

PART 2, CHAPTER 11

WATER RESOURCES

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PART 2 CHAPTER 11

WATER RESOURCES

11.1 OVERVIEW

This chapter provides procedures for assessing and documenting potential impacts to water resources from transportation projects to comply with the **National Environmental Policy Act (NEPA)**, the **Clean Water Act (CWA)**, and other related federal and state environmental laws and regulations. The **CWA** is the primary law regulating pollution of the nation's waterways. Originally enacted in 1948 as the **Federal Water Pollution Control Act**, it was amended in 1972 under the **CWA** to add programs for water quality improvements with the goal of restoring and maintaining the chemical, physical, and biological integrity of the country's water [**33 United States Code (U.S.C.) § 1251 et seq.**]. The **CWA** became the Act's common name with the amendments in 1972. The **CWA** made it unlawful to discharge any pollutant from a point source into navigable waters unless a permit was obtained. Additionally, the Environmental Protection Agency (EPA) has set water quality standards for contaminants in surface waters. In Florida, the Florida Department of Environmental Protection (FDEP) and five regional Water Management Districts (WMDs) implement the **CWA** programs under **Chapters 403 and 373, Florida Statutes (F.S.)**.

Section 403.021(2), F.S., declares that it is public policy of the state to conserve the waters of the state and to protect, maintain, and improve their quality. Even though state surface water quality standards applicable to waters of the state do not apply within a stormwater management system, as provided by **Section 373.4142, F.S.**, as long as the stormwater management system is designed, constructed, operated, and maintained for stormwater treatment in accordance with a valid permit, this statute does require Florida Department of Transportation (FDOT) to provide reasonable assurance that the water quality within its stormwater management system will not adversely impact public health, fish and wildlife, or adjacent waters. Therefore, FDOT projects are evaluated for potential impacts on water quality from stormwater runoff and are designed to address and mitigate impacts from stormwater runoff through compliance with stormwater management plans and applicable regulatory requirements. **Section 373.4596, F.S.**, requires FDOT projects to fully comply with state, WMD, and, when delegated by the state, local government stormwater management programs.

Additionally, this chapter provides guidance on documenting water resource information and coordinating with water resource agencies and other stakeholders. The chapter does not cover impacts to wetlands and other surface waters not related to stormwater. See [Part 2, Chapter 9, Wetlands and Other Surface Waters](#) for wetland evaluation procedures.

The term "water resources" used throughout this chapter includes both surface and groundwater resources such as, aquatic preserves, Outstanding Florida Waters (OFWs),

and Sole Source Aquifers (SSA). Water resource analysis also includes identification of impaired waters. The level of water quality analysis depends upon the extent of potential impacts of a proposed project on surface and/or groundwater resources. Specifically, the impacts covered in this chapter are related to direct and indirect stormwater discharges from transportation projects into surface water (other than wetlands) and groundwater.

11.1.1 Definitions

Aquatic Preserves – are state-owned sovereign submerged lands in areas which have exceptional biological, aesthetic, and scientific value, as described in **Section 258.39, F.S.**

Basin Management Action Plan (BMAP) – a comprehensive plan, coordinated by the FDEP, of regulatory and non-regulatory actions to meet the Total Maximum Daily Load (TMDL) for a given waterbody. BMAPs are designed to implement restoration strategies that reduce pollutant concentrations to meet a TMDL.

Designated Uses – the present and future most beneficial use of a body of water as designated by the Environmental Regulation Commission by means of the Waterbody Classification.

Environmental Regulation Commission – The Florida Environmental Regulation Commission is a non-salaried, seven-member board created by the Legislature as a part of the FDEP. The Florida Environmental Regulation Commission is charged with setting statutorily specified air and water quality standards by evaluating their scientific and technical validity, economic impacts, and risks and benefits to the public and Florida's natural resources.

FDEP Group Number – the number and name assigned to waterbodies and water segments by FDEP, based on watersheds/basins that have been developed for the state and that form the basis for Basin Rotation.

Hydrologic Unit Code (HUC) – the hydrologic cataloging unit assigned to a geographic area representing a surface watershed drainage basin. Each hydrologic unit is assigned a two-digit to 12-digit number that uniquely identifies each of the six levels of classification within six two-digit fields.

Impaired Waters – surface waters that do not meet the standards set for them are determined to be “impaired” and in need of restoration. Using data from assessments, FDEP maintains a verified list of impaired Florida waterbodies. The statewide comprehensive verified list of impaired waters contains waterbody-parameter combinations that have been verified as impaired based on criteria and assessment methodologies in **Chapters 62-302 and 62-303, Florida Administrative Code (F.A.C.)**.

Municipal Separate Storm Sewer System (MS4) – a publicly-owned conveyance or system of conveyances, such as roads with stormwater systems, municipal streets, or catch basins, that are designed or used for collecting or conveying stormwater that discharges into surface waters of the state.

Nonpoint Source – any pollutant source that cannot be considered a “point source” according to the **CWA** and EPA regulations. Nonpoint source pollution generally results from stormwater runoff, precipitation, atmospheric deposition, or seepage.

Numeric Nutrient Criteria (NNC) – statewide numeric nutrient standards for Florida’s waters (including springs, rivers, lakes and estuaries but excluding wetlands, tidal creeks, managed conveyances and south Florida flowing waters) established under **Chapter 62-302.531, F.A.C.** and **Chapter 62-302.532, F.A.C.**

Outstanding Florida Waters (OFWs) – waterbodies designated by the Environmental Regulation Commission as worthy of special protection because of their natural attributes. This special designation is applied to certain waters and is intended to protect existing good water quality. (**Chapter 62-302.700, F.A.C.**)

Outstanding National Resource Waters (ONRWs) – waterbodies designated by the Environmental Regulation Commission that are of such exceptional recreational or ecological significance that water quality should be maintained and protected under all circumstances.

Point Source – any discernable, confined, and discrete conveyance from which pollutants may be discharged, such as a pipe, vessel, channel, or ditch.

Potable Water Well – any water well which supplies water for human consumption to a community water system or to a non-transient non-community water system. (**Chapter 62-521, F.A.C.**)

Reasonable Assurance Plan (RAP) or 4b Plan – waterbody restoration plan for waterbodies that are impaired but with control programs already in place to restore water quality standards.

Site Specific Alternative Criteria (SSAC) – an alternative surface water quality standard that can replace the criteria applicable statewide in cases where site specific information supports different numeric criteria. The SSAC must fully support and protect the designated uses of the waterbody.

