

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

BILL: SB 1758
 INTRODUCER: Senator Mayfield
 SUBJECT: Water Quality Improvements
 DATE: March 19, 2019 REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Anderson	Rogers	EN	Pre-meeting
2.	_____	_____	AEG	_____
3.	_____	_____	AP	_____

I. Summary:

SB 1758 creates the “Clean Waterways Act,” including a grant program, subject to appropriation, for wastewater treatment plant or onsite sewage treatment and disposal system (OSTDS) improvements or connections within a basin management action plan (BMAP) or alternative restoration plan. The bill transfers the OSTDS program of the Department of Health (DOH) to the Department of Environmental Protection (DEP) by a type two transfer.

The bill revises the requirements for all BMAPs. The bill:

- Requires that each BMAP include a plan, with specific timelines, to be submitted by each local government within a BMAP for each wastewater treatment plant project and each OSTDS remediation plan.
- Expands and revises the OSTDS remediation plans required for the Outstanding Florida Springs to apply to all BMAPs.
- Imposes penalties for a local government’s failure to meet the deadlines required under the plan, including a moratorium on local government approval of building permits, a moratorium on DOH approval of OSTDSs, and existing civil and criminal penalties for pollution. However, the bill authorizes DEP to grant an extension of time upon a showing of good cause or to reduce penalties based on expenditures for improvements and upgrades.
- Requires DEP and the Department of Agriculture and Consumer Services to develop agricultural remediation plans that include best management practices and land acquisition.
- Requires local governments to adopt the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes.

The bill requires a wastewater treatment plant that unlawfully discharges raw or partially treated sewage into a waterway or aquifer to provide notification to its customers within 24 hours after discovering the discharge. Effective July 1, 2024, the bill prohibits sanitary sewage disposal into Indian River Lagoon without providing advanced waste treatment.

II. Present Situation:

Water Quality and Nutrients

Phosphorus and nitrogen are naturally present in water and are essential nutrients for the healthy growth of plant and animal life. The correct balance of both nutrients is necessary for a healthy ecosystem; however, excessive nitrogen and phosphorus can cause significant water quality problems.

Phosphorus and nitrogen are derived from natural and human-made sources. Natural inputs include the atmosphere, soils, and the decay of plants and animals. Human-made sources include sewage disposal systems (wastewater treatment facilities and septic systems), overflows of storm and sanitary sewers (untreated sewage), agricultural production and irrigation practices, and stormwater runoff.¹

Excessive nutrient loads may result in harmful algal blooms, nuisance aquatic weeds, and the alteration of the natural community of plants and animals. Dense, harmful algal blooms can also cause human health problems, fish kills, problems for water treatment plants, and impairment of the aesthetics and taste of waters. Growth of nuisance aquatic weeds tends to increase in nutrient-enriched waters, which can impact recreational activities.²

Total Maximum Daily Loads

A total maximum daily load (TMDL), which must be adopted by rule, is a scientific determination of the maximum amount of a given pollutant that can be absorbed by a waterbody and still meet water quality standards.³ Waterbodies or sections of waterbodies that do not meet the established water quality standards are deemed impaired. Pursuant to the federal Clean Water Act, DEP is required to establish a TMDL for impaired waterbodies.⁴ A TMDL for an impaired waterbody is defined as the sum of the individual waste load allocations for point sources and the load allocations for nonpoint sources and natural background.⁵ Waste load allocations are pollutant loads attributable to existing and future point sources. Load allocations are pollutant loads attributable to existing and future nonpoint sources. Point sources are discernible, confined, and discrete conveyances including pipes, ditches, and tunnels. Nonpoint sources are unconfined sources that include runoff from agricultural lands or residential areas.⁶

¹ U.S. Environmental Protection Agency (EPA), *Sources and Solutions*, <https://www.epa.gov/nutrientpollution/sources-and-solutions> (last visited Mar. 15, 2019).

² EPA, *The Problem*, <https://www.epa.gov/nutrientpollution/problem> (last visited Mar. 15, 2019).

³ DEP, *Total Maximum Daily Loads Program*, <https://floridadep.gov/dear/water-quality-evaluation-tmdl/content/total-maximum-daily-loads-tmdl-program> (last visited Mar. 15, 2019).

⁴ Section 403.067(1), F.S.

⁵ Section 403.031(21), F.S.

⁶ Fla. Admin. Code R. 62-620.200(37). “Point source” is defined as “any discernible, confined, and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.” Nonpoint sources of pollution are sources of pollution that are not point sources. Nonpoint sources can include runoff from agricultural lands or residential areas; oil, grease and toxic materials from urban runoff; and sediment from improperly managed construction sites.

Basin Management Action Plans and Best Management Practices

DEP is the lead agency in coordinating the development and implementation of TMDLs.⁷ Basin management action plans (BMAPs) are one of the primary mechanisms DEP uses to achieve TMDLs. BMAPs are plans that use existing planning tools to address the entire pollution load, including point and nonpoint discharges, for a watershed. BMAPs generally include:

- Permitting and other existing regulatory programs, including water quality based effluent limitations;
- Best management practices (BMPs) and non-regulatory and incentive-based programs, including cost sharing, waste minimization, pollution prevention, agreements, and public education;
- Public works projects, including capital facilities; and
- Land acquisition.⁸

DEP may establish a BMAP as part of the development and implementation of a TMDL for a specific waterbody. First, the BMAP equitably allocates pollutant reductions to individual basins, to all basins as a whole, or to each identified point source or category of nonpoint sources.⁹ Then, the BMAP establishes the schedule for implementing projects and activities to meet the pollution reduction allocations. The BMAP development process provides an opportunity for local stakeholders, local government and community leaders, and the public to collectively determine and share water quality clean-up responsibilities.¹⁰

BMAPs must include milestones for implementation and water quality improvement. They must also include an associated water quality monitoring component sufficient to evaluate whether reasonable progress in pollutant load reductions is being achieved over time. An assessment of progress toward these milestones must be conducted every five years and revisions to the BMAP must be made as appropriate.¹¹

Producers of nonpoint source pollution included in a BMAP must comply with the established pollutant reductions by either implementing the appropriate BMPs or by conducting water quality monitoring.¹² A nonpoint source discharger may be subject to enforcement action by DEP or a water management district based on a failure to implement these requirements.¹³ BMPs are designed to reduce the amount of nutrients, sediments, and pesticides that enter the water system and to help reduce water use. BMPs are developed for agricultural operations as well as for other activities, such as nutrient management on golf courses, forestry operations, and stormwater management.¹⁴

⁷ Section 403.061, F.S. DEP has the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules adopted and promulgated by it. Furthermore, s. 403.061(21), F.S., allows DEP to advise, consult, cooperate, and enter into agreements with other state agencies, the federal government, other states, interstate agencies, etc.

