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 Community Affairs

BILL:	CS/SB 712
INTRODUCER:	Community Affairs Committee and Senator Mayfield
SUBJECT:	Water Quality Improvements
DATE:	December 11, 2019 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Paglialonga/Rogers	Yeatman	CA	**Fav/CS**
2.			AEG	
3.			AP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 712 includes recommendations from the Blue-Green Algae Task Force. The major topics in this bill include onsite sewage treatment and disposal systems (OSTDSs, commonly referred to as septic systems), wastewater, stormwater, agriculture, and biosolids. The bill directs the Department of Environmental Protection (DEP) to make rules relating to most of these topics. Note that rules that cost at least $1 million over the first 5 years of implementation require legislative ratification.[1] Therefore, several of these provisions may not be fully effectuated without additional legislation.

Regarding OSTDSs, the bill:

- Transfers the regulation of OSTDSs from the Department of Health (DOH) to DEP.
- Directs DEP to adopt rules to locate OSTDSs by July 1, 2022:
  - These rules will take into consideration conventional and advanced OSTDS designs, impaired water bodies, wastewater and drinking water infrastructure, potable water sources, nonpotable wells, stormwater infrastructure, OSTDS remediation plans, nutrient pollution, and the recommendations of an OSTDS technical advisory committee;
  - Once those rules are adopted, they will supersede the existing statutory requirements for setbacks.

[1] Section 120.541(3), F.S.

- Deletes the DOH OSTDS technical advisory committee and creates a DEP OSTDS technical advisory committee that will expire on August 15, 2022, after making recommendations to the Governor and Legislature regarding the regulation of OSTDSs.
- Requires local governments to develop OSTDS remediation plans within basin management action plans if DEP determines that OSTDSs contribute at least 20 percent of the nutrient pollution or if DEP determines remediation is necessary to achieve the total maximum daily load. Such plans must be adopted as part of the basin management action plans no later than July 1, 2025.

Regarding wastewater, the bill:

- Creates a wastewater grant program, subject to appropriation, within DEP that requires a 50 percent local match of funds. Eligible projects include:
  - Projects to upgrade OSTDSs.
  - Projects to construct, upgrade, or expand facilities to provide advanced waste treatment.
  - Projects to connect OSTDSs to central sewer facilities.
- Requires DEP to submit an annual report to the Governor and Legislature on the projects funded by the wastewater grant program.
- Requires DEP to adopt rules to reasonably limit, reduce, and eliminate leaks, seepages, or inputs into the underground pipes of wastewater collection systems.
- Authorizes DEP to require public utilities seeking a wastewater discharge permit to file reports and other data regarding utility costs:
  - Such reports may include data related to expenditures on pollution mitigation and prevention, including the prevention of sanitary sewer overflows, collection and transmission system pipe leakages, and inflow and infiltration.
  - DEP is required to adopt rules related to these requirements.
- Requires local governments to develop wastewater treatment plans within basin management action plans if DEP determines that domestic wastewater facilities contribute at least 20 percent of the nutrient pollution or if DEP determines remediation is necessary to achieve the total maximum daily load. Such plans must be adopted as part of the basin management action plans no later than July 1, 2025.
- Adds to DEP's penalty schedule a penalty of $2,000 for failure to survey an adequate portion of a wastewater collection system and take steps to reduce sanitary sewer overflows, pipe leaks, and inflow and infiltration. Substantial compliance with certain bill requirements is evidence in mitigation for penalty assessment.
- Prohibits facilities for sanitary sewage disposal from disposing of waste into Indian River Lagoon and its tributaries without providing advanced waste treatment.
- Requires facilities for sanitary sewage disposal to provide for a power outage contingency plan for collection systems and pump stations.
- Requires facilities for sanitary sewage to prevent sanitary sewer overflows or underground pipe leaks and ensure that collected wastewater reaches the facility for appropriate treatment.
  - The bill requires studies, plans, and reports related to this requirement (the action plan).
  - DEP must adopt rules regarding the implementation of inflow and infiltration studies and leakage surveys.
- Authorizes certain facilities for sanitary sewage to receive 10-year permits if they are meeting the goals in their action plan for inflow, infiltration, and leakage prevention.
- Makes the following changes relating to water pollution operation permits:

  - The permit must require the investigation or surveying of the wastewater collection system to determine pipe integrity.
  - The permit must require an annual report to DEP, which details facility revenues and expenditures in a manner prescribed by DEP rule, including any deviation from annual expenditures related to their action plan.
- Requires DEP to submit an annual report to the Governor and Legislature that identifies all wastewater utilities that experienced a sanitary sewer overflow in the preceding calendar year. DEP must include with this report certain utility-specific information for each utility that experienced an overflow.

