

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

3.5 Drainage Outfall Connections

3.5.1

LWDD will issue a Right-of-Way Permit for a drainage outfall connection to its right-of-way if the applicant meets all applicable LWDD criteria and as long as the applicant provides written authorization from either the South Florida Water Management District (SFWMD) or the Florida Department of Environmental Protection (FDEP) complying with all applicable provisions of Part IV of Chapter 373, Florida Statutes, as well as applicable management and storage of surface water rules pursuant to current Chapter 62-330, Florida Administrative Code. Note, pursuant to Part IV of Chapter 373, Florida Statutes the applicant must include submergence calculations with the design information provided to SFWMD or FDEP for approval of the proposed stormwater management system.

3.5.2

A drainage outfall connection is defined as that facility conveying stormwater from the internal stormwater management system to the LWDD canal beginning at and including the internal stormwater management system's discharge control structure and ending at the outfall within LWDD right-of-way. The drainage outfall connection facility includes but may not be limited to stormwater discharge control structures, swales, ditches, pipes, manholes, catchbasins, endwalls, canal berms, canal channel side slopes, and revetment for channel side slope stabilization.

3.5.3

Canal rehabilitation work may be required for projects being proposed on properties that are either immediately adjacent to, crossing, or hydraulically connected to a LWDD canal (see Section 3.5.12).

3.5.4

For projects that are proposed on properties that are either immediately adjacent to, crossing or hydraulically connected to a LWDD canal, additional canal right-of-way may be required from the adjacent property. The amount of additional canal right-of-way that is needed is to be determined from review of submitted acceptable cross sections of the existing canal (see Section 3.5.10.1 – Canal Cross Sections) during the Palm Beach County Development Review Officer (DRO) process or other zoning/site plan approval process through the appropriate municipality (see Section 5.2 – Development Review Process). The conveyance to LWDD of any required additional canal right-of-way must be finalized prior to site plan approval.

3.5.5

Drainage outfall connection discharge pipes shall be sized to provide the required hydraulic capacity but must be at least eighteen (18) inches in diameter.

3.5.6

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

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

3.5.7

An emergency, or operable, control type structure may be authorized by SFWMD or FDEP in accordance with LWDD operating policies. An emergency control type structure is a discharge control structure that has been designed and constructed so that it can temporarily be “opened” to allow more stormwater than authorized, under normal storm event conditions, to be discharged from an internal stormwater management system into a LWDD canal, for a very short period. The “opening” of an emergency (discharge) control type structure is typically accomplished through a screw gate weir or some other mechanism and must be authorized by LWDD each time it is opened. The “opening” of an emergency (discharge) control type structure will typically be authorized by LWDD only to address extreme storm event conditions, such as a tropical storm or a hurricane. Any emergency control type structure(s) shall always remain closed 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 issuance of 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. Also, by issuance of this permit, the Permittee and/or assigns agree to notify LWDD upon receipt of a Transfer of Environmental Resource Permit to the Perpetual Operation and Maintenance Entity from the South Florida Water Management District.

3.5.8

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.

3.5.9 Surface Water Elevations

3.5.9.1 Maintained Water Surface Elevation

This refers to typical maintained average elevation of the water in each 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. However, surface water elevations may fluctuate due to droughts or heavy rainfall events.

3.5.9.2

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

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

3.5.10 Permit Application Notes

3.5.10.1 Canal Cross Sections

For projects that are proposed on properties that are either immediately adjacent to, crossing or hydraulically connected to a LWDD canal, LWDD may require additional right-of-way based on the actual location of the existing canal. LWDD can only determine the need for additional right-of-way by reviewing signed and sealed cross sections of the existing canal. Conveyances to LWDD shall be by Warranty Deed or Exclusive Perpetual Easement.

Also, canal rehabilitation work may be required for projects on properties that are either immediately adjacent to, crossing, or hydraulically connected to a LWDD canal. This will require review by LWDD of the signed and sealed cross sections of the existing canal.

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;
- (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).