Sole Source Aquifer (SSA) – an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer [**Title 40 Code of Federal Regulation (CFR) § 149**]. These areas may have no alternative drinking water source(s) that could physically, legally, and economically supply all those who depend on the aquifer for

drinking water. EPA has identified two SSAs in Florida, the Volusia-Floridan and Biscayne Aquifers.

Special Water – a waterbody demonstrated to be of exceptional recreational or ecological significance as listed in **Chapter 62-302.700(9)(i), F.A.C.**

Total Maximum Daily Load (TMDL) – a scientific determination of the maximum amount of a given pollutant that a waterbody can absorb and still meet the water quality standards that protect human health and aquatic life. FDEP is responsible for the TMDL program.

Water Quality Criteria – elements of the state water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports the present and future most beneficial use, as listed in **Chapter 62-302.200(41), F.A.C.**

Water Quality Standards – composed of designated present and future most beneficial uses (classification of waters), the numerical and narrative criteria, including Site Specific Alternative Criteria, applied to the specific water uses or classification, the Florida anti-degradation policy, and the moderating provisions, such as variances, mixing zone rule provisions, or exemptions, as listed in **Chapter 62-302.200(42), F.A.C.**

Waterbody Classification – a classification of surface waters of the state according to designated use as established by **Chapter 62-302.400, F.A.C.**, as follows:

Class I	Potable Water Supplies
Class II	Shellfish Propagation or Harvesting
Class III	Fish Consumption; Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife
Class III-Limited	Fish Consumption; Recreation or Limited Recreation; and/or Propagation and Maintenance of a Limited Population of Fish and Wildlife
Class IV	Agricultural Water Supplies
Class V	Navigation, Utility, and Industrial Use

Waterbody Identification Number (WBID) – unique identifiers assigned to polygons that roughly delineate the drainage basins surrounding the waterbody assessment units (drainage basins, lakes, lake drainage areas, springs, rivers and streams, segments of rivers and streams, coastal, bay, and estuarine waters in Florida). WBIDs are assigned an FDEP district as part of their attribution. Projects can be in more than one WBID.

Wellhead Protection Area – an area consisting of a 500-foot radial setback distance around a potable water well where groundwater is provided the most stringent protection measures to protect the groundwater source for a potable water well and includes the surface and subsurface area surrounding the well. (**Chapter 62-521, F.A.C.**)

11.2 WATER RESOURCES

Identifying and addressing potential water resource impacts associated with a transportation project first involves identifying water resources in the project area. See [Table 11-1](#) for links to water resource information.

The list of Sole Source Aquifers (SSAs) in Florida is maintained by the EPA. There are two SSAs in Florida: Biscayne Sole Source Aquifer and Volusia-Floridan Sole Source Aquifer. Recharge zones should also be identified.

Identifying and addressing water resource impacts associated with transportation projects also involves engaging various state and federal agencies, as well as other local and regional stakeholders. Coordination requirements specific to the resource, is discussed in the following sections ([Section 11.2.1](#) through [Section 11.2.4](#)). Coordination may begin as early as the Planning phase and Efficient Transportation Decision Making (ETDM) process including using the Watershed Approach to Evaluating Regional Stormwater Solutions (WATERSS) process and tools (see [Part 2, Chapter 3, Engineering Analysis](#) and [Part 2, Chapter 3A, Alternative Analysis](#)). The goal of early coordination is to proactively identify potential water quality and stormwater requirements and to explore opportunities for innovative stormwater solutions or joint/regional stormwater management projects with stakeholders.

The District's Project Development and Environment (PD&E) Project Manager should document coordination efforts internally and with external stakeholders and agencies, as well as areas of potential cooperation and/or agreements in the **Pond Siting Report (PSR)**, **Stormwater Management Alternatives Report (SMART)**, and/or the **Preliminary Engineering Report (PER)** for future follow up as the project progresses into the Design phase.

11.2.1 Aquatic Preserves

Section 258.37, F.S., defines aquatic preserve as “an exceptional area of submerged lands and its associated waters set aside for being maintained essentially in its natural or existing condition”. The Florida Legislature, through the **Florida Aquatic Preserve Act of 1975 (Act)**, **Sections 258.35 – 258.394** and **258.40 - 258.46, F.S.**, set aside state-owned submerged lands with exceptional biological, aesthetic, and scientific value as aquatic preserves. The Board of Trustees of the Internal Improvement Trust Fund through the FDEP Division of State Lands is responsible for the implementation, administration, and enforcement of the **Act**, including the adoption of rules for management of aquatic preserves as found in **Chapter 18-20, F.A.C.**

Most of the aquatic preserves are located along the coast and involve marine or estuarine environments, with the exception of a few aquatic preserves which are located inland. Many of the aquatic preserves are associated with state or federal parks and refuges. Generally, aquatic preserves designated under **Chapter 258, F.S.**, are also considered OFWs under **Rule 62-302.700(2)(f), F.A.C.** ([Section 11.2.3](#)).

For projects in an aquatic preserve, coordination with FDEP is needed if potential impacts to an aquatic preserve have been identified [e.g., sovereign submerged lands, right of way (ROW), in-water work]. Once ROW requirements have been defined, aerial maps depicting alternatives with ROW located within the boundary of an aquatic preserve are submitted to FDEP for review and comment. They are addressed to:

Director, Office of Resilience and Coastal Protection
Florida Department of Environmental Protection
2600 Blair Stone Road
Mail Station 235
Tallahassee, FL 32399-2400

A letter requesting a response from FDEP within 30 days accompanies the aerials. This letter must contain the **NEPA** Assignment standard statement for FDOT Federal Projects (see [Part 1, Chapter 4, Project Development Process](#)).

11.2.2 Impaired Waters

Stormwater treatment systems located within a Hydrologic Unit Code (HUC) 12 sub-watershed which contains an impaired water, and located upstream of that impaired water, are subject to stricter water quality requirements of **Chapter 62-330, F.A.C.** and the **Environmental Resource Permit (ERP) Applicant's Handbook Volume I**.

Using data from assessments, FDEP maintains a verified list of impaired waterbodies. The impairments are separated into the following assessment categories:

- 1 Attains all designated uses.
- 2 Attains some designated uses and insufficient or no information or data are present to determine if remaining uses are attained.
- 3a No data and information are present to determine if any designated use is attained.
- 3b Some data and information are present but not enough to determine if any designated use is attained.
- 3c Enough data and information are present to determine that one or more designated uses may not be attained according to the Planning List methodology.