Regarding stormwater, the bill:
- Requires DEP and the Water Management Districts (WMDs), by January 1, 2021, to initiate rulemaking to update their stormwater rules.
- Requires DEP, by January 1, 2021, to evaluate inspection data relating to entities that self-certify their stormwater permits and provide the Legislature with recommendations for improvements to the self-certification program.
- Directs DEP and the Department of Economic Opportunity to include in their model stormwater management program ordinances that target nutrient reduction practices and use green infrastructure.

Regarding agriculture, the bill:
- Requires the Department of Agriculture and Consumer Services (DACS) to collect and provide to DEP fertilization and nutrient records from each agriculture producer enrolled in best management practices.
- Requires DACS to perform onsite inspections of each agricultural producer that enrolls in a best management practice every two years.
- Authorizes DACS and institutions of higher education with agricultural research programs to develop research plans and legislative budget requests relating to the evaluation and improvement of agricultural best management practices and agricultural nutrient reduction projects.

Regarding biosolids, the bill:
- Requires DEP to adopt rules for biosolids management.
- Exempts the biosolids rules from legislative ratification if they are adopted prior to the 2021 legislative session.

The bill also creates a real-time water quality monitoring program, subject to appropriation, within DEP.

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.[2]

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.[3]

Blue-Green Algae Task Force

In January of 2019, Governor DeSantis issued the comprehensive Executive Order Number 19-12.[4] The order directed the Department of Environmental Protection (DEP) to establish a Blue-Green Algae Task Force charged with expediting progress towards reducing nutrient pollution and the impacts of blue-green algae (cyanobacteria) blooms in the state.[5] The task force's responsibilities include identifying priority projects for funding and making recommendations for regulatory changes. The five-person task force issued a consensus document on October 11, 2019.[6] To the extent that the task force has issued recommendations on topics addressed in this Present Situation, those recommendations are included in the relevant section.

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.[7] 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.[8] 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.[9] Point sources are discernible,

[2] U.S. Environmental Protection Agency (EPA), *Sources and Solutions*, https://www.epa.gov/nutrientpollution/sources-and-solutions (last visited Dec. 2, 2019).
[3] EPA, *The Problem*, https://www.epa.gov/nutrientpollution/problem (last visited Dec. 2, 2019).
[4] State of Florida, Office of the Governor, *Executive Order Number 19-12* (2019), *available at* https://www.flgov.com/wp-content/uploads/orders/2019/EO_19-12.pdf.
[5] *Id.* at 2; DEP, *Blue-Green Algae Task Force*, https://protectingfloridatogether.gov/state-action/blue-green-algae-task-force (last visited Dec. 2, 2019).
[6] DEP, *Blue-Green Algae Task Force Consensus Document #1* (Dec. 2, 2019), *available at* https://floridadep.gov/sites/default/files/Final%20Consensus%20%231_0.pdf.
[7] DEP, *Total Maximum Daily Loads Program*, https://floridadep.gov/dear/water-quality-evaluation-tmdl/content/total-maximum-daily-loads-tmdl-program (last visited Dec. 2, 2019).
[8] Section 403.067(1), F.S.
[9] Section 403.031(21), F.S.

confined, and discrete conveyances including pipes, ditches, and tunnels. Nonpoint sources are unconfined sources that include runoff from agricultural lands or residential areas.[10]

Basin Management Action Plans and Best Management Practices

DEP is the lead agency in coordinating the development and implementation of TMDLs.[11] Basin management action plans (BMAPs) are one of the primary mechanisms DEP uses to achieve TMDLs. BMAPs are plans that 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.[12]

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.[13] 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 determine and share water quality cleanup responsibilities collectively.[14] BMAPs are adopted by secretarial order.[15]

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.[16]

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[10] 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.

[11] 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.

