstructing flow in operable DCS

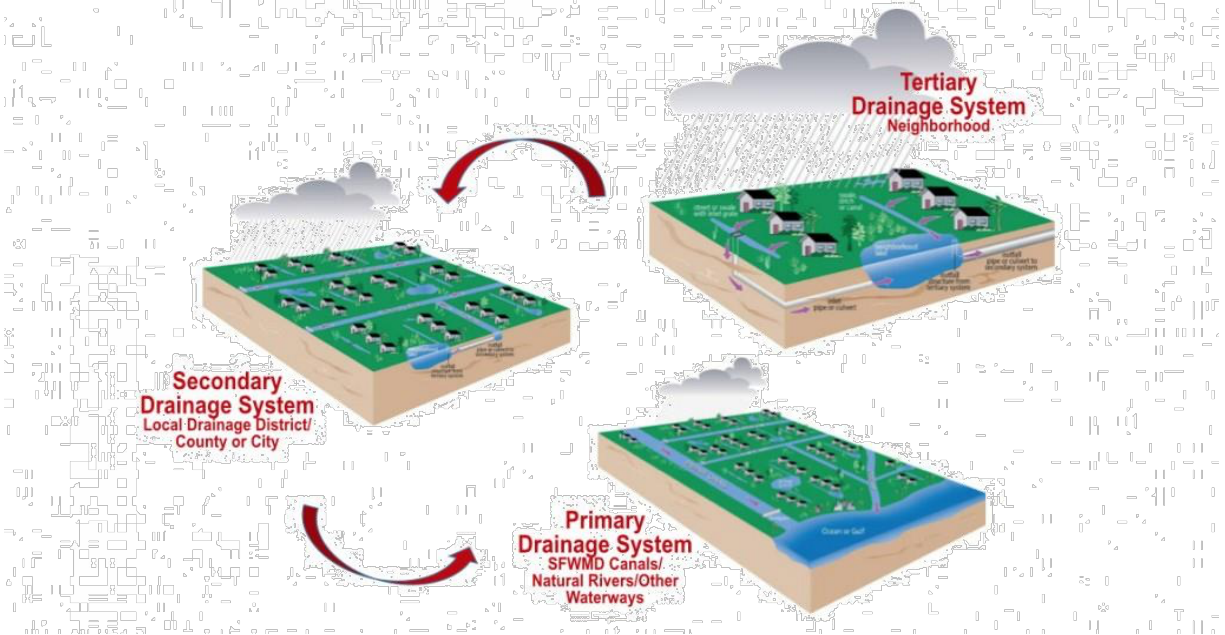


Figure 7: Example of underground connecting pipe to outfall



Figure 8: Example of vegetation obstructing flow in catch basins compared to well-maintained catch basins

Figure 9



Flood Control in South Florida A Shared Responsibility

Flood control in South Florida is a shared responsibility and is achieved through an interconnected, three-tiered drainage system. Neighborhood drainage systems, or tertiary systems, are operated by property owners or residential associations. Secondary flood control canals are operated by the Lake Worth Drainage District, and primary flood control is provided by the South Florida Water Management District.

Water managers are continually monitoring weather systems and canal levels to proactively respond to heavy rainfall events. In anticipation of a heavy rainfall event, the Lake Worth Drainage District water control structures are opened to maintain appropriate water levels in the system.

Residential communities are designed to retain water in swales and onsite detention ponds. With prior authorization from the Lake Worth Drainage District, excess stormwater may be discharged into District canals through control structures with fixed or operable weirs to prevent flooding of property.

Flood Protection Does Not Equal Flood Proof

During heavy rain events, systems are designed to protect house floor pads. Temporary flooding of streets and parking lots is expected. Flooding may be experienced when extreme volumes of rain fall in a brief period, and rainfall exceeds the water management system design. Flooding may also occur when culverts and catch basins are blocked with materials and vegetation.

Exhibit 1

BEFORE THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

ORDER NO. SFWMD 9-7-32 DAO-
SWM

IN RE:
CONDITIONAL AUTHORIZATION TO
OPERATE WATER CONTROL STRUCTURES
IN ANTICIPATION OF OR IN RESPONSE TO
DEFINED EMERGENCY TRIGGERS

Pursuant to Chapter 373, F.S., and the rules promulgated thereunder, this Conditional Authorization to Operate Water Control Structures in Anticipation of or in Response to Defined Emergency Triggers (Conditional Authorization) is entered into between the SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) and LAKE WORTH DRAINAGE DISTRICT (LWDD), by mutual consent, and without this Conditional Authorization constituting a waiver of any authority of the SFWMD under Chapter 373, Fla. Stat.

FINDINGS OF FACT

1. The SFWMD is a public corporation of the State of Florida existing by virtue of Chapter 25270, Laws of Florida, 1949, and operating pursuant to Chapter 373, Fla. Stat., and Title 40E, Fla. Admin. Code, as a multipurpose water management district with its principal office at 3301 Gun Club Road, West Palm Beach, Florida, 33406. The SFWMD is authorized to enter into agreements pursuant to section 373.083, Fla. Stat.