- 4a Impaired for one or more designated uses but does not require Total Maximum Daily Load (TMDL) development because a TMDL has already been completed.
- 4b Impaired for one or more designated uses but does not require TMDL development because the water will attain water quality standards due to existing or proposed measures.
- 4c Impaired for one or more criteria or designated uses but does not require TMDL development because impairment is not caused by a pollutant.
- 4d Waterbody indicates non-attainment of water quality standards, but FDEP does not have enough information to determine a causative pollutant; or current data show a potentially adverse trend in nutrients or nutrient response variables; or there are exceedances of stream nutrient thresholds, but FDEP does not have enough information to fully assess non-attainment of the stream nutrient standard.
- 4e Waterbody indicates non-attainment of water quality standards and pollution control mechanisms or restoration activities are in progress or planned to address non-attainment of water quality standards, but FDEP does not have enough information to fully evaluate whether proposed pollution mechanisms will result in attainment of water quality standards.
- 5 Water quality standards are not attained and a TMDL is required.

Section 303(d) of the CWA requires states to identify waters where current pollution control technologies alone cannot meet the water quality standards set for that waterbody. Every two years, states are required to submit a list of impaired waters, plus any waters that may soon become impaired, to the EPA for approval. The impaired waters are prioritized based on the severity of the pollution and the designated use of the waterbody (e.g., fish propagation or human recreation). States must establish the TMDLs of the pollutant(s) in the waterbody for impaired waters on their respective lists.

The **Florida Watershed Restoration Act (FWRA)**, which is codified at **Section 403.067, F.S.**, was enacted to protect waters of the state through the TMDL program as required by **Section 303(d) of the CWA** and **33 U.S.C. § 1251**. The TMDL program promotes improvements in water quality by coordinating pollution control from both point and nonpoint sources. TMDLs are adopted for waters identified as impaired by FDEP in accordance with **Chapter 62-303, F.A.C.**, also known as the **Impaired Waters Rule (IWR)**. TMDLs are adopted by law in **Chapter 62-304, F.A.C.** TMDLs may be implemented through Basin Management Action Plan (BMAPs), National Pollutant Discharge Elimination System (NPDES) permits, or through other pollution reduction strategies.

BMAPs are developed under **Section 403.067, F.S.**, with local stakeholders, including FDOT. The BMAP implementation and updates provide opportunities for local stakeholders and FDOT to seek joint/regional water quality projects.

The list of TMDLs and their BMAPs can be found on the FDEP **Basin Management Action Plans Website** (see link in [Section 11.4](#)). Projects that are located within a BMAP boundary or within the HUC12 basin of an impaired waterbody with established TMDLs are subjected to stricter water quality requirements of **Chapter 62-330, F.A.C** and the **ERP Applicant's Handbook Volume I**. The District Project Manager should coordinate with the Drainage and Environmental Permits Coordinator to confirm the applicable criteria/requirements. Examples of BMAP activities are permit limits on wastewater facilities, urban and agricultural best management practices, stormwater best management practices, conservation programs, financial assistance, and revenue generating activities.

FDEP implements Reasonable Assurance Plans (RAPs) to restore waterbodies to meet their designated uses. Implementation of RAPs alleviates the need to establish TMDLs. **Rule 62-303.600, F.A.C.**, allows FDEP to delist impaired waters if pollution control programs, such as RAPs, are being implemented to restore water quality standards. FDEP's decision to adopt a RAP shall be based on reasonable assurances that the proposed pollution control mechanism and expected water quality improvements will attain applicable water quality standards. Adopted RAPs can be found on the FDEP **RAPs Category 4b Assessments and Documentation Website** (see link in [Section 11.4](#)). It is important to note that the BMAP and RAP boundaries generally encompass a larger area than the TMDL or impaired waterbody.

If the project is located within a BMAP or RAP area, the District should first coordinate with the District NPDES Permit Coordinator and also coordinate with BMAP/RAP stakeholders to understand FDEP and local concerns. Coordination may also identify the level of water quality evaluation needed, additional stakeholders, permitting needs, project commitment for nutrients reductions, and whether any potential regional water resource improvement opportunities exist for the project. FDOT is an active stakeholder for the BMAPs and RAPs within their jurisdiction under the District NPDES Permit Coordinator. Coordination should occur with the District NPDES Permit Coordinator on projects located within a BMAP and/or RAP and results documented in accordance with [Section 11.3.5.4](#).

11.2.3 Outstanding Florida Waters

Section 403.061(27), F.S., grants FDEP rulemaking authority to establish a special category of waterbodies within the State, to be designated as OFWs, which shall be worthy of special protection because of their natural attributes. OFWs are listed in **Rule 62-302.700(9), F.A.C.**, which include:

- (a) Waters within National Parks and National Memorials
- (b) Waters within National Wildlife Refuges
- (c) Waters within State Parks, State Wildlife Parks, and State Recreation Areas

- (d) Waters within State Ornamental Gardens, State Botanical Sites, State Historic Sites, and State Geological Sites
- (e) Waters within State Preserves, State Underwater Archaeological Preserves, and State Reserves
- (f) Waters within Areas Acquired through Donation, Trade, or Purchased Under the Environmentally Endangered Lands Bond Program, Conservation and Recreation Lands Program, Land Acquisition Trust Fund Program, and Save Our Coast Program
- (g) Waters within National Seashores
- (h) Waters within State Aquatic Preserves
- (i) Special Waters

Stormwater treatment systems located within a HUC 12 subwatershed containing an OFW and located upstream of that OFW, are subject to stricter water quality requirements of **Chapter 62-330, F.A.C.** and the **ERP Applicant's Handbook Volume I**.

Coordination with FDEP is needed if OFW impacts have been identified on projects that are not a Type 1 Categorical Exclusion (CE) or Non-Major State Action (NMSA). Once ROW requirements have been defined, aerial maps depicting alternatives with ROW located within the OFW boundary are submitted to FDEP for review and comment.

A letter requesting a response from FDEP within 30 days accompanies the aerials. This letter must contain the **NEPA** Assignment standard statement for FDOT Federal Projects.

Submittals are addressed to:

Director, Office of Resilience and Coastal Protection
Florida Department of Environmental Protection
2600 Blair Stone Road
Mail Station 235
Tallahassee, FL 32399-2400

After coordination with FDEP, documentation of any anticipated impacts to the OFW is provided in accordance with [Section 11.3.5.2](#).

11.2.4 Sole Source Aquifer

The list of SSAs in Florida is maintained by the EPA. There are two SSAs in Florida: Biscayne Sole Source Aquifer and Volusia-Floridan Sole Source Aquifer.

When a project has the potential to impact a SSA, the District must coordinate with EPA's Region 4 Ground Water and Underground Injection Control (UIC) Section to obtain EPA concurrence with **Section 1424(e) of the Safe Drinking Water Act (SDWA)** and **40 CFR § 149**.