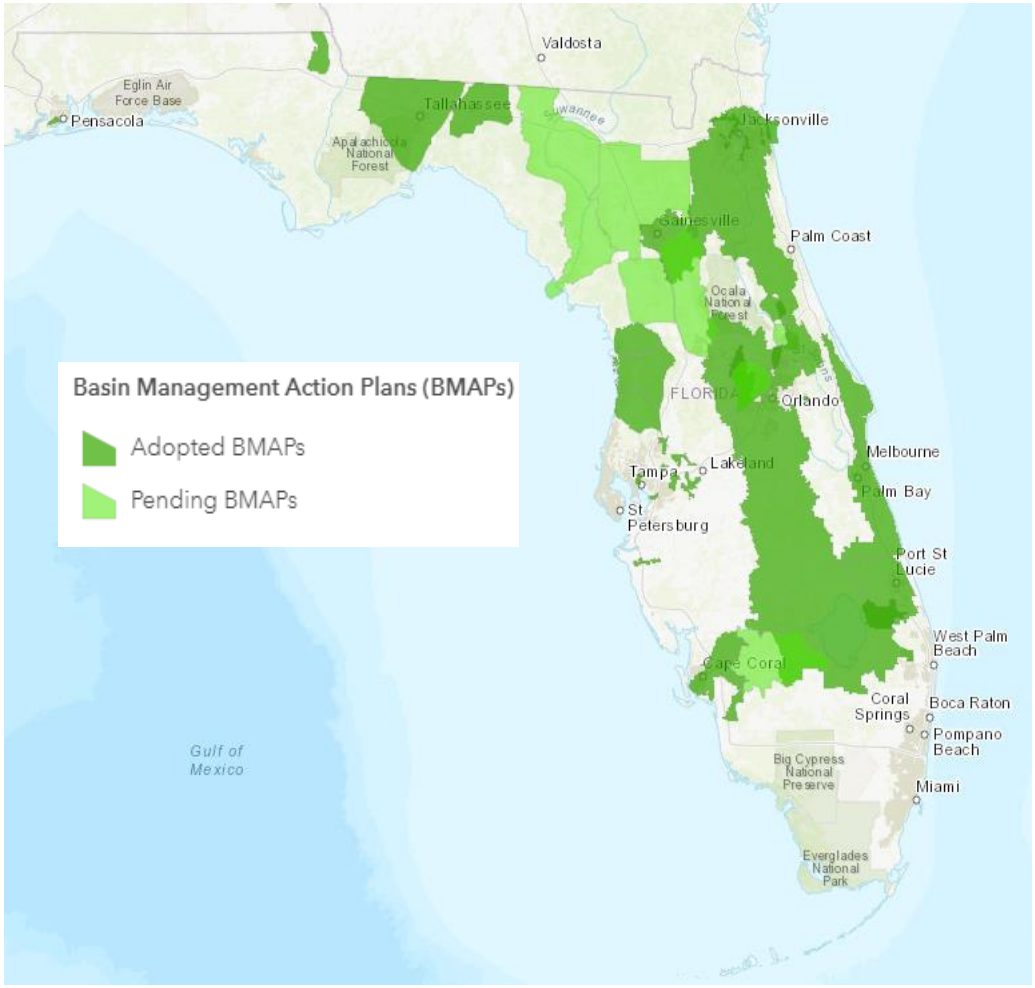
[12] Section 403.067(7), F.S.

[13] *Id*.

[14] DEP, *Basin Management Action Plans (BMAPs)*, https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps (last visited Dec. 4, 2019).

[15] Section 403.067(7)(a)5., F.S.

[16] Section 403.067(7)(a)6., F.S.



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.[17] A nonpoint source discharger may be subject to enforcement action by DEP or a water management district (WMD) based on a failure to implement these requirements.[18] 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.[19]

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 above shows the state's adopted and pending BMAPs.[20]

[17] 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.
[18] Section 403.067(7)(b)2.h., F.S.
[19] DEP, *NPDES Stormwater Program*, https://floridadep.gov/Water/Stormwater (last visited Dec. 2, 2019).
[20] DEP, *Impaired Waters, TMDLs, and Basin Management Action Plans Interactive Map*, https://floridadep.gov/dear/water-quality-restoration/content/impaired-waters-tmdls-and-basin-management-action-plans (last visited Dec. 5, 2019).

The Blue-Green Algae Task Force made the following recommendations for BMAPs:

- Include regional storage and treatment infrastructure in South Florida watersheds.
- Consider land use changes, legacy nutrients, and the impact of the BMAP on downstream waterbodies.
- Develop a more targeted approach to project selection.
- Evaluate project effectiveness through monitoring.[21]