⁸ Section 403.067(7), F.S.

⁹ *Id.*

¹⁰ DEP, *Basin Management Action Plans (BMAPs)*, <https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps> (last visited Mar. 15, 2019).

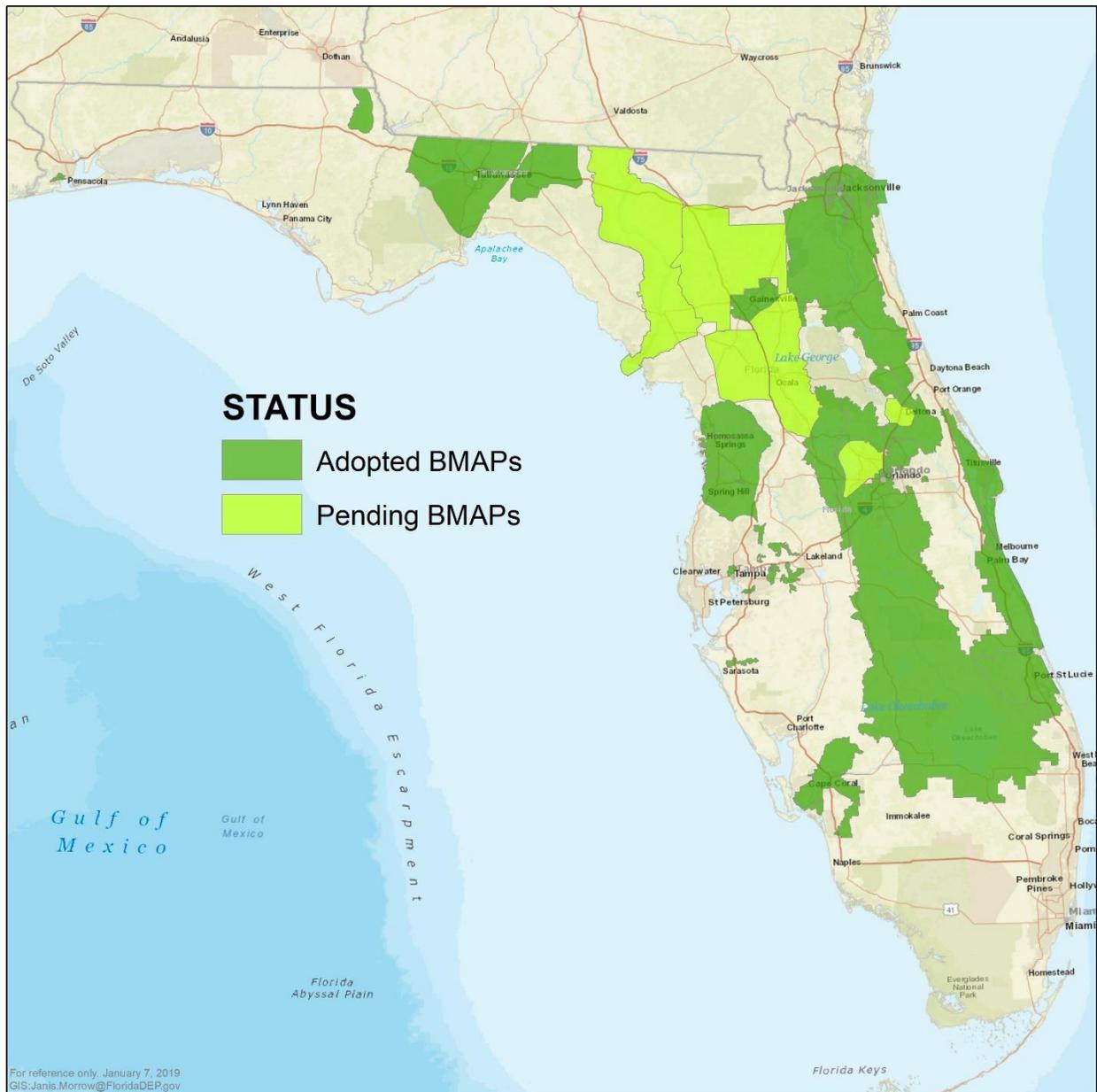
¹¹ Section 403.067(7)(a)6., F.S.

¹² Section 403.067(7)(b)2.g., F.S. For example, BMPs for agriculture include activities such as managing irrigation water to minimize losses, limiting the use of fertilizers, and waste management.

¹³ Section 403.067(7)(b)2.h., F.S.

¹⁴ DEP, *NPDES Stormwater Program*, <https://floridadep.gov/Water/Stormwater> (last visited Mar. 15, 2019).

Currently, BMAPs are adopted or pending for a significant portion of the state and will continue to be developed as necessary to address water quality impairments. The graphic below shows the state's adopted and pending BMAPs.



BMAPs for Outstanding Florida Springs

In 2016, the Florida Legislature passed the Florida Springs and Aquifer Protection Act, which identified 30 "Outstanding Florida Springs" (OFS) that have additional statutory protections and

requirements.¹⁵ Key aspects of the Springs and Aquifer Protection Act relating to water quality include:

- The development of an onsite sewage treatment and disposal system (OSTDS) remediation plan if it has been determined that OSTDSs within a priority focus area contribute at least 20 percent of nonpoint source nitrogen pollution or that remediation is necessary to achieve the TMDL;
- A 20-year timeline for implementation of the TMDL, including 5-, 10-, and 15-year targets; and
- The prohibition against new OSTDSs on parcels of less than 1 acre, unless the system complies with the OSTDS remediation plan.

The OSTDS remediation plan must include options for repair, upgrade, replacement, drainfield modification, addition of effective nitrogen reducing features, connection to a central sewerage system, or other action for a sewage system or group of systems.¹⁶ The options must be cost-effective and financially feasible projects necessary to reduce the nutrient impacts from OSTDSs within the area.¹⁷

In June 2018, DEP adopted 13 restoration plans, addressing all 24 nitrogen-impaired OFS.¹⁸ Eight of these plans are currently effective, while five others are pending the outcome of legal challenges on various alleged deficiencies in the BMAP.¹⁹ These deficiencies include lack of specificity in the required list of projects and programs identified to implement a TMDL, lack of detail in cost estimates, incomplete or unclear strategies for nutrient reduction, and failure to account for population growth and agricultural activity.