2. The LWDD is a Special Taxing District created in 1915 under the General

Drainage Law of the State of Florida and given those powers and responsibilities enumerated in Chapter 61-147, Florida Statutes;

3. The SFWMD and the LWDD desire to establish a Conditional Authorization that addresses the use of certain water control structures described herein as emergency structures within the boundaries of the LWDD. This Conditional Authorization, and permits issued pursuant to this Conditional Authorization, authorizes operation of water control structures in a manner which avoids and minimizes adverse impacts to off-site surface water management systems and the water resources of the SFWMD, to alleviate the duration of localized flooding in extreme rainfall events, and to protect public health, safety and welfare.

4. The LWDD operates a permitted regional surface water management system (the LWDD System) that serves approximately 218 square miles in central and southern Palm Beach County. Within this drainage network are numerous water control structures that regulate surface water discharges within and from the LWDD system and conserve water for irrigation purposes.

5. In the early 1980's the Hillsboro Basin allowable discharge rate was reduced from 70 CSM to 35 CSM. The LWDD and the SFWMD verbally agreed at that time to allow the use of certain emergency structures in order to help alleviate the duration of localized flooding in low lying areas.

6. The LWDD has a policy of allowing emergency structures which has been implemented since the early 1980's. It is the requirement of the LWDD to have Homeowners' Associations request permission from the LWDD before operating any

structure for emergency discharge into the LWDD System from a subdivision surface water management system. The LWDD does permit the use of these structures and enforces the unauthorized operation of these structures.

CONDITIONAL AUTHORIZATION AND AGREEMENT

Therefore, the SFWMD and LWDD mutually agree to the following terms and conditions of authorization:

A. LWDD RESPONSIBILITIES

7. The LWDD shall require and process permits from any group or person (permittee / operating entity) requesting the construction and/or operation of an emergency structure that is connected to a LWDD canal. Such permit(s) shall contain the following Special Condition:

The emergency control type structure shall remain closed at all times unless specific approval is granted by the Lake Worth Drainage District for its operation. At no time, shall the structures be operated to bypass the water quality detention requirements for the project or to lower the lake levels below the permitted control elevation for the project except as authorized by the SFWMD. If for whatever reason, it is determined that the permittee is not complying with the directives of the LWDD, and/or is operating the structures contrary to their intended purpose as an emergency outflow, (when LWDD conditions permit) the structure shall be modified to render the emergency

structure inoperable. In addition, the emergency structures shall be equipped with a lock mechanism to prevent its unauthorized use, and a staff gauge shall be installed upstream of the structure so that lake levels within the project can be instantly determined. By accepting this permit, the permittee and/or assigns agrees to allow the LWDD to ingress/egress and render the emergency portion of the structure(s) inoperable, for non-compliance or to prevent potential or actual unacceptable adverse impacts.

8. For purposes of this Conditional Authorization, the LWDD will be the sole contact agency for any permittee / operating entity that has been permitted by the LWDD for requests to operate an emergency structure.

9. The LWDD will contact the SFWMD to inform staff of all emergency requests for operation of structures that have been approved by the LWDD.

10. The LWDD shall immediately inform the permittee / operating entity to close the structures if requested to do so by SFWMD staff. If the structure is not closed immediately by the permittee / operating entity, the LWDD shall take such measures as necessary to close the structure. The LWDD shall enforce against improper use of the emergency structures. If it is determined by the LWDD or SFWMD staff that an emergency structure was, or is, improperly used, the LWDD shall take whatever steps are necessary to ensure the structure is rendered inoperable.

11. The LWDD shall by permit, or other means as maybe necessary, require all existing emergency structures that connect to the LWDD System to have a lock mechanism installed to prevent unauthorized opening of the structure, if a locking

mechanism does not already exist. LWDD, shall assist the District in identifying existing emergency structures which connect to a LWDD ditch so a complete inventory is accomplished within 180 days of execution of this Conditional Authorization. The LWDD shall record and notify permittees that do not have locking devices on their structures, when identified.

12. During the LWDD's review process of an application to construct and operate emergency structures, the LWDD shall consider potential adverse impacts operation of said structures may have on downstream surface water management systems and the levels of flood protection to affected lands. If the LWDD determines unacceptable potential adverse impacts will occur, within their system, the LWDD shall not allow the construction or operation of said structures.

13. It is the intent of both the LWDD and the SFWMD to conserve fresh water whenever possible. The LWDD shall consider water conservation each time a request is made to operate an emergency structure and shall to the maximum extent practicable under the circumstances avoid discharge to tide. It is recognized that potential emergency circumstances may warrant lowering a surface water management system's water level below control elevation for a period of time. The LWDD shall receive prior approval from the SFWMD for the lowering of water levels within a project's surface water management system that discharges into the LWDD System to a level below the existing project control elevation.