Agricultural BMPs

Agricultural best management practices (BMPs) are practical measures that agricultural producers undertake to reduce the impacts of fertilizer and water use and otherwise manage the landscape to further protect water resources. BMPs are developed using the best available science with economic and technical consideration and, in certain circumstances, can maintain or enhance agricultural productivity.[22] BMPs are implemented by the Department of Agriculture and Consumer Services (DACS). Since the BMP program was implemented in 1999,[23] DACS has adopted nine BMP manuals and is currently developing two more that cover nearly all major agricultural commodities in Florida. According to the annual report on BMPs prepared by DACS, approximately 54 percent of agricultural acreage is enrolled in the DACS BMP program statewide.[24] Producers implementing BMPs receive a presumption of compliance with state water quality standards for the pollutants addressed by the BMPs[25] and those who enroll in the BMP program become eligible for technical assistance and cost-share funding for BMP implementation. To enroll in the BMP program, producers must meet with the Office of Agricultural Water Policy (OAWP) to determine the BMPs that are applicable to their operation and submit a Notice of Intent to Implement the BMPs, along with the BMP checklist from the applicable BMP manual.[26]

The University of Florida's Institute of Food and Agricultural Sciences (IFAS) is heavily involved in the adoption and implementation of BMPs. IFAS provides expertise to both DACS and agriculture producers, and has extension offices throughout Florida. IFAS puts on summits

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[21] DEP, *Blue-Green Algae Task Force Consensus Document #1*, 2-4 (Oct. 11, 2019), *available at* https://floridadep.gov/sites/default/files/Final%20Consensus%20%231_0.pdf.

[22] Florida Department of Agriculture and Consumer Services Office of Agricultural Water Policy, *Status of Implementation of Agricultural Nonpoint Source Best Management Practices*, 3, (Jul. 1, 2019), *available at* https://www.fdacs.gov/ezs3download/download/84080/2481615/Media/Files/Agricultural-Water-Policy-Files/Status-of-Implementation-of-BMPs-Report-2019.pdf (last visited Dec. 5, 2019).

[23] The program was voluntary from 199-2005.in 2005 the Florida Legislature modified the law requiring agricultural producers to adopt BMPs or conduct water quality monitoring.

[24] Florida Department of Agriculture and Consumer Services Office of Agricultural Water Policy, *Status of Implementation of Agricultural Nonpoint Source Best Management Practices*, 2, (Jul. 1, 2019), *available at* https://www.fdacs.gov/ezs3download/download/84080/2481615/Media/Files/Agricultural-Water-Policy-Files/Status-of-Implementation-of-BMPs-Report-2019.pdf (last visited Dec. 5, 2019).

[25] Section 403.067(7), F.S.

[26] Florida Department of Agriculture and Consumer Services Office of Agricultural Water Policy, *Status of Implementation of Agricultural Nonpoint Source Best Management Practices*, 3, (Jul. 1, 2019), *available at* https://www.fdacs.gov/ezs3download/download/84080/2481615/Media/Files/Agricultural-Water-Policy-Files/Status-of-Implementation-of-BMPs-Report-2019.pdf (last visited Dec. 5, 2019).

and workshops on BMPs,[27] conducts research to issue recommendations for improving BMPs,[28] and issues training certificates for BMPs that require licenses such as Green Industry BMPs.[29]

For agriculture and BMPs, the Blue-Green Algae Task Force recommended:
- Increasing BMP enrollment.
- Improving records and additional data collection.
- Accelerating updates to BMP manuals.[30]

BMAPs for Outstanding Florida Springs

In 2016, the Legislature passed the Florida Springs and Aquifer Protection Act, which identified 30 "Outstanding Florida Springs" (OFS) that have additional statutory protections and requirements.[31] Key aspects of the Springs and Aquifer Protection Act relating to water quality include:
- The designation of a priority focus area for each OFS. A priority focus area of an OFS means the area or areas of a basin where the Florida 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 WMDs, and delineated in a BMAP;[32]
- The development of an onsite sewage treatment and disposal system (OSTDS) remediation plan[33] 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;[34] and
- The prohibition against new OSTDSs on parcels of less than 1 acre, unless the system complies with the OSTDS remediation plan.[35]

DEP is the lead agency in coordinating the preparation and adoption of the OSTDS remediation plan. The OSTDS remediation plan must include options for repair, upgrade, replacement, drainfield modification, the addition of effective nitrogen reducing features, connection to a central sewerage system, or other action for a sewage system or group of systems.[36] The options

[27] UF/IFAS, *BMP Resource*, *available at* https://bmp.ifas.ufl.edu/ (last visited Dec. 5, 2019).
[28] UF/IFAS Everglades Research & Education Center, *Best Management Practices & Water Resources*, *available at* https://erec.ifas.ufl.edu/featured-3-menus/research-/best-management-practices--water-resources/ (last visited Dec. 5, 2019).
[29] UF/IFAS Florida-Friendly Landscaping, *GI-BMP Training Program Overview*, *available at* https://ffl.ifas.ufl.edu/professionals/BMP_overview.htm (last visited Dec. 5, 2019).
[30] *Id*.
[31] Chapter 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.
[32] Section 373.802(5), F.S.
[33] Commonly called a "septic remediation plan."
[34] Section 373.807, F.S.
[35] Section 373.811, F.S.
[36] Section 373.807(3), F.S.