The Wakulla Springs BMAP serves as a successful example of BMAP implementation with respect to its approach to wastewater and OSTDSs. The nitrogen loading for Wakulla Springs was allocated as described in the table below. The table includes the following acronyms: UTF (Urban Turfgrass Fertilizer), FF (Farm Fertilizer), and LW (Livestock Waste).²⁰

¹⁵ Ch. 2016-1, Laws of Fla.; *see* s. 373.802, F.S., Outstanding Florida Springs include all historic first magnitude springs, including their associated spring runs, as determined by DEP using the most recent Florida Geological Survey springs bulletin, and De Leon Springs, Peacock Springs, Poe Springs, Rock Springs, Wekiwa Springs, and Gemini Springs, and their associated spring runs.

¹⁶ Section 373.807(3), F.S.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Our Santa Fe River, Inc., et. al. v. DEP*, No. 18-1601, DEP No. 18-2013; *Sierra Club v. DEP*, No. 17-1175, DEP No. 18-0204; *Friends of Wekiva River, Inc. v. DEP*, No. 18-1065, DEP No. 18-0217; *Thomas Greenhalgh v. DEP*, No. 17-1165, DEP No. 18-0204; *Paul Still v. DEP*, No. 18-1061; *Save the Manatee Club, Inc. v. DEP*, No. 17-1167, DEP No. 18-0206; *Silver Springs Alliance, Inc. and Rainbow River Conservation, Inc. v. DEP*, No. 18-1060, DEP No. 18-0211.

²⁰ DEP, *Upper Wakulla River and Wakulla Springs Basin Management Action Plan* (October 2015), available at <https://floridadep.gov/dear/water-quality-restoration/documents/upper-wakulla-river-and-wakulla-springs-basin-management-0> (last visited Mar. 16, 2019).

Table 3. Estimated nitrogen load to groundwater by source in the BMAP area

Nitrogen Source	Total Nitrogen Load to Groundwater in Pounds of Nitrogen Per Year (lb-N/yr)	% Contribution
OSTDS	272,313	34
UTF	77,282	10
Atmospheric Deposition	212,134	27
FF	161,985	21
Sports Turfgrass Fertilizer (STF)	15,398	2
LW	23,840	3
Wastewater Treatment Facility (WWTF)	26,697	3
Total	795,386	100

A priority focus area of an OFS means the area or areas of a basin where the Floridan Aquifer is generally most vulnerable to pollutant inputs where there is a known connectivity between groundwater pathways and an Outstanding Florida Spring, as determined by DEP in consultation with the appropriate water management districts, and delineated in a BMAP.²¹ Wastewater treatment facilities within the priority focus areas are subject to wastewater effluent standards based on the size of the facility, with the largest facilities being required to meet the strictest requirements and the smallest plants being authorized to have slightly more relaxed standards. For reference, untreated wastewater generally has a total nitrogen (TN) concentration of 20-70 mg/L, secondary treatment yields 15-30 mg/L, and tertiary treatment yields 3-8 mg/L.²²

Table 13. Wastewater effluent standards for PFA1 and PFA2

95% of the Permitted Capacity (gpd)	TN Concentration Limits for RIBs and Absorption Fields (mg/L)	TN Concentration Limits for All Other Land Disposal Methods (mg/L)
Greater than 100,000	3	3
20,000 to 100,000	3	6
Less than 20,000	6	6

Appendix D of the Wakulla BMAP sets forth the OSTDS remediation plan, which is still under development. The remediation plan prohibits new conventional systems on lots of less than one acre within the priority focus areas, unless the OSTDS includes enhanced treatment of nitrogen or the OSTDS permit applicant demonstrates that sewer connections will be available within five

²¹ Section 373.802(5), F.S.

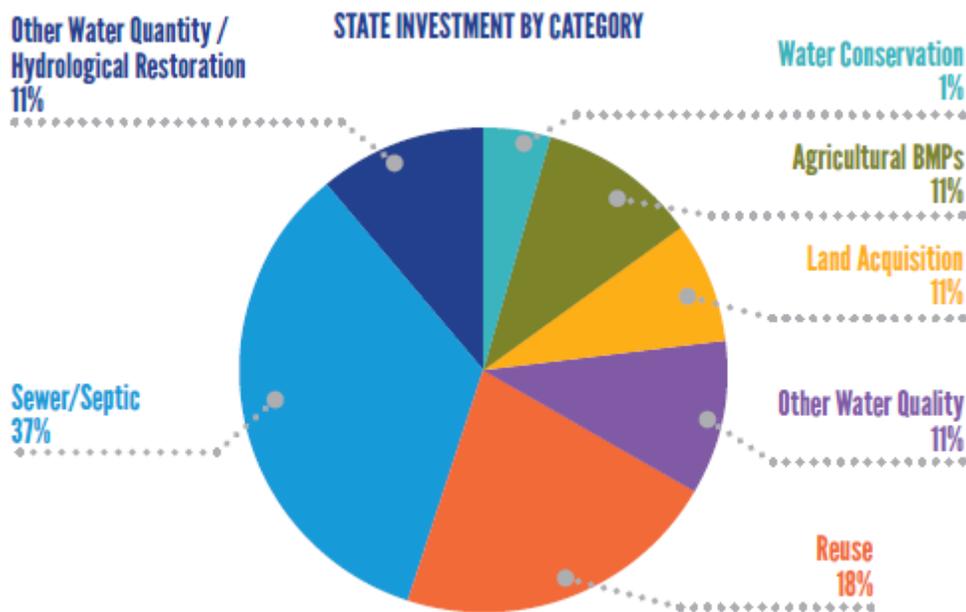
²² Richard O. Carey, Kati W. Migliaccio, *Contribution of Wastewater Treatment Plant Effluents to Nutrient Dynamics in Aquatic Systems: A Review*, Environmental Management (2009) (on file with the Environment and Natural Resources Committee).

years. Local governments and utilities are expected to develop master wastewater treatment feasibility analyses to identify specific areas to be sewerred within 20 years of BMAP adoption.

For existing OSTDSs, the remediation policy for existing systems does not go into effect upon BMAP adoption, but rather following completion of the master wastewater treatment feasibility analyses, DOH rulemaking, and creation of a funding program to help offset the costs to homeowners. Regardless, the policy must go into effect no later than five years after BMAP adoption. Existing systems must include nitrogen-reducing enhancements. The OSTDS remediation plan includes a planning tool created by DEP to provide credible scientific information, OSTDS remediation options in the area, and a public education plan.