Projects with federal funding located within the boundaries of designated SSA must be planned and designed to ensure they will not contaminate the aquifer. During the PD&E Study, the District coordinates with EPA's Region 4 for evaluation and concurrence using the **EPA Region 4 Sole Source Aquifer Project Review Form**. Concurrence is documented in an email from EPA Region 4, which serves as the official record of the EPA decision. The District should respond to EPA's inquiries, comments, or mitigation measures before the Environmental Document is finalized.

Projects excluded from EPA review under SSA program include those that are funded entirely by state, local, or private entities.

11.3 PROCEDURE

Project impacts to water resources must be evaluated and documented, regardless of whether the project is required to meet federal and/or state environmental review requirements. The evaluation should include the information necessary to estimate potential impacts to water resources as part of the project development process in compliance with the goals and requirements of the **CWA, Chapter 373, F.S.**, and **Chapter 403, F.S.**

11.3.1 Level of Assessment Determination

The level of assessment for water resources depends on the project's involvement with water resources, the quality of the water resources, potential impacts, and the potential implementation of non-traditional water quality treatments. If the project is located in, over, or adjacent to a water resource designated as an OFW, aquatic preserve, impaired waters, or SSA, additional assessment may be needed.

In accordance with [Part 1, Chapter 2, Class of Action Determination for Federal Projects](#), qualifying projects must complete an ETDM Programming Screen; these projects may have also completed a prior ETDM Planning Screen. The following items should be addressed as the projects advance through either screening type and the project development process:

1. **ETDM Planning Screen Evaluation** – In the Preliminary Environmental Discussion (PED), the District may provide a discussion about known potential project involvement with surface waterbodies and groundwater resources and their designations in accordance with [Part 1, Chapter 3, Preliminary Environmental Discussion and Advance Notification](#). The District identifies water resources

located within the project area using online resources maintained by the FDEP and WMDs, as well as other data sources.

Specific information identified during the screening may include:

a. Surface Water

1. Identification of surface waterbody to which stormwater discharges;
2. Any special designations of receiving waterbodies (e.g., OFW, impaired waters, Outstanding National Resource Waters (ONRW), aquatic preserve);
3. Waterbody Classification;
4. Whether the project is within a permitted Municipal Separate Storm Sewer System (MS4);
5. WBIDs in the project area and associated FDEP Group Number and name;
6. Listing status—whether the WBID is identified as impaired, has a TMDL or is located within a BMAP or RAP boundary;
7. The appropriate numeric nutrient standard for the waterbody, if applicable; and
8. If project directly discharges to a waterbody identified as impaired [including the pollutant(s) of concern, numeric nutrient standard, or TMDL (whichever applies)].
9. WMD in which the project is located;
10. Water Control Districts or Regional Water Authorities;
11. HUC 12 basin ID.

b. Groundwater

1. Groundwater recharge mechanism;
2. Identification of an SSA and the aquifer where the project is located;
3. Potentially affected springsheds and spring protection zones;
4. Whether the potentially affected spring has a TMDL, BMAP, or RAP plan; and
5. Water Control Districts or Regional Water Authorities with potable water well fields.

2. **ETDM Programming Screen Evaluation** – Whether or not a Planning Screen Evaluation has been completed, the information listed above in the Planning

Screen Evaluation is required to be included in the Programming Screen Evaluation. The District should include a discussion about potential project involvement with surface waterbodies and groundwater resources (based on the District's familiarity with the project area and information from the Planning Screen) in the PED and the Advance Notification (AN) Package, as appropriate. The District ETDM Coordinator and the District Project Manager should coordinate with other District staff, such as the District Drainage Engineer, District Environmental Permits Coordinator, and others who will be involved with the project in subsequent phases, to document pertinent information regarding affected water resources and to explore opportunities for stormwater management. The District should coordinate, as needed, with the Environmental Technical Advisory Team (ETAT) and other stakeholders throughout the ETDM screening process.

For projects that were screened through the ETDM process, water resource data as well as potential associated project impacts provided through ETAT comments, are presented in the ***Programming Screen Summary Report*** ([ETDM Manual, Topic No. 650-000-002](#)). The EST includes a WATERSS Analysis Tool to assist in the identification of Water Resources and areas of water quality concerns. The ***WATERSS Report*** specifically includes Geographic Information System (GIS) data and applicable maps that identify the proximity of the proposed action to aquatic preserves, impaired waters, OFWs, or SSAs. ETAT comments under the Special Designations topic should identify any potential project impacts to these resources. Comments by FDEP are especially important as they may identify potential project impacts on other issues such as Wetlands and Surface Waters, and Water Resources.

Detailed evaluations are generally not warranted for transportation projects not qualifying for ETDM screening (typically Type 1 CEs and NMSAs). These projects have no significant environmental effects; therefore, documentation of drainage considerations should be included in the appropriate checklist.

11.3.2 Existing Water Resource Conditions

The District identifies water resource basins or watershed boundaries where the project may have a direct impact on water quality and specific water resource characteristics within the basins. Data to evaluate potential water resources within the project area can be obtained from various sources such as the EST, FDEP and the relevant WMD websites, GIS water resource data, county and city water atlases, regional stormwater master plans, and flood studies. The District reviews the project area for innovative stormwater solutions or joint/regional opportunities by using the WATERSS process. Joint/regional stormwater management projects may require considerations beyond the project's immediate hydrologic basin boundary(ies) and preferred alternatives.

If a ***Programming Screen Summary Report*** is completed, the Project Development Engineer and/or the District Drainage Engineer should review the ETAT comments provided for the following resources: Water Quality and Quantity (including comments

pertaining to SSAs), Coastal and Marine, Wetlands and Surface Waters, Floodplains, and Special Designations. WATERSS comments related to innovative stormwater solutions or joint/regional opportunities suggested by ETAT members should also be reviewed. After comments are reviewed, the project's involvement is determined, water resources characteristics are identified, as well as any potential involvement. Information from the ETDM screening is used to scope the water quality and stormwater evaluation efforts during the PD&E Study. The Project Manager should discuss scoping activities with other offices such as Drainage, Maintenance, and with the District Permits Coordinator.

The Project Manager should coordinate with the District Drainage Office to determine any additional areas associated with pond siting, stormwater storage, hydrologic restoration, recharge or treatment. Coordination should also include the District Environmental Permits Coordinator, State Drainage Engineer, and NPDES Permit Coordinator to identify areas where pollutant load reduction efforts may be needed to meet requirements of **Chapter 62-330, F.A.C** and the **ERP Applicant's Handbook Volume I**.