must be cost-effective and financially feasible projects necessary to reduce the nutrient impacts from OSTDSs within the area.[37]

In June 2018, DEP adopted 13 BMAPs, addressing all 24 nitrogen-impaired OFS.[38] Eight of these plans are currently effective, while five others are pending the outcome of legal challenges on various alleged deficiencies in the BMAPs.[39] These alleged 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.

Wastewater Treatment Facilities

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.[40]

Chapter 403, F.S., requires that any facility or activity which discharges waste into waters of the state or which will reasonably be expected to be a source of water pollution must obtain a permit from DEP.[41] 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.[42]

Under section 402 of the Clean Water Act, 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 a National Pollution Discharge Elimination System (NPDES) permit.[43] 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.[44] 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 meeting certain statutory requirements.[45]

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[37] *Id*.
[38] DEP, *Springs*, https://floridadep.gov/springs (last visited Nov. 26, 2019).
[39] *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.
[40] 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 Dec. 2, 2019).
[41] Section 403.087, F.S.
[42] DEP, *Wastewater Permitting*, https://floridadep.gov/water/domestic-wastewater/content/wastewater-permitting (last visited Dec. 2, 2019).
[43] 33 U.S.C. s. 1342.
[44] Sections 403.061 and 403.087, F.S.
[45] Section 403.087(3), F.S.

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.[46] 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.[47]

Advanced Waste Treatment

Under Florida law, facilities for sanitary sewage disposal are required to provide for advanced waste treatment, as deemed necessary by DEP.[48] 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.[49] The standard also requires high-level disinfection.[50]

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

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.[51] 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.[52]

[46] 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.
[47] *Id*.
[48] Section 403.086(2), F.S.
[49] Section 403.086(4), F.S.
[50] Section 403.086(4)(b), F.S.; Fla. Admin. Code R. 62-600.440(6).
[51] 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.
[52] U.S. Department of the Interior and U.S. Geological Survey, *Integrating Science and Resource Management in Tampa Bay, Florida*, 110 (2011), *available at* https://pubs.usgs.gov/circ/1348/pdf/Chapter%205_105-156.pdf (internal citations omitted).

Sanitary Sewer Overflows, Leakages, and Inflow and Infiltration

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.[53] A SSO may subject the owner or operator of a facility to civil penalties of not more than $10,000 for each offense, a criminal conviction or fines, and additional administrative penalties.[54] Each day during the period in which a violation occurs constitutes a separate offense.[55] However, administrative penalties are capped at $10,000.[56]

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 (DOH) 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.[57]

Reduction of SSOs can be achieved through:

- Cleaning and maintaining the sewer system;
- Reducing inflow and infiltration through rehabilitation and repairing broken or leaking lines;
- Enlarging or upgrading sewer, pump station, or sewage treatment plant capacity and/or reliability; and
- Constructing wet weather storage and treatment facilities to treat excess flows.[58]

Inflow and Infiltration (I&I) occurs when groundwater and/or rainwater enters the sanitary sewer system and ends up at the wastewater treatment facility, necessitating its treatment as if it were wastewater.[59] I&I can be caused by groundwater infiltrating the sewer system through faulty pipes or infrastructure, or any inflows of rainwater or non-wastewater into the sewer system.

I&I is a major cause of SSOs in Florida.[60] When domestic wastewater facilities are evaluated for permit renewal, collection systems are not evaluated for issues such as excessive infiltration/inflow unless problems result at the treatment plant.[61] Another major cause of SSOs

[53] DEP, *Sanitary Sewer Overflows (SSOs), available at* https://floridadep.gov/sites/default/files/sanitary-sewer-overflows.pdf (last visited Dec. 4, 2019).
[54] Sections 403.121 and 403.141, F.S.
[55] *Id*.
[56] Section 403.121(2)(b),(8), and (9), F.S.
[57] DEP, *SSOs, available at* https://floridadep.gov/sites/default/files/sanitary-sewer-overflows.pdf.
[58] *Id*.
[59] City of St. Augustine, *Inflow & Infiltration Elimination Program*, https://www.citystaug.com/549/Inflow-Infiltration-Elimination-Program (last visited Dec. 6, 2019).
[60] *See generally* RS&H, Inc., *Evaluation of Sanitary Sewer Overflows and Unpermitted Discharges Associated with Hurricanes Hermine and Matthew* (Jan. 2017), *available at* https://floridadep.gov/sites/default/files/Final%20Report_Evaluation%20of%20SSO%20and%20Unpermitted%20Discharges%2001_06_17.pdf.
[61] Fla. Admin. Code R. 62-600.735; *see* Fla. Admin. Code R. 62-600.200. "Collection/transmission systems" are defined as "sewers, pipelines, conduits, pumping stations, force mains, and all other facilities used for collection and transmission of