Funding for Outstanding Florida Springs

The Legislature created a carveout to allocate \$50 million annually in funding for Florida springs in 2016.²³ This funding has enabled DEP to assist local governments and other stakeholders to identify and construct projects that are targeted to the springs’ nutrient sources and that are imperative to achieving restoration goals. Specifically, DEP’s efforts have emphasized land acquisition for conservation, and implementation of enhanced best management practices for agriculture, including innovative cost-share programs and addressing wastewater issues by wastewater treatment upgrades and sewerage efforts.²⁴



Decisions for the selection of springs projects that will receive state funding in any given year is based upon DEP’s consideration of the following factors:

- Nutrient reductions or measurable improvements in water quality;

²³ Ch. 2016-201, Laws of Fla.; s. 375.401, F.S.

²⁴ DEP, *Springs Restoration Project Plan for the Legislative Budget Commission* (Fiscal Year 2018-2019), available at <https://floridadep.gov/sites/default/files/LBC%20Report%20FY2018-2019.pdf> (last visited Mar. 16, 2019).

- Water savings or measurable water quantity improvements;
- Cost sharing and leveraging opportunities referred to as “match;”
- Readiness to proceed in a timely manner;
- Proximity to priority focus areas or springs; and
- Cost effectiveness.²⁵

Restoration Plans as Alternatives to TMDLS

DEP encourages local stakeholders to develop restoration plans²⁶ at the earliest practicable time to restore waters not meeting state water quality standards.²⁷ The restoration plans are designed to be a more streamlined process than the BMAP process and can help focus local and state resources directly on measures to improve water quality.²⁸ Under the Florida Watershed Restoration Act,²⁹ DEP can forgo establishing a TMDL for a waterbody if DEP can document that there is reasonable assurance existing or proposed pollution control mechanisms or programs that will effectively address the impairment.³⁰ These restoration plans depend on local stakeholders to gather necessary documentation to demonstrate reasonable assurance that the proposed control mechanisms will restore the particular waterbody.³¹

The following information must be documented in a restoration plan:

- Description of the impaired waterbody;
- Description of water quality or aquatic ecological goals;
- Description of proposed management actions to be undertaken;
- Description of procedures for monitoring and reporting results; and
- Description of and commitment to proposed corrective actions.³²

Wastewater Treatment Plants

The proper treatment and disposal or reuse of domestic wastewater is an important part of protecting Florida’s water resources. The majority of Florida’s domestic wastewater is controlled and treated by centralized treatment facilities regulated by DEP. Florida has approximately 2,000 permitted domestic wastewater treatment facilities.³³

Chapter 403, F.S., requires that any facility or activity which discharges wastes into waters of the state or which will reasonably be expected to be a source of water pollution must obtain a permit

²⁵ DEP, *Springs Funding Guidance* (2017), available at

<https://floridadep.gov/sites/default/files/Spring%20Guidance%20Document%202017.pdf> (last visited Mar. 16, 2019).

²⁶ Fla. Admin. Code R. 62-303.600.

²⁷ DEP, *Guidance on Developing Restoration Plans as Alternatives to TMDLS – Assessment Category 4b and 4e Plans*, 1 (June 2015), available at <https://floridadep.gov/sites/default/files/4b4ePlansGuidance.pdf> (last visited Mar. 13, 2019).

²⁸ *Id.* at 1-2.

²⁹ Ch. 99-223, Laws of Fla.

³⁰ DEP, *Guidance on Developing Restoration Plans as Alternatives to TMDLS – Assessment Category 4b and 4e Plans*, 2 (June 2015), available at <https://floridadep.gov/sites/default/files/4b4ePlansGuidance.pdf> (last visited Mar. 13, 2019).

³¹ *Id.*

³² *Id.* at 6-7.

³³ DEP, *General Facts and Statistics About Wastewater in Florida*, <https://floridadep.gov/water/domestic-wastewater/content/general-facts-and-statistics-about-wastewater-florida> (last visited Mar. 15, 2019).

from DEP.³⁴ Generally, persons who intend to collect, transmit, treat, dispose, or reuse wastewater are required to obtain a wastewater permit. A wastewater permit issued by DEP is required for both operation and certain construction activities associated with domestic or industrial wastewater facilities or activities. A DEP permit must also be obtained prior to construction of a domestic wastewater collection and transmission system.³⁵

The National Pollution Discharge Elimination System (NPDES) Program is a federal program established by the Clean Water Act (CWA) to control point source and stormwater discharges.³⁶ Under section 402 of the CWA, any discharge of a pollutant from a point source to surface waters (i.e., the navigable waters of the United States or beyond) must obtain an NPDES permit. NPDES permit requirements for most wastewater facilities or activities (domestic or industrial) that discharge to surface waters are incorporated into a state-issued permit, thus giving the permittee one set of permitting requirements rather than one state and one federal permit.³⁷ DEP issues operation permits for a period of 5 years for facilities regulated under the NPDES program and up to 10 years for other domestic wastewater treatment facilities.³⁸

In its 2016 Report Card for Florida’s infrastructure, the American Society of Civil Engineers reported that the state’s wastewater system is increasing in age and the condition of installed treatment and conveyance systems is declining.³⁹ As existing infrastructure ages, Florida utilities are placing greater emphasis on asset management systems to maintain service to customers. Population growth, aging infrastructure, and sensitive ecological environments are increasing the need to invest in Florida’s wastewater infrastructure.

Advanced Waste Treatment

Under Florida law, facilities for sanitary sewage disposal are required to provide for advanced waste treatment, as deemed necessary by DEP.⁴⁰ The standard for advanced waste treatment is defined in statute using the maximum concentrations of nutrients or contaminants that a reclaimed water product may contain.⁴¹ The reclaimed water product must also have received high level disinfection, which is a standard of disinfection defined by DEP rule.⁴²

Nutrient or Contaminant	Maximum concentration annually
Biochemical Oxygen Demand	5 mg/L
Suspended Solids	5 mg/L
Total Nitrogen	3 mg/L
Total Phosphorus	1 mg/L

³⁴ Section 403.087, F.S.

³⁵ DEP, *Wastewater Permitting*, <https://floridadep.gov/water/domestic-wastewater/content/wastewater-permitting> (last visited Mar. 15, 2019).

³⁶ 33 U.S.C s. 1342.

³⁷ Sections 403.061 and 403.087, F.S.

³⁸ Section 403.087(3), F.S.

³⁹ American Society of Civil Engineers, *Report Card for Florida’s Infrastructure* (2016), available at https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/2016_RC_Final_screen.pdf (last visited Mar. 19, 2019).

⁴⁰ Section 403.086(2), F.S.

⁴¹ Section 403.086(4), F.S.