The **Programing Screen Summary Report**, ETAT comments, and results from the coordination efforts are used to document the existing water resources and Special Designations affected by the proposed project. The detailed results of the water resources analysis are documented in the **PSR** and/or **SMART**, and summarized in the Water Resources section of the Environmental Document. If more than one project alternative is analyzed in detail, a water resources analysis is completed for each alternative and basin. The results of each alternative are then compared and documented in the **Conceptual Drainage Report, PSR, SMART, PER**, and summarized in the Environmental Document (see [Section 11.3.5.6](#)).

11.3.3 Water Quality Analysis

The water quality analysis is the analysis of potential project impacts on water quality and should be performed for each alternative when applicable. The purpose of the water quality analysis is, assess a project's potential impacts to identified water resources, identify and evaluate mitigation measures (if necessary), and document stakeholder coordination that has occurred. Water quality requirements and basin designations affect design criteria and may affect the stormwater pond and/or facilities' size requirements. Project impacts to an aquatic preserve, impaired waters, ONRW, OFW, or SSA must also be identified in the water quality analysis.

Information associated with the water quality analysis should be documented in the **PSR, Conceptual Drainage Report**, or **SMART**, and summarized in the **PER**.

In addition to the **PSR, Conceptual Drainage Report**, and/or **SMART**, the water quality analysis should be briefly summarized in the Environmental Document [Type 2 CE, Environmental Assessment (EA), Environmental Impact Statement (EIS), or State Environmental Impact Report (SEIR)], and uploaded to the project file in the SWEPT (see [Section 11.3.5.6](#)).

11.3.4 Stormwater Impacts

Stormwater impacts associated with transportation projects are addressed with an ERP through FDEP, the respective WMD, or a delegated local program.

In accordance with **Chapter 62-330.301, F.A.C.**, to obtain an approval of an ERP, FDOT must provide reasonable assurance that the construction, alteration, operation, maintenance, removal, or abandonment of the project:

- a. will not cause adverse water quantity impacts to receiving waters and adjacent lands;
- b. will not cause adverse flooding to off-site property;
- c. will not cause adverse impacts to existing surface water storage and conveyance capabilities;
- d. will not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters;
- e. will not adversely affect the quality of receiving waters such that the state water quality standards will be violated;
- f. will not cause adverse secondary impacts to the water resources;
- g. will not adversely impact the maintenance of surface or groundwater levels or surface water flows established pursuant to **Section 373.042, F.S.**;
- h. will not cause adverse impacts to a Work of the District established pursuant to **Section 373.086, F.S.**;
- i. will be capable, based on generally accepted engineering and scientific principles, of performing and functioning as proposed;
- j. will be conducted by a person with the financial, legal, and administrative capability of ensuring that the activity will be undertaken in accordance with the terms and conditions of the permit, if issued; and,
- k. will comply with any applicable special basin or geographic area criteria established in **Chapter 62-330.301(1)(k), F.A.C.**

11.1.1.1 Federal and State Stormwater Regulations and Permits

FDOT projects must adhere to federal and state stormwater regulations. This section summarizes regulations and programs designed to improve water quality and address stormwater impacts associated with transportation projects. Refer to [Part 1, Chapter 12](#),

[Environmental Permits](#) for more information regarding FDOT procedures for obtaining environmental permits.

FDOT transportation projects involving the construction, alteration, operation, maintenance, repair, abandonment and removal of stormwater management systems, dams, impoundments, reservoirs, appurtenant works, and works including structures, dredging and filling located in, on or over wetlands or other surface waters as defined in **Chapter 62-340, F.A.C.**, are governed by the ERP Program under **Chapter 62-330, F.A.C.** and **Chapter 14-86, F.A.C.** The **ERP Applicant's Handbook Volume I** includes statewide stormwater rule requirements. ERP requirements can vary among WMDs. Stormwater pond design criteria for slopes, berms, and clearances, found in the [Drainage Manual, Topic Number 625-040-002](#), are set to satisfy similar WMD pond design criteria.

Generally, ERP requirements regulate stormwater discharge leaving FDOT ROW. Typically, maximum post-development discharge is limited to no greater than pre-development discharge for the specified design storm events required by the WMD. However, in certain basins with historical flooding or limited stormwater conveyance infrastructure, WMDs require onsite development reductions from pre-development discharge. On FDOT transportation projects, ERPs are obtained prior to construction, typically when the drainage design is substantially complete (i.e., after Phase II design plans).

11.3.4.1 Existing Drainage Conditions

For each project alternative being evaluated in the PD&E Study, the existing drainage and water quality conditions should be identified and documented in the **PSR, Conceptual Drainage Report** or **SMARt**, as appropriate:

1. General drainage patterns near the project;
2. Description of the existing drainage basins with their respective outfalls (including information about name and size of basin and whether it is an open or closed basin);
3. The receiving waterbodies, their classifications and special designations (if appropriate);
4. Previous permit information—WMD's permits and drainage connection permits;
5. Base flood elevation, tidal information, Water Control District's control elevations, seasonal high-water table;
6. The land use within the project area;
7. Deficiencies in existing conditions—history of flooding, substandard clearances, scour/erosion problems;

8. The soil types within the project area;
9. Description of existing stormwater systems and stormwater management facilities including conveyance system; location and size of cross drains; location and description of bridges; location, type, and size of ponds; other stormwater facilities;
10. Known above or below ground contamination materials that have a potential to be impacted by the project and affect water quality;
11. Information regarding historical, archeological, and environmental resources that have the potential to be impacted by the drainage of the project;
12. Whether the project is within a permitted MS4;
13. WBIDs in which the project is located and associated FDEP Group Number and Name;
14. WMD in which the project is located;
15. Water Control Districts or Regional Water Authorities;
16. Listing status – whether the WBID is identified as impaired, has a verified TMDL, or is located within a BMAP/RAP boundary as listed by FDEP;
17. The appropriate numeric nutrient standard for the waterbody, if applicable;
18. If project directly discharges to a waterbody identified as impaired (including the pollutant(s) of concern, nutrient numeric criteria, or TMDL (whichever applies));
19. HUC 12 basin information;
20. Whether the project is directly discharging to an OFW;
21. Groundwater recharge mechanism;
22. Identification of the aquifer where the project is located;
23. Identification of SSA;
24. Potentially affected springsheds and spring protection zones;
25. Whether the potentially affected spring has a BMAP or RAP plan;
26. Whether the project is located within a well protection area or nearby; and
27. Water Control Districts or Regional Water Authorities with potable water well fields.