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

Note: Each cross section is to include enough 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 (including existing culvert invert elevations) 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 100 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 100 feet of required right-of-way width (including both heavy and light canal maintenance berms). A statement must be included on the canal 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 Portable Document Format (PDF) files that are directly exported from an AutoCAD drawing.

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.

3.5.10.2 Vertical Datum Used for Design Plans

Plans submitted to LWDD must clearly depict the vertical datum being used for the elevations shown on the plans. Since the LWDD stormwater conveyance system is based upon the National Geodetic Vertical Datum of 1929 (NGVD 29), if the elevations shown on the submitted plans are based upon the North American Vertical Datum of 1988 (NAVD 88), a conversion factor between the NAVD 88 vertical datum and the NGVD 29 vertical datum must be clearly shown on the plans.

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

3.5.10.3

Construction dewatering will require separate SFWMD written approval and LWDD written approval prior to discharge into the canal system. LWDD will issue written approval for construction dewatering only after the applicant, engineer or contractor has provided LWDD with a copy of SFWMD's written approval for the construction dewatering.

3.5.10.4

Conversion and Transfer of a Right-of-Way – Drainage Outfall Connection Permit from Construction Phase to Operation Phase

When the project construction is completed and LWDD issues a Final Acceptance the current property owner is required to convert and transfer the existing Right-of-Way Permit from the Construction Phase to the Operation Phase and also identify the Perpetual Operation and Maintenance Entity by submitting to LWDD a completed Conversion and Transfer Right-of-Way Permit from Construction Phase to Operation Phase form, using the appropriate form, along with the required Permit Conversion and Transfer – Construction Phase to Operation Phase fee. See the Appendix of this Operating Policies Manual for the Conversion and Transfer of Right-of-Way Permit from Construction Phase to Operation Phase form.

3.5.10.5

Transfer of Ownership of Right-of-Way – Drainage Outfall Connection Permit

When ownership of property that has an existing, valid LWDD Right-of-Way – Drainage Outfall Connection Permit is changed, and the permitted site design is not being altered, the new owner shall request a Transfer of Ownership of Right-of-Way – Drainage Outfall Connection Permit by completing and submitting a fully executed Request of Transfer of Ownership of Right-of-Way – Drainage Outfall Connection Permit, using the appropriate form, along with the required Permit Transfer of Ownership fee.

See the Appendix of this Operating Policies Manual for the Request of Transfer of Ownership of Right-of-Way – Drainage Outfall Connection Permit form. If the permitted drainage outfall connection is to be altered, the new owner shall submit either a completed new permit application or request a permit modification, depending upon the degree of alteration. Contact LWDD 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 permit.

3.5.11 Special Conditions That May Be Included On Permit

In addition to the standard general conditions on a LWDD Right-of-Way Permit the following special conditions may be included on the permit issued for a drainage outfall connection.

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

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

3.5.11.1

This permit authorizes the installation of a Drainage Outfall Connection to LWDD right-of-way from the proposed internal stormwater management system discharge control structure to the outfall within LWDD __-__ Canal right-of-way (consisting of the discharge control structure and all other appurtenances to convey the stormwater to LWDD __-__ Canal, including but not be limited to swales, ditches, pipes, manholes, catchbasins, endwalls, canal berms, canal channel side slopes, and revetment for channel side slope stabilization) and _____ as represented on the application, plans and/or specs submitted by [authorized agent] on [DATE Final Plans Received].

3.5.11.2

If applicable, pursuant to the approved plans, the 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. The 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.

3.5.11.3

If applicable, pursuant to the approved plans, the emergency control type structure(s) shall always remain closed 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 issuance of 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. Also, by issuance of this permit, the Permittee and/or assigns agree to notify LWDD upon receipt of a Transfer of Environmental Resource Permit to the Perpetual Operation and Maintenance Entity from the South Florida Water Management District.

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

3.5.11.4

If authorized pursuant to the approved plans, 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.

3.5.11.5

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

3.5.11.6

At the time of installation, a permanent benchmark shall be established at 2nd 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.

3.5.11.7

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.

3.5.11.8

All underground utility installations in LWDD rights-of-way must have a minimum depth (cover) of thirty-six inches (36") 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.