⁴² Section 403.086(4)(b), F.S.; Fla. Admin. Code R. 62-600.440(6).

Facilities for sanitary sewage disposal are prohibited from disposing of waste into certain waters in the state without providing advanced waste treatment approved by DEP.⁴³ Specifically, Tampa Bay is viewed as a success story for this type of prohibition.

[Tampa Bay is] one of the few estuaries in the U.S. that has shown evidence of improving environmental conditions. These water-quality improvements have been due, in large part, to upgrades in wastewater treatment practices at municipal wastewater-treatment plants in the region. Since 1980, all wastewater treatment plants that discharge to the bay or its tributaries have been required by state legislation to meet advanced wastewater treatment standards, a step that has reduced the annual nutrient loads from these sources by about 90 percent.⁴⁴

Sanitary Sewer Overflows

Although domestic wastewater treatment facilities are permitted and designed to safely and properly collect and manage a specified wastewater capacity, obstructions or extreme conditions can cause a sanitary sewer overflow (SSO). Any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system is a SSO.⁴⁵ A SSO may subject the owner or operator of a facility to civil penalties of not more than \$10,000 for each offense (each day during the period in which a violation occurs constitutes a separate offense), a criminal conviction or fines, and additional administrative penalties.⁴⁶

A key concern with SSOs entering rivers, lakes, or streams is their negative effect on water quality. In addition, because SSOs contain partially treated or potentially untreated domestic wastewater, ingestion or similar contact may cause illness. People can be exposed through direct contact in areas of high public access, food that has been contaminated, inhalation, and skin absorption. The Department of Health issues health advisories when bacteria levels present a risk to human health, and may post warning signs when bacteria affect public beaches or other areas where there is a risk of human exposure.⁴⁷

Reduction of SSOs can be achieved through:

- Cleaning and maintaining the sewer system;
- Reducing infiltration and inflow through rehabilitation and repairing broken or leaking lines;
- Enlarging or upgrading sewer pump station or sewage treatment plant capacity and/or reliability; and

⁴³ Section 403.086(1)(c), F.S. Facilities for sanitary sewage disposal may not dispose of any wastes into Old Tampa Bay, Tampa Bay, Hillsborough Bay, Boca Ciega Bay, St. Joseph Sound, Clearwater Bay, Sarasota Bay, Little Sarasota Bay, Roberts Bay, Lemon Bay, or Charlotte Harbor Bay, or into any river, stream, channel, canal, bay, bayou, sound, or other water tributary thereto, without providing advanced waste treatment approved by DEP. This prohibition does not apply to facilities permitted by February 1, 1987, and which discharge secondary treated effluent, followed by water hyacinth treatment, to tributaries of the named waters; or to facilities permitted to discharge to the nontidally influenced portions of the Peace River.

⁴⁴ U.S. Department of the Interior and U.S. Geological Survey, *Integrating Science and Resource Management in Tampa Bay, Florida* (2011), available at https://pubs.usgs.gov/circ/1348/pdf/Chapter%205_105-156.pdf (last visited Mar. 16, 2019).

⁴⁵ DEP, *Sanitary Sewer Overflows (SSOs)*, available at <https://floridadep.gov/sites/default/files/sanitary-sewer-overflows.pdf> (last visited Mar. 15, 2019).

⁴⁶ Sections 403.121 and 403.141, F.S.

⁴⁷ DEP, *SSOs*, available at <https://floridadep.gov/sites/default/files/sanitary-sewer-overflows.pdf> (last visited Mar. 15, 2019).

- Constructing wet weather storage and treatment facilities to treat excess flows.⁴⁸

Onsite Sewage Treatment and Disposal Systems

Onsite sewage treatment and disposal systems (OSTDS), commonly referred to as “septic systems,” can contain any one or more of the following components: a septic tank; a subsurface drainfield; an aerobic treatment unit; a graywater tank; a laundry wastewater tank; a grease interceptor; a pump tank; a waterless incinerating or organic waste-composting toilet; and a sanitary pit privy.⁴⁹ OSTDSs generally consist of two basic parts: the septic tank and the drainfield.⁵⁰ Waste from toilets, sinks, washing machines and showers flows through a pipe into the septic tank, where anaerobic bacteria break the solids into a liquid form. The liquid portion of the wastewater flows into the drainfield, which is generally a series of perforated pipes or panels surrounded by lightweight materials such as gravel or styrofoam. The drainfield provides a secondary treatment where aerobic bacteria continue deactivating the germs. The drainfield also provides filtration of the wastewater, as gravity draws the water down through the soil layers.⁵¹

The Department of Health (DOH) administers OSTDS programs, develops statewide rules, and provides training and standardization for county health department employees responsible for issuing permits for the installation and repair of septic systems within the state.⁵² There are an estimated 2.6 million OSTDSs in Florida, providing wastewater disposal for 30 percent of the state’s population.⁵³

In Florida, development in some areas is dependent on OSTDSs due to the cost and time it takes to install central sewer systems.⁵⁴ For example, in rural areas and low-density developments, central sewer systems are not cost effective. Less than one percent of OSTDS in Florida are actively managed under operating permits and maintenance agreements.⁵⁵ The remainder of systems are generally serviced only when they fail, often leading to costly repairs that could have been avoided with routine maintenance.⁵⁶ In Florida, approximately 30-40 percent of the

⁴⁸ *Id.*

⁴⁹ DEP, *Septic Systems*, <https://floridadep.gov/water/domestic-wastewater/content/septic-systems> (last visited Mar. 15, 2019); see s. 381.0065(2)(k), F.S. “Onsite sewage treatment and disposal system” is defined as “a system that contains a standard subsurface, filled, or mound drainfield system; an aerobic treatment unit; a graywater system tank; a laundry wastewater system tank; a septic tank; a grease interceptor; a pump tank; a solids or effluent pump; a waterless, incinerating, or organic waste-composting toilet; or a sanitary pit privy that is installed or proposed to be installed beyond the building sewer on land of the owner or on other land to which the owner has the legal right to install a system. The term includes any item placed within, or intended to be used as a part of or in conjunction with, the system. This term does not include package sewage treatment facilities and other treatment works regulated under chapter 403.”

⁵⁰ DOH, *Septic System Information and Care*, <http://columbia.floridahealth.gov/programs-and-services/environmental-health/onsite-sewage-disposal/septic-information-and-care.html> (last visited Mar. 15, 2019).

⁵¹ *Id.*

⁵² Section 381.0065(3), F.S.