11.3.4.2 Proposed Drainage Conditions

For each project alternative being evaluated in the PD&E Study, the proposed drainage and water quality conditions should be identified and documented in the **PSR**, **Conceptual Drainage Report** or **SMART**, as appropriate:

1. Description of the onsite drainage basins with their respective outfalls;
2. Discussion on how stormwater from offsite area will be handled;
3. WMD requirements for water quality treatment and the rate (or volume) discharge;
4. Pre- and post-development pollutant loading analysis per basin to meet the statewide stormwater rule requirements under **Chapter 62-330 F.A.C.** and the **ERP Applicant's Handbook Volume I**;
5. Floodplain compensation requirements and estimated compensation volume;
6. General discussion of the preliminary proposed drainage (ditched, piped, ponds);
7. Approximate sizes and potential locations of Stormwater Management Facilities;
8. Approximate locations and sizes of cross drains (new and existing)— potential for ROW, including drainage or construction easements;
9. Treatment of existing cross drains (e.g., lengthened, type of end treatment, replaced, plugged);
10. Proposed new bridge structures;
11. Modifications to existing bridge structures;
12. Drainage related design variations;
13. Utility conflicts;
14. Canal rework or relocation; and
15. Potential effects to water quality associated with project construction and/or operations.

11.3.4.3 Regional Stormwater Management

The [WATERSS Process Guidebook](#) contains the steps needed to proactively identify and evaluate innovative stormwater management opportunities. WATERSS provides a framework for how FDOT can partner in innovative, cooperative, regional stormwater management solutions that can lead to improved environmental benefit and/or reduced

stormwater management costs. Coordination with regulatory agencies and stakeholders on stormwater management should begin in the Planning phase/ETDM process and continue through PD&E and Design phases.

Stakeholders, identified in the WATERSS process or through other means, may be able to provide information on current water quality or drainage concerns, possible innovative stormwater management solutions, and mitigation credit opportunities for the project. WATERSS solutions must be coordinated with other FDOT offices and personnel such as, Maintenance, the Environmental Office, Drainage, District Environmental Permits Coordinator, District NPDES Permit Coordinator, Legal, and others as needed.

11.3.4.3.1 Stormwater Management Alternatives Report

When the WATERSS process is followed, the results are documented in the **SMART**. The **SMART** summarizes the stormwater activities and resulting strategy decisions in both the Planning and PD&E phases. The **SMART** includes summaries of all coordination, the water quality analysis, drainage analysis results, all drainage alternatives considered, stormwater management, floodplain and environmental analysis, permit considerations, and legal agreements with stakeholders. The [WATERSS Process Guidebook](#) includes a **SMART** template.

11.3.4.4 Pond Siting Analysis

Drainage and pond siting analyses conducted during the PD&E phase are dependent on the level of engineering and design analyses required for the PD&E Study. For stormwater ponds requiring ROW acquisition, a pond siting evaluation is required during the PD&E phase, in accordance with **NEPA** and as part of obtaining environmental clearances for the project.

At a minimum, the PD&E phase pond siting analysis should identify the following:

- Project's regulatory requirements
- General size and potential location of stormwater management facilities (ponds)
- Stormwater management facility options (e.g., detention, retention, infiltration)
- ROW needs
- Possible challenges that may affect the overall stormwater management approach
- Potential impacts to other environmental resources
- Construction and Maintenance considerations

- Contamination, geotechnical, and utility considerations
- Possible stormwater design concepts that mitigate stormwater runoff and meet regulatory requirements.
- Comparison of pond site alternatives and selection of the preferred alternative.

Stormwater pond design considerations during the PD&E Study include seasonal high groundwater table, soil permeability, tailwater, maintenance, constructability, aviation safety issues, attenuation (quantity control) and water quality treatment (quality control) regulatory requirements, including the special standards for OFWs and ONRWs set forth in **Rule 62-4.242(2)** and **Rule 62-4.242(3), F.A.C.** and wetland and protected species potential impacts.

When identifying the size and location of pond sites, it is important to consider the aesthetic qualities of stormwater management ponds. The [FDOT Drainage Manual, Topic No. 625-040-002](#) requires the design of stormwater management facilities to be consistent with the [Landscape, Policy No. 000-650-011](#) and integrated with existing and proposed landscaping and adjoining land uses. Location of ponds for the preferred alternative must be evaluated for potential impacts to the social, natural, cultural, and physical environment. The Project Team should first explore innovative opportunities such as regional facilities, joint facilities, and stormwater re-use systems, through the WATERSS process. See the [WATERSS Process Guidebook](#) for more information.

The pond siting analysis, including stormwater management facility type, size, location, and cost are documented in detail in the **PSR** and/or **SMART** and summarized in the **PER** and in the Water Resources section of the Environmental Document (see [Section 11.3.5.6](#)). More information on the **PSR** can be found in the [Section 5 of the Drainage Manual](#) and [Chapter 9 of the FDOT Drainage Design Guide](#).

The **PSR** should be organized into headings and subheadings that clearly delineate the information analyzed in the pond siting analysis. Refer to the [WATERSS Process Guidebook, Appendix D](#) for a sample **PSR** report template. The cover page should be prepared using the **Technical Report Cover Sheet Requiring Professional Engineer (PE) Signature, Form No. 650-050-38b** and be signed and sealed by a professional engineer in accordance with **Chapter 471, F.S.**

Refer to the [WATERSS Process Guidebook](#) for the **SMART** report template.

11.3.4.5 Conceptual Drainage Design

A **PSR** might not be warranted for projects in an urban core area where adjacent land is fully developed and there are no ROW needs. In such cases, a **Conceptual Drainage**

Design Report is prepared to document a preliminary drainage analysis and data that will support drainage design in the Design phase. The contents for the **Conceptual Drainage Design Report** are typically expanded during the Design phase when the stormwater management systems are designed in detail.

The **Conceptual Drainage Design Report** should have headings and subheadings to effectively delineate the sections appropriate to the level of analysis. The cover page should be prepared using the **Technical Report Cover Sheet Requiring PE Signature, Form No. 650-050-38b** and be signed and sealed by a professional engineer in accordance with **Chapter 471, F.S.**

11.3.5 Environmental Document

Data collection, existing and proposed conditions, impacts to water resources (including aquatic preserves, impaired waters, or OFWs), and the drainage analysis are all summarized in the appropriate section of the Environmental Document.

11.3.5.1 Documentation of Aquatic Preserves

If a project is located in an Aquatic Preserve it is documented in the Environmental Document whether there are impacts or not.

No Impacts to Aquatic Preserve(s)

For Type 1 CE or NMSA projects located in an aquatic preserve which will have **no impact** on the aquatic preserve, a copy of the FDEP coordination letter(s) (if applicable) should be uploaded into the project file in SWEPT.

For a Type 2 CE, EA, EIS, or SEIR located in an aquatic preserve, which will have **no impact** on the aquatic preserve, the following standard statement is included in the Aquatic Preserves section of the Environmental Document.

