

**LAKE WORTH DRAINAGE DISTRICT  
OPERATING POLICIES**

**Chapter 3: Engineering & Permitting Requirements**

**3.5 Drainage Permit Criteria**

**3.5.1** Allowable discharge limits apply to all drainage applications.

<u>Basin</u>	<u>Rate</u>	<u>Frequency (yrs)</u>
Hillsboro Canal	35 CSM	25
C-15	70 CSM	25
C-16	62.6 CSM	25
C-51	Subject to restrictions of SFWMD basin rule.	

**3.5.2**

Minimum discharge culvert shall be fifteen (15) inches in diameter.

**3.5.3**

Invert of the discharge orifice shall be no lower than the maintained elevation in the LWDD canal. The minimum orifice shall be triangular in shape, with a six (6) inch base and a six (6) inch height. The triangular orifice shall be inverted so as to simulate a V-notch weir at low stages.

**3.5.4**

Any emergency control type structure(s) shall remain closed at all times unless specific written approval is granted by LWDD for its operation. At no time, shall the structure(s) 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. If for whatever reason it is determined that the Permittee is not complying with the directives of the LWDD, and/or is operating the structure(s) contrary to their intended purpose as an emergency outflow, the structure(s) shall be modified by LWDD to render the emergency structure(s) inoperable. In addition, the emergency structure(s) shall be equipped with a lock mechanism to prevent its unauthorized use, and a staff gauge shall be installed upstream of the structure(s) so that lake levels within the project can be quickly determined. By accepting this permit, the Permittee and/or assigns agree to allow 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.

**3.5.5**

Maximum allowable discharge from any newly constructed road or street, or from any road or street improvement, shall be limited to two and one-half cubic feet per second (2.5 cfs) peak allowable per half (½) mile section for the twenty-five (25) year storm frequency. This is for any lane width or number of lanes for the road cross-section.

**3.5.6**

All waters discharged into the LWDD's canal system shall meet water quality standards in accordance with the laws of the State of Florida and the United States Federal Government.

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### 3.5.7 Surface Water Elevations

#### 3.5.7.1 Maintained Water Surface Elevation

This refers to the every day maintained average elevation of the water in a given canal. It varies little during normal times, since minor rainfall can be controlled or released, and during a short dry period the water in some areas can be replenished by pumping. During extreme droughts this water surface elevation cannot always be achieved.

#### 3.5.7.2 Historical Water Surface Elevation

This refers to actual readings of the water surface elevations during storms which exceed the design criteria. On occasion, personnel have observed high water elevations relative to a road surface or similar landmark. These elevations have been recorded and are available for public inspection at LWDD's office.

#### 3.5.7.3

LWDD encourages engineers to discuss each area and receiving waters with a member of LWDD's staff prior to finalizing drainage plans.

### 3.5.8 Permit Application Notes

#### 3.5.8.1 Canal Cross-Sections

LWDD may require additional right-of-way adjacent to existing right-of-way, based on the actual location of the canals. LWDD can only determine the need for additional right-of-way by reviewing signed and sealed cross-sections of the canals. Conveyances to LWDD shall be by Warranty Deed or Exclusive Perpetual Easement.

For each applicable existing LWDD canal, the applicant or petitioner must provide two sets of current canal cross-sections signed and sealed by a professional surveyor and mapper licensed in the State of Florida. The canal cross-sections will be used to determine if LWDD will require the applicant or petitioner to convey any right-of-way to LWDD. Canal cross-sections at 300 foot intervals are to be provided for each canal, including at each end of the portion of the project that fronts the canal. A minimum of three canal cross-sections for each canal are to be provided. The canal cross-sections are to show, label and dimension at least the following:

- (a) channel bottom elevation and width;
- (b) location and elevation of each toe-of-slope and each top-of-bank;
- (c) existing canal right-of-way lines;

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- (d) existing land lines (such as section lines, quarter-section lines, or platted block lines and tract lines within platted subdivisions, e.g., THE PALM BEACH FARMS CO. PLAT NO. 3);
- (e) property lines of subject parcel;
- (f) all easements within the limits of the canal cross-section; and
- (g) existing ground elevations to a point 50 feet beyond the existing top-of-banks on each side of the channel or to a point 25 feet outside of the existing canal right-of-way lines on each side of the channel, whichever is greater, including all features that may be relevant (e.g. buildings, edges of pavement, curbs, sidewalks, guardrails and ground grade breaks).