is the loss of electricity to the infrastructure for the collection and transmission of wastewater, such as pump stations, especially during storms.[62] Pump stations receiving flow from another station through a force main, or those discharging through pipes 12 inches or larger, must have emergency generators.[63] All other pump stations must have emergency pumping capability through one of three specified arrangements.[64] These requirements for emergency pumping capacity only apply to domestic wastewater collection/transmission facilities existing after November 6, 2003, unless facilities existing prior to that date are modified.[65]

The Blue-Green Algae Task Force made the following recommendations relating to SSOs:

- Emergency back-up capabilities should be required for all lift stations constructed prior to 2003.
- DEP and wastewater facilities should take a more proactive approach to infiltration and inflow issues.[66]

Wastewater Asset Management

Asset management is the practice of managing infrastructure capital assets to minimize the total cost of owning and operating these assets while delivering the desired service levels.[67] Many utilities use asset management to pursue and achieve sustainable infrastructure. A high-performing asset management program includes detailed asset inventories, operation and maintenance tasks, and long-range financial planning.[68]

Each utility is responsible for making sure that its system stays in good working order, regardless of the age of its components or the availability of additional funds.[69] Asset management programs with good data can be the most efficient method of meeting this challenge. Some key steps for asset management are making an inventory of critical assets, evaluating the condition and performance of such assets, and developing plans to maintain, repair, and replace assets and to fund these activities.[70] The EPA provides guidance and reference manuals for utilities to aid in developing asset management plans.[71]

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wastewater from individual service connections to facilities intended for the purpose of providing treatment prior to release to the environment."

[62] *See generally* RS&H, Inc., *Evaluation of Sanitary Sewer Overflows and Unpermitted Discharges Associated with Hurricanes Hermine and Matthew* (Jan. 2017), *available at* https://floridadep.gov/sites/default/files/Final%20Report_Evaluation%20of%20SSO%20and%20Unpermitted%20Discharges%2001_06_17.pdf.

[63] Fla. Admin. Code R. 62-604.400.

[64] *Id.*

[65] Fla. Admin. Code R. 62-604.100.

[66] DEP, *Blue-Green Algae Task Force Consensus Document #1*, 7 (Oct. 11, 2019), *available at* https://floridadep.gov/sites/default/files/Final%20Consensus%20%231_0.pdf.

[67] EPA, *Sustainable Water Infrastructure - Asset Management for Water and Wastewater Utilities*, https://www.epa.gov/sustainable-water-infrastructure/asset-management-water-and-wastewater-utilities (last visited Dec 9, 2019).

[68] *Id.*

[69] *Id.*

[70] *Id.*

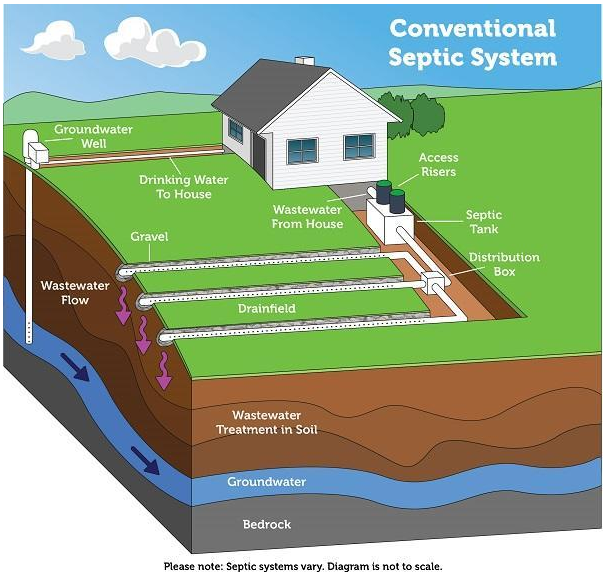
[71] EPA, *Asset Management: A Best Practices Guide* (2008), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi/P1000LP0.PDF?Dockey=P1000LP0.PDF; EPA, *Reference Guide for Asset Management Tools/Asset Management Plan Components and Implementation Tools for Small and Medium Sized Drinking*