This project is within the boundaries of (Name of Aquatic Preserve). After coordination with the Florida Department of Environmental Protection, it has been determined that the project will not have an impact on the (Name of Aquatic Preserve).

Coordination with FDEP should also be discussed in the Environmental Document. The **FDEP Aquatic Preserves Correspondence Letter** should be referenced, uploaded to the SWEPT project file, and included in the Appendix. It is recommended that it be saved in the Aquatic Preserves and Outstanding Florida Waters folder within SWEPT.

Impacts to Aquatic Preserve(s)

For a Type 1 CE or NMSA **with impacts** to an aquatic preserve, they would be addressed during permitting.

For a Type 2 CE, EA, EIS, or SEIR **with impacts** to an aquatic preserve, the following information should be included in the Aquatic Preserves section of the Environmental Document:

- Identification of the aquatic preserve affected including the location of that part of the project that may affect the aquatic preserve on a figure or map,
- Discussion of the extent of potential impacts to the aquatic preserve,
- An assessment of the impacts that the proposed project will have on the aquatic preserve,
- Discussion on why there is no practicable alternative to location the project inside the aquatic preserve,
- Identification of measures to minimize harm to the aquatic preserve,
- Identification of permits needed and appropriate permitting agencies,
- The results of coordination with appropriate agencies having jurisdiction over the aquatic preserve,
- Resolution of ETAT comments.

The **FDEP Aquatic Preserves Correspondence Letter** and any other correspondence should be referenced, uploaded to the SWEPT project file, and included in the Appendix. It is recommended that correspondence be saved in the Aquatic Preserves and Outstanding Florida Waters folder within SWEPT.

11.3.5.2 Documentation of Outstanding Florida Waters

If a project is located in an OFW it is documented in the applicable Environmental Document.

For a Type 1 CE or NMSA located in an OFW, a copy of the FDEP coordination letter(s) (if applicable) should be uploaded into the project file in SWEPT.

For a Type 2 CE, EA, EIS, or SEIR located in an OFW, the following information should be included in the Outstanding Florida Waters section of the Environmental Document:

- Identification of the OFW and a map or figure showing how it relates to the project,

- Resolution of related ETAT comments,
- Potential impacts to OFWs that can be evaluated prior to permitting, including potential treatment strategies.

The results of the assessment and discussion of coordination with FDEP should be included in the Outstanding Florida Waters section of the Environmental Document. Correspondence with FDEP should be referenced, uploaded to the SWEPT project file, and included in the Appendix. It is recommended that this correspondence be saved in the Aquatic Preserves and Outstanding Florida Waters folder within SWEPT.

11.3.5.3 Section 4(f) and/or Section 6(f) Applicability

Aquatic Preserves and OFWs with park, recreation, or refuge purposes, or which contain a significant historic resource site, may be protected by **Section 4(f)** and/or **Section 6(f)** depending on the ownership, funding source, and manner in which they are administered by the managing agency. **Section 4(f)** defines this type of resources as multiple-use properties or facilities under **23 CFR § 774.11(d)**. **Section 4(f)** only applies to those portions of multiple-use properties which are designated by statute, or identified in the official management plan, as providing park or recreational purposes, functioning as wildlife and waterfowl refuges, or which are significant historic sites. Coordination with the Official with Jurisdiction (OWJ) will identify the activities, features, and attributes which are protected under **Section 4(f)** as well as the significance of the activities, features, and attributes in consideration of the primary purpose of the aquatic preserve or OFW. Establishing the primary purpose of the property is especially important in the absence of distinct activity areas where functions or purposes coexist in the same space. See [Part 2, Chapter 7, Section 4\(f\) Resources](#) for more information on **Section 4(f)** applicability.

Project interaction of park and recreational properties funded wholly or in part under **Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) (16 U.S.C. § 4601-4 et seq., 36 CFR § 59)**, as well as other federal and state encumbrances and requirements may overlap with **Section 4(f)**.

Coordination with the District Environmental Manager is needed on projects that include aquatic preserves and OFWs that may be considered protected by **Section 4(f)** and/or **Section 6(f)**. The District should determine if the aquatic preserve or OFW in question is a multiple-use facility as defined by **23 CFR § 774.11(d)** and assess the project interaction location in consideration of that area's purpose or function within the aquatic preserve or OFW. OEM subject matter experts should be contacted if there are any questions in determining **Section 4(f)** or **Section 6(f)** project interaction with a multiple-use facility. A brief summary of results of the assessment and **Section 4(f)** and/or **Section 6(f)** findings should be included in the Aquatic Preserves or Outstanding Florida Waters section of the Environmental Document, with references to the **Section 4(f)** and or **Section 6(f)** sections of the Environmental Document.

11.3.5.4 Documenting Impaired Waters

If a project may impact an impaired water resource, it is documented in the applicable Environmental Document.

A Type 1 CE or NMSA should verify that the project does not involve significant impacts on impaired water resources. See [Part 1, Chapter 5, Categorical Exclusion](#) and [Part 1, Chapter 10, State, Local, or Privately Funded Project Delivery](#) for more guidance.

For a Type 2 CE, EA, EIS, or SEIR the following information should be included in the Water Resources section of the Environmental Document:

- Identification of the impaired waters and a map or figure showing how it relates to the project,
- Resolution of related ETAT comments,
- Identification of potential impacts to impaired waters that can be evaluated prior to permitting, including potential treatment strategies.
- A Summary of the major elements of the water quality analysis
- Documentation of the results of coordination meetings and, when applicable, commitments are included in the Commitments section.

11.3.5.5 Documenting Sole Source Aquifer Project Review

For a Type 2 CE, EA, or EIS, comments raised by EPA should be addressed in the Sole Source Aquifer section of the Environmental Document, and when applicable, avoidance or minimization measures documented in the Commitments section. The results of coordination meetings should also be summarized in the Environmental Document.

If received, the **Sole Source Aquifer EPA Concurrence Email** is referenced, included in the Appendix of the Environmental Document, and uploaded to the SWEPT project file. It is recommended that it be saved in the Water Quality and Quantity folder within SWEPT.

11.3.5.6 Documenting Water Quality and Quantity

The water quality and water quantity requirements are verified as follows:

A Type 1 CE or NMSA should verify that the project does not involve significant impacts on water resources. See [Part 1, Chapter 5, Categorical Exclusion](#) and [Part 1, Chapter 10, State, Local, or Privately Funded Project Delivery](#) for more guidance.