**Note: Each cross-section is to include a sufficient number of surveyed points such that the existing canal is accurately depicted.**

Canal cross-sections are also to be provided at each end of every culvert that exists within the limits of the project for each applicable LWDD canal, with the existing culvert shown in cross-sectional view depicted on the appropriate canal cross-section.

The cross-sections are to be shown at a scale of 1 inch equals 10 feet, both horizontal and vertical, for canals with a total of 80 feet (or less) of required right-of-way width (including both heavy and light canal maintenance berms), or 1 inch equals 20 feet, both horizontal and vertical, for canals with a total of more than 80 feet of required right-of-way width (including both heavy and light canal maintenance berms). A statement must be included on the cross-sections that the vertical datum used for the cross-sections is either the National Geodetic Vertical Datum of 1929 (NGVD 29) or the North American Vertical Datum of 1988 (NAVD 88), and if the NAVD 88 vertical datum has been used, a conversion factor between the NGVD 29 vertical datum and the NAVD 88 vertical datum for the locations where the cross-sections were taken, must be provided. A plan view must be provided that shows how the cross-sections are oriented. The cross-sections must be shown, in cross-sectional view, looking from west to east or from south to north, with the north or west right-of-way respectively being on the left side of each cross-section shown.

The requested information must be submitted to LWDD in both hardcopy format and CAD drawing files. The CAD drawing files must be in the form of AutoDesk DWG format (current and all prior versions accepted) or alternatively, in DXF format. The CAD drawing files can be submitted on either CD or DVD optical media.

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**NOTE:** Canal cross-sections are valid for a two year period. After that time, current canal cross-sections will be required for review by LWDD. Based upon review of current canal cross-sections, the applicant or petitioner may be required to reconstruct or reshape the existing canal, in addition to conveying right-of-way to LWDD.

### 3.5.8.2

Minimum bleeder size shall be a 6" X 6" inverted triangular orifice or larger, if discharge requirements allow.

### 3.5.8.3

Construction dewatering will require separate SFWMD and LWDD approval prior to discharge into the canal system.

### 3.5.8.4 Transfer Drainage Permit

When ownership of property that has an existing, valid LWDD Drainage Permit is changed and the permitted site design is not being altered, the new owner shall request a Transfer Drainage Permit by completing and submitting a fully executed Request for Transfer LWDD Drainage Permit, using the form at the end of this Section, along with submitting the required \$250.00 Transfer Drainage Permit fee. If the permitted site design is to be altered, the new owner shall submit either a completed new drainage permit application or request a permit modification, depending upon the degree of alteration. Contact the LWDD Engineering and Right-of-Way Department for a determination as to whether the modification is minor enough to warrant a permit modification or if the modification is major and requires a new drainage permit.

## 3.5.9 Possible Permit Conditions

[Note: These conditions are not totally inclusive. Additional conditions may be required based upon the circumstances of the project.]

### 3.5.9.1

Permittee shall reconstruct canal(s) to approved design section along and adjacent to the project's limits, including clearing and proper sloping of the maintenance berms. The cleared canal berms and side slopes shall be stabilized. Type of stabilization shall be approved by LWDD. This construction shall be completed prior to any building activity adjacent to LWDD rights-of-way. Please be advised that any fill material scheduled to be removed from the canal may not be relied on for site work.

### 3.5.9.2

The emergency control type structure(s) shall remain closed at all times unless specific written approval is granted by LWDD for its operation. At no time, shall the structure(s) 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. If for whatever reason it is determined that the Permittee is not complying with the directives of the LWDD, and/or is

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operating the structure(s) contrary to their intended purpose as an emergency outflow, the structure(s) shall be modified by LWDD to render the emergency structure(s) inoperable. In addition, the emergency structure(s) shall be equipped with a lock mechanism to prevent its unauthorized use, and a staff gauge shall be installed upstream of the structure(s) so that lake levels within the project can be quickly determined. By accepting this permit, the Permittee and/or assigns agree to allow 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.

#### **3.5.9.3**

Permittee is to construct any sidewalk or pathway that is proposed within LWDD's rights-of-way with six-inch (6") thick concrete, or to meet LWDD approved alternate loading and material(s). The LWDD will not be held responsible or liable for any damage to the sidewalk or pathway resulting from LWDD operations and maintenance procedures, or any property damage or personal injury resulting from any sidewalk or pathway damage. All repairs are to be the responsibility of the Permittee.