Many states, including Florida, provide financial incentives for the development and implementation of an asset management plan when requesting funding under a State Revolving Fund or other state funding mechanism.[72] Florida's incentives include priority scoring,[73] reduction of interest rates,[74] principal forgiveness for financially disadvantaged small communities,[75] and eligibility for small community wastewater facilities grants.[76]

In 2016, the Legislature authorized the Public Service Commission (PSC) to allow a utility to create a utility reserve fund for repair and replacement of existing distribution and collection infrastructure that is nearing the end of its useful life or is detrimental to water quality or reliability of service. The utility reserve fund would be funded by a portion of the rates charged by the utility, by a secured escrow account, or through a letter of credit.

The PSC adopted rules governing the implementation, management, and use of the fund, including expenses for which the fund may be used, segregation of reserve account funds, requirements for a capital improvement plan, and requirements for the PSC authorization before fund disbursements.[77] The PSC requires an applicant to provide a capital improvement plan or an asset management plan in seeking authorization to create a utility reserve fund.[78]

Onsite Sewage Treatment and Disposal Systems



Onsite sewage treatment and disposal systems (OSTDSs), commonly referred to as "septic systems," generally consist of two basic parts:

Water and Wastewater Systems (May 2014), *available at* https://www.epa.gov/sites/production/files/2016-04/documents/am_tools_guide_may_2014.pdf.
[72] EPA, *State Asset Management Initiatives* (Aug. 2012), *available at* https://www.epa.gov/sites/production/files/2016-04/documents/state_asset_management_initiatives_11-01-12.pdf.
[73] Fla. Admin. Code R. 62-503.300(e).
[74] Fla. Admin. Code R. 62-503.300(5)(b)1. and 62-503.700(7).
[75] Fla. Admin. Code R. 62-503.500(4).
[76] Fla. Admin. Code R. 62-505.300(d) and 62-505.350(5)(c).
[77] Fla. Admin. Code R. 25-30.444.
[78] Fla. Admin. Code R. 25-30.444(2)(e) and (m).

the septic tank and the drainfield.[79] 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.[80]

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 OSTDSs within the state.[81] DOH regulations focus on construction standards and setback distances. The regulations are primarily designed to protect the public from waterborne illnesses.[82] DOH also conducts research to evaluate performance, environmental health, and public health effects of OSTDSs. Innovative OSTDS products and technologies must be approved by DOH.[83]

DOH and DEP have an interagency agreement that standardizes procedures and clarifies responsibilities between them regarding the regulation of OSTDSs.[84] DEP has jurisdiction over OSTDSs when: domestic sewage flow exceeds 10,000 gallons per day; commercial sewage flow exceeds 5,000 gallons per day; there is a likelihood of hazardous or industrial wastes; a sewer system is available; or if any system or flow from the establishment is currently regulated by DEP (unless DOH grants a variance).[85] In all other circumstances, DOH regulates OSTDSs.

There are an estimated 2.6 million OSTDSs in Florida, providing wastewater disposal for 30 percent of the state's population.[86] In Florida, development in some areas is dependent on OSTDSs due to the cost and time it takes to install central sewer systems.[87] For example, in rural areas and low-density developments, central sewer systems are not cost-effective. Less than one percent of OSTDSs in Florida are actively managed under operating permits and maintenance agreements.[88] The remainder of systems are generally serviced only when they fail, often leading to costly repairs that could have been avoided with routine maintenance.[89]

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[79] 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 Dec. 2, 2019); EPA, *Types of Septic Systems*, https://www.epa.gov/septic/types-septic-systems (last visited Dec. 2, 2019) (showing the graphic provided in the analysis).
[80] *Id.*
[81] Section 381.0065(3), F.S.
[82] DOH, *Overview of Onsite Sewage Treatment and Disposal Systems*, 5 (Aug. 1, 2019), http://floridadep.gov/file/19018/download?token=6r94Bi2B.
[83] Section 381.0065(3), F.S.
[84] *Interagency Agreement Between the Department of Environmental Protection and the Department of Health for Onsite Sewage Treatment and Disposal Systems* (Sept. 30, 2015), *available at* https://floridadep.gov/sites/default/files/HOHOSTDS_9_30_15.pdf.
[85] *Id.* at 6-13; s. 381.0065(3)(b), F.S.; DEP, *Septic Systems*, https://floridadep.gov/water/domestic-wastewater/content/septic-systems (last visited Dec. 2, 2019).
[86] DOH, *Onsite Sewage*, http://www.floridahealth.gov/environmental-health/onsite-sewage/index.html (last visited Dec. 2, 2019).
[87] 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. The report begins on page 56 of the PDF.
[88] *Id.*
[89] *Id.*