For a Type 2 CE, EA, EIS, or SEIR, major elements of the water quality analysis should be identified and the **PSR** and/or **SMART** are summarized in the Water Resources section

of the Environmental Document. A statement should be included that states whether the project will meet the WMD regulatory criteria for attenuation (quantity control) and water quality treatment (quality control). The results of coordination meetings should be documented in the Water Resources section and, when applicable, the Commitments section. It is recommended that correspondence be saved in the Water Quality and Quantity folder within SWEPT.

11.3.5.7 Commitments

Water resource commitments may be related to BMAP/RAP commitments, WATERSS, stakeholder commitments, or actions/activities required to advance the project and/or required during construction. Commitments may include the retrofitting of structures to increase water quality treatment, building of water quality improvement features, hydrologic enhancement, recharge or reuse projects, or continued coordination with water resource agencies or other stakeholders. Commitments must be coordinated with other offices in the District prior to inclusion in the Environmental Document to ensure commitments are feasible. See FDOT's [Standard Environmental Commitments Guidance](#).

Commitments related to water resource issues made by the FDOT should be included in the Environmental Document consistent with [Part 2, Chapter 22, Commitments](#) and transmitted to the next phase of project development in accordance with [Procedure No. 650-000-003, Project Commitment Tracking](#).

11.3.6 Re-evaluation

Changes to the project which may affect impacts to water resources after approval of the Environmental Document must be documented consistent with [Part 1, Chapter 13, Re-evaluations](#). The water quality analysis, in the **PSR** and/or **SMART** should be updated during a Re-evaluation if changes have occurred to water quality status, such as the delisting of a waterbody from the verified impaired waterbody list, adoption of new TMDLs, or inclusion in a BMAP or RAP boundary, or if the project impacts to water quality have changed, or regulatory updates. Commitments and coordination, and the status of permits, should be discussed in the Water Resources, Commitment Status, and/or Status of Permits sections of the **Re-evaluation Form**.

11.4 REFERENCES

Chapter 14-86, F.A.C., Drainage Connections

Chapter 62-302, F.A.C., Surface Water Quality Standards

Chapter 62-303, F.A.C., Identification of Impaired Surface Waters

Chapter 62-304, F.A.C., Total Maximum Daily Loads

Chapter 62-330, F.A.C., Environmental Resource Permit (ERP) Program

Chapter 62-340, F.A.C., Delineation of the Landward Extent of Wetlands and Surface Waters

Chapter 62-521, F.A.C., Wellhead Protection

Chapter 62-621, F.A.C., Generic Permits

Chapter 62-624, F.A.C., Municipal Separate Storm Sewer Systems

Chapter 373, F.S., Water Resources

Chapter 403, F.S., Environmental Control

Clean Water Act of 1972, <https://www.govinfo.gov/content/pkg/STATUTE-86/pdf/STATUTE-86-Pg816.pdf>

EPA, EPA Region 4 Sole Source Aquifer Project Review Form
<https://www.epa.gov/dwssa/forms/epa-region-4-sole-source-aquifer-project-review-form-section-b-determination-potential>

EPA, Sole Source Aquifers, 40 CFR Part 149.
<https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol25/pdf/CFR-2019-title40-vol25-part149.pdf>

FDEP, Basin Management Action Plans Website. <https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps>

FDEP, ERP Applicant's Handbook Volume I. <https://floridadep.gov/water/engineering-hydrology-geology/content/erp-stormwater-resource-center>

FDEP, Guidance on Developing Restoration Plans and Alternatives to TMDLs – Assessment Category 4b and 4e Plans, 2015.
<https://floridadep.gov/dear/watershed-assessment-section/documents/guidance-developing-restoration-plans-alternatives-tmdls>

FDEP, Permitted MS4s in Florida.
<https://floridadep.gov/water/stormwater/content/stormwater-facility-information>

FDEP, Reasonable Assurance Plans (RAPs) Category 4b Assessments and Documentation Website. <https://floridadep.gov/dear/alternative-restoration-plans/content/reasonable-assurance-plans-raps-category-4b-assessments>

FDEP, Wastewater Facility Information. <https://floridadep.gov/water/domestic-wastewater/content/wastewater-facility-information>

FDOT, Drainage Design Guide.

<https://www.fdot.gov/roadway/Drainage/Manualsandhandbooks.shtm>

FDOT, Drainage Manual, Topic No. 625-040-002.

<https://www.fdot.gov/roadway/Drainage/Manualsandhandbooks.shtm>

FDOT, Efficient Transportation Decision Making Manual, 2019.

<https://www.fdot.gov/environment/oem-divisions/qa-gc/etdm-manual>

FDOT, Landscape, Policy No. 000-650-011. <https://pdl.fdot.gov/>

FDOT, Standard Environmental Commitments Guidance.

https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/environment/pubs/pde---general/commitment-guidance.pdf?sfvrsn=8df1b700_1

FDOT, Statewide Stormwater Management Plan, 2012.

https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/maintenance/fdotstormwatermgmtplan2012.pdf?sfvrsn=858ebaa2_0

FDOT, WATERSS Process Guidebook, 2021.

https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/environment/pubs/waterss-process-guidebook-2021-0916.pdf?sfvrsn=d0682cb_8

Rule 62-4.242(2) and (3), F.A.C. <https://flrules.org/gateway/RuleNo.asp?id=62-4.242>

11.5 FORMS

[Technical Report Cover Sheet Requiring PE Signature, Form No. 650-050-38b](#)

Table 11-1 Water Resources References

Reference	Available Information
Efficient Transportation Decision Making (ETDM)	<p>The designated water resource and characteristics is determined by using the Environmental Screening Tool (EST) and reported in the Programming Screen Summary Report.</p> <p>Note - Designated water resource data layers stored in the Florida Geographic Data Library can be accessed through the EST independent of running an ETDM screening event</p>
Rule 62-302.700(9)(h), F.A.C.	<p>A list of waters within state aquatic preserves which is maintained by the FDEP</p>
Chapter 258, F.S.	<p>Provides confirmation of aquatic preserves shown in Rule 62-302.700(9) F.A.C.</p>
Rule 62-302.700(9), F.A.C.	<p>Provides a list of OFWs. This list includes an identification of all OFWs by County. (Some examples of OFWs include aquatic preserves, National Seashores, waters in national parks, waters in state parks and specially designated areas.)</p>
ERP Stormwater Resource Center Florida Department of Environmental Protection	<p>A resource for identifying the HUC 12 basins and impaired waters</p>
FDOT Drainage Manual, Section 5	<p>Provides a discussion of the statewide stormwater rule requirements. The statewide stormwater rule establishes minimum performance standards for impaired waters, OFWs, and traditional systems, in accordance with the Environmental Resource Permit (ERP) Applicant’s Handbook Volume I.</p>