⁵³ DOH, *Onsite Sewage*, <http://www.floridahealth.gov/environmental-health/onsite-sewage/index.html> (last visited Mar. 15, 2019).

⁵⁴ DOH, *Report on Range of Costs to Implement a Mandatory Statewide 5-Year Septic Tank Inspection Program*, Executive Summary (Oct. 1, 2008), available at <http://www.floridahealth.gov/environmental-health/onsite-sewage/research/documents/rrac/2008-11-06.pdf> (last visited Mar. 15, 2019). The report begins on page 56 of the PDF.

⁵⁵ *Id.*

⁵⁶ *Id.*

nitrogen levels are reduced in a system that is installed 24 inches or more from groundwater.⁵⁷ This still leaves a significant amount of nitrogen to percolate into the groundwater, which makes nitrogen from OSTDSs a potential contaminant in groundwater.⁵⁸

The owner of a properly functioning OSTDS must connect to a sewer system within one year of receiving notification that a sewer system is available for connection.⁵⁹ Owners of an OSTDS in need of repair or modification must connect within 90 days of notification from DOH.⁶⁰

Urban Fertilizer Usage and Florida's Model Ordinance

The Legislature passed the Protection of Urban and Residential Environments and Water Act in 1999.⁶¹ The law encourages county and municipal governments to adopt and enforce the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes or an equivalent requirement to protect local surface and groundwater quality.⁶² The law requires each local government located within the watershed of a water body or water segment that is listed as impaired by nutrients to adopt, at minimum, the ordinance, unless the county or municipal government already had a fertilizer use ordinance before July 1, 2009.⁶³ As part of the Florida Springs and Aquifer Protection Act, the Legislature required each local government that includes an OFS or any part of a springshed or OFS priority focus area and had not adopted a fertilizer ordinance, to develop, enact, and implement an ordinance by July 1, 2017.⁶⁴ Currently, 32 counties have adopted a fertilizer ordinance.⁶⁵

Application of fertilizer in urban areas can impact watersheds when it runs off lawns and impervious surfaces into stormwater collection systems or directly into the surface water. DEP has provided guidelines to minimize the impact of urban fertilizer use and adopted the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes.⁶⁶ The model ordinance provides counties and municipalities with a range of options to help minimize fertilizer inputs from urban applications. Some of the suggestions contained in the model ordinance are:

- Restricting the times fertilizer may be applied, such as restricting its application during the rainy season;
- Creating fertilizer free zones around sensitive waterbodies such as ponds, streams, watercourses, lakes, canals, or wetlands;
- Controlling application practices by, for example, restricting fertilizer application on impervious surfaces and requiring prompt cleanup of any fertilizer that is spilled on impervious surfaces; and

⁵⁷ DOH, *Florida Onsite Sewage Nitrogen Reduction Strategies Study, Final Report 2008-2015*, 21 (Dec. 2015), available at <http://www.floridahealth.gov/environmental-health/onsite-sewage/research/draftlegreportsm.pdf> (last visited Mar. 15, 2019).

⁵⁸ University of Florida Institute of Food and Agricultural Sciences (IFAS), *Onsite Sewage Treatment and Disposal Systems: Nitrogen*, 3 (Feb. 2014), available at <http://edis.ifas.ufl.edu/pdf/files/SS/SS55000.pdf> (last visited Mar. 15, 2019).

⁵⁹ Section 381.00655, F.S.

⁶⁰ *Id.*

⁶¹ Ch. 1999-199, ss. 2-5, Laws of Fla.

⁶² Section 403.9337(1), F.S.

⁶³ Section 403.9337(2), (3), F.S.

⁶⁴ Section 373.807(2), F.S.

⁶⁵ UF/IFAS Florida-Friendly Landscaping Program, *Florida Fertilizer Ordinances* (updated Jan. 10, 2019), available at <https://ffl.ifas.ufl.edu/pdf/FloridaFertilizerOrdinances.pdf?v=20190219> (last visited Mar. 15, 2019).

⁶⁶ DEP, *Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes* (2015), available at <https://ffl.ifas.ufl.edu/pdf/dep-fert-modelord.pdf> (last visited Mar. 15, 2019).

- Managing grass clipping and vegetative matter by disposing of such materials properly rather than simply blowing them into the street, ditches, stormwater drains, or waterbodies.⁶⁷

Indian River Lagoon

The Indian River Lagoon (IRL) system is an estuary⁶⁸ that runs along 156 miles of Florida's east coast and connects Volusia, Brevard, Indian River, St. Lucie, and Martin counties.⁶⁹ The IRL system is composed of three main waterbodies: Mosquito Lagoon, Banana River, and the Indian River Lagoon.⁷⁰ There are four Basin Management Action Plans (BMAP) that have been adopted for the IRL.⁷¹

The IRL is one of the most biologically diverse estuaries in North America and is home to more than 2,000 species of plants, 600 species of fish, 300 species of birds, and 53 endangered or threatened species.⁷² The estimated economic value received from the IRL in 2014 was approximately \$7.6 billion.⁷³ Industry groups that are directly influenced by the IRL support nearly 72,000 jobs, collecting wages totaling more than \$1.2 billion annually.⁷⁴

The balance of the IRL's delicate ecosystem has been disturbed by increased development in the area. Development has led to harmful levels of nutrients and sediments entering the lagoon as a result of stormwater runoff from urban and agricultural areas, wastewater treatment facility discharges, septic systems, and excess fertilizer applications.⁷⁵ In the last decade, as a result of the pollution, there have been algae blooms; unusual mortalities of dolphins, manatees, and shorebirds; and large fish kills due to low dissolved oxygen from decomposing algae.⁷⁶ Additionally, thick layers of muck have built up at the bottom of waterbodies and now cover an

⁶⁷ *Id.* at 6-9.

⁶⁸ An estuary is a partially enclosed, coastal waterbody where freshwater from rivers and streams mixes with saltwater from the ocean. Estuaries are among the most productive ecosystems on earth, home to unique plant and animal communities that have adapted to brackish water: freshwater mixed with saltwater. U.S. EPA, *What Is An Estuary?*, <https://www.epa.gov/nep/basic-information-about-estuaries> (last visited Mar. 15, 2019); NOAA, *What Is An Estuary?*, <https://oceanservice.noaa.gov/facts/estuary.html> (last visited Mar. 15, 2019).

⁶⁹ IRL National Estuary Program, *About the Indian River Lagoon*, <http://www.irlcouncil.com/> (last visited Mar. 15, 2019).