B. JOINT RESPONSIBILITIES

14. Permittees / operating entities proposing to discharge to the SFWMD canal system shall be required to obtain a permit from the SFWMD as well as the LWDD. SFWMD shall continue to coordinate with the LWDD the permitting of applications for the construction and operation of emergency structures that connect to the LWDD System.

15. The SFWMD and the LWDD shall cooperate when taking compliance and enforcement actions with the LWDD, when necessary, to ensure compliance with the SFWMD and the LWDD rules and permits for the operation of all emergency structures within the LWDD.

16. The LWDD and the SFWMD shall each designate in writing an agency representative to serve as the principal contact person in carrying out the provisions of this Conditional Authorization.

17. The LWDD and the SFWMD shall meet as needed, but not less than once a year, to assess compliance with this Conditional Authorization and its effectiveness in achieving the above stated objectives.

CONDITIONS OF OPERATION

18. The operation and construction of certain water control structures conditionally authorized herein shall be conducted so as to minimize any adverse impacts to water quality and quantity, fish, wildlife and environmental resources.

MISCELLANEOUS TERMS AND CONDITIONS

19. This Conditional Authorization does not relieve the LWDD of the need to comply with all applicable federal, state, or local laws, rules or ordinances.

20. The SFWMD reserves the right to terminate this Conditional Authorization at any time the SFWMD determines that the water resources of the SFWMD are threatened with harm by such operation or as otherwise determined by the SFWMD.

21. The Conditional Authorization shall not constitute waiver of the SFWMD's regulatory jurisdiction, nor be construed to authorize any activity within the jurisdiction of the SFWMD except in accordance with the express terms of this Conditional Authorization.

22. This Conditional Authorization does not convey any property right to the LWDD, or any rights and privileges other than those specified in this Conditional Authorization.

23. This Conditional Authorization incorporates, embodies and expresses all agreements and understanding regarding emergency control structures between and among the SFWMD and the LWDD, and may not be altered except as authorized herein.

24. Captions and headings in this Conditional Authorization are for ease of reference only and do not constitute a part of this Conditional Authorization and shall not affect the meaning or interpretation of any provisions herein.

25. Nothing in this Conditional Authorization expressed or implied is intended to confer upon any person other than the parties hereto any rights or remedies under or by reason of this Conditional Authorization.

26. There shall be no waiver of any right related to this Conditional Authorization unless in writing signed by the party waiving such right. No delay or

failure to exercise a right under this Conditional Authorization shall impair such right or shall be construed to be a waiver thereof. Any waiver shall be limited to the particular right so waived and shall not be deemed a waiver of the same right at a later time, or of any other right under this Conditional Authorization.

27. The invalidity of one or more of the terms or conditions contained in this Conditional Authorization shall not affect the validity of the remaining portion of the Conditional Authorization, provided that the material purposes of this Conditional Authorization can be determined and effectuated.

28. This Conditional Authorization shall take effect and become fully binding upon execution by the parties and the rendering thereto by the Clerk of the SFWMD.

29. The Governing Board of the SFWMD authorized the Executive Director, or his designee, to execute this Conditional Authorization.

NOTICE OF RIGHTS

This Conditional Authorization is final agency action and shall take effect after adoption by and execution on behalf of the Governing Board of the SFWMD, on the date it is filed with the Clerk of the SFWMD unless a petition for administrative hearing is filed, pursuant to Chapter 120, F.S., by a third party.

Persons who are not parties to this Conditional Authorization but whose substantial interests are affected by this Conditional Authorization, have a right pursuant to Sections 120.569 and 120.57, F.S., to petition for an administrative hearing. The petition must contain the information set forth in rule 40E-1.521, Fla. Admin. Code, and be filed with the Clerk of the SFWMD during normal business hours, at SFWMD's

headquarters in West Palm Beach, Florida, within 14 days of receipt of this Conditional Authorization. Failure to file a petition within the 14 days constitutes a waiver of any right such person has to an administrative hearing pursuant to Sections 120.569 and 120.57, F.S. The administrative hearing process, initiated by filing a petition, is designed to formulate agency action. Accordingly, the SFWMD's final action taken pursuant to this hearing may be different from the position taken by the SFWMD in this Conditional Authorization.

BY THE GOVERNING BOARD OF THE
SOUTH FLORIDA WATER
MANAGEMENT DISTRICT

Legal form approved
SFWMD Office of Counsel

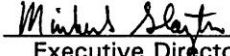
By: 

Date: _____

ATTEST:

Assistant Secretary



By: 
Executive Director

Date: _____

ATTEST:

BY THE LAKE WORTH
DRAINAGE DISTRICT

By: 

By: 
President, Board of Supervisors

Legal form approved
LWDD Office of Counsel

By: 

Date: 3/10/97

Date: 3/11/97