#### **3.5.9.4**

Permittee or Permittee's representative shall notify the LWDD Engineering Department forty-eight (48) hours prior to any work within LWDD rights-of-way to coordinate the extent of work to be completed. All facilities needing inspection must be observed prior to backfilling.

#### **3.5.9.5**

Permittee shall restore LWDD's right-of-way to its original or better condition where disturbed by construction activity.

#### **3.5.9.6**

LWDD cannot accept any water from dewatering either on or off-site until written notification of approval from South Florida Water Management District has been submitted to this office.

#### **3.5.9.7**

It shall be the responsibility of the Permittee to locate and protect any underground facilities within LWDD's rights-of-way prior to and during construction.

#### **3.5.9.8**

All underground installations in LWDD rights-of-way must have a minimum depth (cover) of thirty-six (36) inches unless an alternate design is approved. All underground utilities placed within LWDD's canal rights-of-way must be identified with LWDD approved permanent witness markers identifying utility type and location.

#### **3.5.9.9**

Permittee shall take all reasonable precautions necessary to prevent turbidity or silting upstream or downstream during construction.

#### **3.5.9.10**

At the time of installation, a permanent benchmark shall be established at 2<sup>nd</sup> order, class II or better on top of the control structure(s) with the elevation clearly defined, pursuant to the National Geodetic Survey standards and requirements for leveling.

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#### **3.5.9.11**

Where improvements are erected on lots or parcels contiguous to LWDD canals, the Permittee shall install gutters and downspouts eliminating surplus water overland flow, assuring the route of said water into the on-site drainage facility and/or storm sewer system.

#### **3.5.9.12**

Permittee shall submit record drawings within sixty (60) days of project completion. Drawings should show, as a minimum, perimeter grading at or above the design storm and control structure elevations. Failure of the Permittee to provide these drawings within the time specified shall result in LWDD terminating the permit and requesting that all jurisdictional agencies withhold their final approval until the drawings are received and approved by LWDD.

#### **3.5.9.13**

Permittee shall obtain any and all permits required by any governmental agency and/or municipality that may be involved, prior to the commencement of any construction.

#### **3.5.9.14**

Permittee agrees that the stormwater discharge authorized by this permit shall comply with all applicable provisions of Part IV of Chapter 373, Florida Statutes, as well as applicable management and storage of surface water rules, including but not limited to, 40E-4.301, 40E-400.215, and 40E-400.315, Florida Administrative Code, and Section 5.2 of the SOUTH FLORIDA WATER MANAGEMENT DISTRICT Basis of Review. All costs of correcting any violations of SOUTH FLORIDA WATER MANAGEMENT DISTRICT law and rules shall be the exclusive obligation of Permittee.

#### **3.5.9.15**

All unpermitted drainage facilities installed before or during construction shall be removed prior to the project's final acceptance.

#### **3.5.9.16**

Permittee has provided a bond in favor of LWDD in the amount of 110% of the cost of the permitted facility and its installation. Bond will be released upon issuance of final inspection by LWDD and Permittee's submittal of record drawings to LWDD. The cost will be based upon an estimate prepared and signed and sealed by a professional engineer registered in the State of Florida.

#### **3.5.9.17**

Permittee agrees that significant construction must start within two years to the date of permit issuance or this permit is void and a new permit must be applied for prior to any construction activity on site. The new application must meet current operating policies.

#### **3.5.9.18**

The Permittee, LWDD approved assignees, or successors in title agree to operate and maintain the drainage system in perpetuity.

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### 3.5.9.19

Permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system. LWDD reserves the right to require that additional water quality treatment methods shall be incorporated into the drainage system, if such measures are shown to be necessary based on local, SFWMD, USACE, FDEP and/or EPA standards that are required.

### 3.5.10 Conditions upon which Work within LWDD Right(s)-of-Way May be Required of a Petitioner or an Applicant

Proposed improvements to property that is adjacent to a LWDD canal, or part of a parent tract (same property owner or contiguous master plat) that is adjacent to a LWDD canal, or proposed improvements within LWDD canal right(s)-of-way, may be conditioned, when and if permitted by LWDD, to do canal work. This canal work may include, but may not necessarily be limited to, canal channel and maintenance berm relocation, canal channel and maintenance berm reshaping, dredging, filling, sloping, channel side slope stabilization, sodding and/or seeding and mulching.