⁷⁰ *Id.*

⁷¹ East Central Florida Regional Planning Council and the Treasure Coast Regional Planning Council, *Indian River Lagoon Economic Valuation Update*, x (Aug. 26, 2016), available at http://tcrpc.org/special_projects/IRL_Econ_Valu/FinalReportIRL08_26_2016.pdf (last visited Mar. 15, 2019); DEP, *Basin Management Action Plans (BMAPs)*, <https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps> (last visited Mar. 15, 2019).

⁷² IRL National Estuary Program, *About the Indian River Lagoon*, <http://www.irlcouncil.com/> (last visited Mar. 15, 2019).

⁷³ East Central Florida Regional Planning Council and the Treasure Coast Regional Planning Council, *Indian River Lagoon Economic Valuation Update*, vi (Aug. 26, 2016), available at http://tcrpc.org/special_projects/IRL_Econ_Valu/FinalReportIRL08_26_2016.pdf (last visited Mar. 15, 2019).

⁷⁴ *Id.* at ix. The main IRL-related industry groups are categorized as: Living Resources; Marine Industries; Recreation and Visitor-related; Resource Management; and Defense & Aerospace.

⁷⁵ Tetra Tech, Inc. & Closewaters, LLC, *Draft Save Our Indian River Lagoon Project Plan 2019 Update for Brevard County, Florida*, xii (Jan. 2019), available at <https://www.dropbox.com/sh/59riiyz9eevvdq0/AACc4Rq3SJqiO-ZOYUA3TJMsa?dl=0&preview=Draft+2019+Save+Our+Indian+River+Lagoon+Project+Plan+Update+012919.pdf> (last visited Mar. 15, 2019).

⁷⁶ *Id.* at 1.

estimated 15,900 acres of the lagoon bottom in Brevard County, in some areas measuring more than 6 feet thick.⁷⁷

Type Two Transfer

Section 20.06(2), F.S., defines a type two transfer as the merging of an existing department, program, or activity into another department. Any program or activity transferred by a type two transfer retains all the statutory powers, duties, and functions it held previous to the transfer. The program or activity also retains its records, personnel, property, and unexpended balances of appropriations, allocations, or other funds, unless otherwise provided by law. The transfer of segregated funds must be made in such a manner that the relation between the program and the revenue source is retained.⁷⁸

III. Effect of Proposed Changes:

Section 1 provides a short title for the act, “Clean Waterways Act.”

Section 2 transfers authority of onsite sewage treatment and disposal systems (OSTDS) from the Department of Health (DOH) to the Department of Environmental Protection (DEP) by a type two transfer.

Section 3 revises basin management action plan (BMAP) requirements for Outstanding Florida Springs (OFS). The bill:

- Requires that the priority ranking for each listed project be based on nutrient load per project, project readiness, cost effectiveness, overall environmental benefit, location within the plan area, local matching funds, and water savings or quantity improvements;
- Requires that each BMAP include, as set out in section 5 of the bill, a plan submitted by each local government within the plan area for each wastewater treatment plant project and each OSTDS remediation plan, and adopts the penalties set out in that section;
- Requires local governments that do not have a fertilizer use ordinance to adopt one by July 1, 2020, and imposes penalties and a moratorium on local government approval of building permits on local governments that fail to implement an ordinance;
- Transfers the requirement for an OSTDS remediation plan to the general BMAP provisions to require a revised version of the plans for all BMAPs; and
- Requires DEP and the Department of Agriculture and Consumer Services (DACCS) to develop agricultural remediation plans if DEP determines that agricultural nonpoint sources contribute at least 20 percent of nonpoint source nutrient pollution. The plans must identify cost-effective and financially feasible projects, including, if applicable, advanced best management practices and land acquisition projects, such as conservation easements, to reduce the nutrient impacts from agricultural operations. Requires the plan to be adopted as part of a BMAP by July 1, 2021.

⁷⁷ *Id.* at 52.

⁷⁸ Section 20.06(2), F.S.

Section 4 establishes a grant program within DEP, subject to appropriation, to provide grants for projects that will individually or collectively reduce excess nutrient pollution in a BMAP or an alternative restoration plan that:

- Retrofit OSTDSs;
- Construct, upgrade, or expand wastewater facilities to provide advanced waste treatment; and
- Connect OSTDSs to central sewer facilities.

The bill directs DEP to give priority for projects that subsidize the connection of OSTDSs to a wastewater treatment plant or that subsidize inspections and assessments of OSTDSs.

The bill requires 50% matching funds from local governments but authorizes DEP to waive the matching requirement for rural areas of opportunity.

The bill authorizes DEP to coordinate with water management districts to identify grant recipients. The bill requires DEP to submit an annual report on funded projects to the Governor and the Legislature every January 1, beginning in 2020.

Section 5 revises general BMAP requirements. The bill:

- Requires that the priority ranking for each listed project be based on nutrient load per project, project readiness, cost effectiveness, overall environmental benefit, location within the plan area, local matching funds, and water savings or quantity improvements;
- Requires a BMAP to include an identification of each point source or category of nonpoint sources and an estimated allocation of the pollutant load for each source; and
- Requires estimated nutrient load reductions to exceed the total amount of nutrient load reductions needed to meet the TMDL under the BMAP.

The bill creates a wastewater treatment plan, which:

- Requires a local government, in cooperation with DEP and the relevant local public and private wastewater utilities, to develop a plan to implement improvements that provide, at minimum, advanced waste treatment;
 - Requires that each plan provide for construction, expansion, or upgrades necessary to achieve a total maximum daily load, consistent with an OSTDS remediation plan.
 - Requires owners or operators of existing wastewater treatment plants to provide certain information for each plant with a plan to implement upgrades, including:
 - The permitted capacity of the plant;
 - The average nutrient concentration; and
 - The estimated average nutrient load.
 - Requires local governments to provide certain information in the plan:
 - The timeline of dates required for beginning construction, completing each stage of construction, and beginning operations;
 - A detailed planning and design report setting forth the plan for construction of improvements and operations; and
 - A certification that the local government, in agreement with the owner or operator of the wastewater treatment plant, has improved the method of implementing upgrades and method of financing or funding construction and operation.
- Authorizes DEP to amend the plan and requires DEP to approve a final plan;

- Requires DEP to provide technical support to a local government upon request;
- Requires existing wastewater treatment plants to incorporate the wastewater treatment plan into its next NPDES permit renewal;
- Provides that failure to meet deadlines and comply with the plan will result in a moratorium on local government approval of building permits, a moratorium on DOH approval of OSTDSs, and penalties; and
- Authorizes DEP to grant an extension of time to a local government to reach compliance with the schedule upon a showing of good cause and to reduce penalties based on expenditures for improvements and upgrades to the wastewater treatment plant.