3.5.11.9

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 pursuant to current Chapter 62-330, Florida Administrative Code. All costs of correcting any violations shall be the exclusive obligation of permittee.

3.5.11.10

The Permittee, LWDD approved assignees, and/or successors in title agree to operate and maintain the system/facility in perpetuity, including correction of any damages caused because of this installation. Pursuant to General Conditions of this permit, the Permittee agrees that the transfer of any rights, title or interests of the property or facility ownership referenced in this permit herein shall require a transfer of this permit.

3.5.11.11

In the event it becomes necessary for LWDD to expand or further utilize its facilities within its right-of-way, the permittee shall after reasonable notice

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

(the same not to exceed sixty (60) days), effect such removal of the permitted facility as LWDD may reasonably require from time to time so as to allow and not delay LWDD canal or right-of-way improvements and further, the Permittee shall maintain in good safe operating condition the facility permitted and involved herein.

3.5.11.12

Permittee may, at its sole expense, modify the facility involved and installed herein under the condition that same does not unreasonably interfere with LWDD's use of its right-of-way and under the condition that the plans and specifications for such modification have been permitted by LWDD through application of a permit modification.

3.5.11.13

It shall be the responsibility of the Permittee or Permittee's contractor(s) installing the above described facility to maintain the continuous uninterrupted free flow of water in the canal. It shall further be the duty of the Permittee to obtain the approval of LWDD for any construction methods, which would be contrary to the above. The Permittee shall also be responsible for the installation of silt screens and/or turbidity barriers as necessary to maintain the clarity of the water. PERMITTEE'S FAILURE TO COMPLY WITH WRITTEN NOTICE OF A VIOLATION OF THE CONDITIONS OF THIS PERMIT SHALL, AFTER FIVE (5) WORKING DAYS, AUTOMATICALLY WITHOUT FURTHER NOTICE VOID THIS PERMIT, BUT NOT THE PERMITTEE'S LIABILITY INVOLVED HEREIN.

ANY BOND CONDITIONED BY THIS PERMIT SHALL BE UTILIZED FOR THE RESTORATION OF ANY DAMAGES DONE TO THE CANAL RIGHT-OF-WAY BY THE PERMITTEE OR THE PERMITTEE'S CONTRACTOR(S).

3.5.11.14

This permit is issued based on the applicant's submitted information which reasonably demonstrates that no adverse water resource related impacts will be caused by the completed permit activity. Should it be determined that adverse impacts caused by the completed surface water management system have taken place, including the discharge of nutrient concentrations to canals that cause an imbalance in natural populations of aquatic flora and fauna, then LWDD shall require the permittee to develop a source control plan [i.e. consisting of chemical treatment and/or implementation of best management practices (BMPs)]. Additionally, LWDD may require the permittee to modify the permit to implement components of the source control plan.

3.5.11.15

If required by LWDD, 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/project certification to LWDD. The

LAKE WORTH DRAINAGE DISTRICT OPERATING POLICIES

Chapter 3: Engineering & Permitting Requirements

cost will be based upon an estimate prepared and signed and sealed by a professional engineer registered in the State of Florida.

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

Canal rehabilitation work may be required for projects that are proposed on properties that are either immediately adjacent to, crossing or hydraulically connected to a LWDD canal. Required canal rehabilitation work may include removal of vegetative encroachments, removal of structural and non-structural encroachments, and earthwork to bring the existing canal section to the approved canal design section through realignment of the canal, dredging of the canal channel, and reshaping or reconstruction of the canal bank(s), along with any required channel side slope stabilization. On a case-by-case situation and depending upon the condition of the existing canal, in lieu of canal rehabilitation work LWDD may allow the applicant to remit a canal rehabilitation fee based upon the linear-foot of canal that the project fronts.

Projects that may be conditioned to do canal rehabilitation work are projects that propose to make improvements to the adjacent property and which improvements may directly affect the facilities of LWDD and projects that are proposing improvements within LWDD rights-of-way such as drainage outfall connections, culvert crossings, bridges, utility installations, etc.

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 rehabilitation work.

Any requirements or conditions for canal rehabilitation 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.