Projects that may be conditioned to do canal work are projects that propose to make improvements to the adjacent property and which improvements may directly affect the facilities of LWDD.

Also, projects within adjacent property that have existing conditions that have, in the past, adversely affected the facilities of LWDD, even if the proposed improvements will not directly affect the facilities of LWDD, may be required to do canal work.

Any requirements or conditions for canal work may be independent of any LWDD right-of-way ownership and interest requirements. These LWDD right-of-way ownership and interest requirements can be found in Chapter 5: Right-of-Way Ownership & Interests of the LWDD Operating Policies Manual.

Engineering and permitting requirements can be found in Chapter 3: Engineering & Permitting Requirements of the LWDD Operating Policies Manual.

LWDD GENERAL PERMIT APPLICATION

1. Project Name/Description: \_\_\_\_\_  
\_\_\_\_\_

Check all that apply:

Type:  Drainage Master  Drainage Phase  Roadway or Pathway  Bridge  
 Culvert Crossing  Piping of Canal  
 Permit Modification (Permit Number being modified: LWDD Permit Number \_\_\_\_\_)

Utility Installation:  Aerial Crossing  Subaqueous Crossing  Directional Bore Crossing  
 Pole to Pole  Underground Crossing  Parallel Installation  
 Attached to Bridge

R/W Encroachment:  Sign  Utility Pole  Monitoring Well

Other: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2a. Project Location (Including Address) Note: Legal description of project or property survey with legal description must be attached to this application: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Drainage Basin:  C-51  C-16  C-15  Hillsboro  
(Please check all that apply)

2b. On applications for Drainage Outfalls, Roadways, Pathways, Bridges, Culvert Crossings, Piping of Canals, Utility Lines, Utility Poles and Monitoring Wells provide Florida State Plane Grid Coordinates (U.S. Survey Feet) based upon the North American Datum of 1983, 1990 Adjustment (NAD 83/90), or better for the proposed improvements, as follows:

Begin Construction Centerline Coordinates: N \_\_\_\_\_ E \_\_\_\_\_

and

End Construction Centerline Coordinates: N \_\_\_\_\_ E \_\_\_\_\_

or

Location Coordinates: N \_\_\_\_\_ E \_\_\_\_\_



**LWDD PERMIT APPLICATION**

**Project Name/Description** \_\_\_\_\_

**2c. Property Control Number (for applicable parcels)** \_\_\_\_\_

**2d. Job, Agent or Government Project Number** \_\_\_\_\_

**2e. Receiving/Adjacent Canal(s):** \_\_\_\_\_ **2f. Project Acreage:** \_\_\_\_\_

**3. Agent\*:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip** \_\_\_\_\_ **Code:** \_\_\_\_\_

**Phone #:** \_\_\_\_\_ **Fax:** \_\_\_\_\_ **Job #:** \_\_\_\_\_

**Project Engineer:** \_\_\_\_\_ **Phone #** \_\_\_\_\_

**Project Engineer's email address:** \_\_\_\_\_

I hereby certify that I am an authorized agent of the owner.

\_\_\_\_\_  
Signature & Printed Name of Agent

\_\_\_\_\_  
Date

\* Agent must provide letter of authorization from owner.

**4. Owner/Applicant:** \_\_\_\_\_ **Phone #:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

\_\_\_\_\_  
Signature & Printed Name of Owner/Applicant

\_\_\_\_\_  
Date

**LWDD PERMIT APPLICATION**

**Project Name/Description** \_\_\_\_\_

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**Checklist of items (if applicable) to be included with a Permit Application  
(Please check each item that is included with your permit application)**

- Two (2) sets of signed & sealed design plans.
- One (1) set of signed & sealed drainage calculations for the appropriate frequency design storm event.
- Control structure(s) shown on the detail sheet of design plans shall be a fixed metal plate or wall, moveable metal plate or a combination of both. All dimensions and elevations shall be shown on design plans.
- Discharge pipe and/or endwall shown on detail sheet of the design plans shall meet LWDD & FDOT standards and specifications.
- Existing canal cross section with canal design section overlay, if applicable.
- Check for inspection/administrative fees if required, including itemization of fees. **See Chapter 2 – Fees, of LWDD Operating Policies manual.**
- Map of Survey and/or sketch of description (signed and sealed)
- Drawing describing the proposed use or facilities (to scale if possible)
- Copy of other Agency permits (if applicable)
- Other information pertinent to the application
- A benchmark shall be provided on the discharge control structure.