The bill revises and expands the OSTDS remediation plans, currently required only for OFSSs, to:

- Apply to all BMAPs and revise the provisions to shift primary responsibility to local governments;
- Authorize DEP to identify OSTDS remediation plan priority focus areas;
- Require a local government, in cooperation with DEP and the relevant local public and private wastewater utilities, to develop an OSTDS remediation plan if DEP has identified OSTDSs as contributors of at least 20 percent of nonpoint source nutrient pollution or if DEP determines that remediation is necessary to achieve a TMDL. The bill:
 - Requires the plan to be completed and adopted as part of a BMAP no later than the first 5-year milestone assessment for the BMAP.
 - Requires that each plan provide for connecting each OSTDS to a central wastewater treatment plant or replacing the current system with a new system where the discharge meets current water quality standards and which has a discharge monitoring system.
 - Requires local governments to submit a plan with:
 - The timeline of dates required for beginning construction, completing each stage of construction, and beginning operations;
 - A detailed planning and design report setting forth the plan for construction of improvements and operations; and
 - A certification that the local government, in agreement with the owner/operator, has improved the method of remediation and method of financing or funding construction and operation.
- Authorize DEP to amend the plan and require DEP to approve a final plan;
- Require DEP to provide technical support to a local government upon request;
- Provide that failure to meet deadlines and comply with the plan will result in a moratorium on local government approval of building permits, a moratorium on DOH approval of OSTDSs, and penalties;
- Authorize DEP to grant an extension of time to a local government to reach compliance with the schedule upon a showing of good cause and to reduce penalties based on expenditures designed to achieve compliance with the remediation plan; and
- Require the installation, repair, modification, or upgrade of OSTDSs on lots of 1 acre or less and within the BMAP area with an OSTDS remediation plan to conform to the requirements of the remediation plan.

The bill requires alternative restoration plans to establish and include:

- Implementation of BMPs;
- Implementation of OSTDS remediation plans needed to restore the water body;

- Adoption of advanced waste treatment levels for wastewater treatment plants; and
- Any other pollution control mechanisms being implemented to demonstrate a reasonable assurance that existing or proposed pollution control mechanisms or programs will effectively address the impairment.

Section 6 requires a wastewater treatment plant that discharges raw or partially treated sewage into a waterway or aquifer to provide notification to its customers within 24 hours after discovering the discharge.

The bill imposes a moratorium on local government approval of building permits, a moratorium on DOH approval of OSTDSs, and existing civil and criminal penalties on the wastewater treatment plant until the required maintenance, repair, or improvement has been implemented. The bill authorizes DEP to reduce penalties based on the wastewater treatment plant's investment in assessment and maintenance activities.

Section 7 adds Indian River Lagoon, effective July 1, 2024, to a list of waterbodies with a prohibition against any sanitary sewage disposal into the waterbody without providing advanced waste treatment approved by DEP.

Section 8 imposes a moratorium and daily fines on local governments that fail to adopt, enact, and implement the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes.

Section 9 requires DEP to revise all BMAPs that were adopted and approved by the Secretary of Environmental Protection or prepared by DEP before July 1, 2019:

- By July 1, 2020, for Indian River Lagoon and Outstanding Florida Springs. Authorizes DEP to grant an extension of time, upon a showing of good cause, to local governments on the deadlines for its wastewater treatment or OSTDS remediation plan.
- Beginning July 1, 2020, for all other BMAPs. Authorizes DEP to grant an extension of time, upon a showing of good cause, to local governments on the deadlines for its wastewater treatment or OSTDS remediation plan.

Sections 10-19 make conforming changes relating to the type two transfer.

Section 20 provides that except as otherwise expressly provided in the act, the effective date is July 1, 2019.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

The county and municipality mandate provisions of Article VII, section 18 of the Florida Constitution may apply because the bill requires local governments to develop and implement plans for wastewater treatment plant improvements and OSTDS improvements and connections, which may require the expenditure of funds. Article VII, section 18(a) of the Florida Constitution provides in part that a county or municipality may not be bound by a general law requiring a county or municipality to spend funds or

take an action that requires the expenditure of funds unless certain specified exemptions or exceptions are met.

Article VII, section 18(d) provides eight exemptions, which, if any single one is met, exempts the law from the limitations on mandates. If no exemption or exception applies, the bill may require a finding of important state interest and a two-thirds vote of the membership of each house.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

There may be a negative fiscal impact on builders who are unable to secure building permits or permits for their OSTDSs or who experience delays in a local jurisdiction that is subject to a moratorium imposed under the bill.

Wastewater treatment plants may incur a negative fiscal impact due to costs associated with notifying customers of a sanitary sewage overflow. Additionally, if a wastewater treatment plant makes an unlawful discharge, it may incur penalties until it implements required maintenance, repairs, or improvements.

It is unclear whether the type two transfer will result in changes to the OSTDS permitting program that could affect the private sector, such as changes in the cost of permit fees or the approval of using lower cost, nutrient reducing systems. If there are such changes, the bill may have a negative fiscal impact on the private sector.

C. Government Sector Impact:

There may be a significant negative fiscal impact on local governments that are required to develop and implement wastewater treatment plant improvements and OSTDS improvements and connections. There may be an additional negative fiscal impact on a local government that does not comply with the requirements under the bill, leading to a moratorium on issuing building permits or an assessment of penalties.

However, there may be a positive fiscal impact on a local government that receives a grant for wastewater or OSTDS projects. There may also be a positive fiscal impact on government expenditures if the revisions to BMAPs improve water quality, resulting in decreased expenditures on water cleanup efforts.

There may be negative fiscal impacts on DEP if staff time and department resources are necessary to administer the wastewater grant program and to provide technical support to local governments that request assistance. There may also be a negative fiscal impact on DEP and DACS due to costs associated with developing the agricultural remediation plans required under the bill and on DACS to develop advanced best management practices.

The bill may have an indeterminate effect on state government expenditures. Under DOH, the OSTDS program is funded by permit fees and the State General Revenue Fund. In addition, county health departments provide support to the program. It is unclear how the transfer of authority to DEP will affect county health departments.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill substantially amends the following sections of the Florida Statutes: 373.807, 403.067, 403.086, 403.9337, 153.54, 153.73, 163.3180, 373.811, 381.006, 381.0061, 381.0064, 381.0065, 381.00651, and 381.0068.

This bill creates the following sections of the Florida Statutes: 381.00661 and 403.0771.

IX. Additional Information:**A. Committee Substitute – Statement of Changes:**

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.