In a conventional OSTDS, a septic tank does not reduce nitrogen from the raw sewage. In Florida, approximately 30-40 percent of the nitrogen levels are reduced in the drainfield of a system that is installed 24 inches or more from groundwater.[90] This still leaves a significant amount of nitrogen to percolate into the groundwater, which makes nitrogen from OSTDSs a potential contaminant in groundwater.[91]

Different types of advanced OSTDSs exist that can remove greater amounts of nitrogen than a typical septic system (often referred to as "advanced" or "nutrient-reducing" septic systems).[92] DOH publishes on its website approved products and resources on advanced systems.[93] Determining which advanced system is the best option can depend on site-specific conditions.

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.[94] Owners of an OSTDS in need of repair or modification must connect within 90 days of notification from DOH.[95]

The Blue-Green Algae Task Force made the following recommendations relating to OSTDSs:
- DEP should develop a more comprehensive regulatory program to ensure that OSTDSs are sized, designed, constructed, installed, operated, and maintained to prevent nutrient pollution, reduce environmental impact, and preserve human health.
- More post-permitting septic tank inspections should take place.
- Protections for vulnerable areas in the state should be expanded.
- Additional funding to accelerate septic to sewer conversions.[96]

The DOH Technical Review and Advisory Panel

DOH has a technical review and advisory panel to review agency rules and provide assistance to DOH with rule adoption.[97] It is comprised of, at a minimum:
- A soil scientist;
- A professional engineer registered in this state who is recommended by the Florida Engineering Society and who has work experience in OSTDSs;
- Two representatives from the home-building industry recommended by the Florida Home Builders Association, including one who is a developer in this state who develops lots using onsite sewage treatment and disposal systems;

[90] 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; *see* Fla. Admin. Code R. 64E-6.006(2).
[91] 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/pdffiles/SS/SS55000.pdf.
[92] DOH, *Nitrogen-Reducing Systems for Areas Affected by the Florida Springs and Aquifer Protection Act* (2019), *available at* http://www.floridahealth.gov/environmental-health/onsite-sewage/products/_documents/bmap-n-reducing-tech-18-10-29.pdf.
[93] DOH, *Onsite Sewage Programs, Product Listings and Approval Requirements*, http://www.floridahealth.gov/environmental-health/onsite-sewage/products/index.html (last visited Dec. 2, 2019).
[94] Section 381.00655, F.S.
[95] *Id*.
[96] DEP, *Blue-Green Algae Task Force Consensus Document #1*, 6-7 (Oct. 11, 2019), *available at* https://floridadep.gov/sites/default/files/Final%20Consensus%20%231_0.pdf.
[97] Section 381.0068, F.S.

- A representative from the county health departments who has experience permitting and inspecting the installation of onsite sewage treatment and disposal systems in this state;
- A representative from the real estate industry who is recommended by the Florida Association of Realtors;
- A consumer representative with a science background;
- Two representatives of the septic tank industry recommended by the Florida Onsite Wastewater Association, including one who is a manufacturer of onsite sewage treatment and disposal systems;
- A representative from local government who is knowledgeable about domestic wastewater treatment and who is recommended by the Florida Association of Counties and the Florida League of Cities; and
- A representative from the environmental health profession who is recommended by the Florida Environmental Health Association and who is not employed by a county health department.[98]

Members are to be appointed for a term of 2 years. The panel may also, as needed, be expanded to include ad hoc, nonvoting representatives who have topic-specific expertise.[99]

Stormwater Management

Stormwater is the flow of water resulting from, and immediately following, a rainfall event.[100] When stormwater falls on pavement, buildings, and other impermeable surfaces, the runoff flows quickly and can pick up sediment, nutrients (such as nitrogen and phosphorous), chemicals, and other pollutants.[101] Stormwater pollution is a major source of water pollution in Florida.[102]

There are two main regulatory programs to address water quality from stormwater: the federal program that regulates discharges of pollutants into waters of the United States[103] and the state Environmental Resource Permitting (ERP) Program that regulates activities involving the alteration of surface water flows.[104] The federal NPDES Stormwater Program regulates the following types of stormwater pollution:[105]

- Certain municipal storm sewer systems;

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[98] *Id*.
[99] *Id*.
[100] DEP and Water Management Districts, *Environmental Resource Permit Applicant's Handbook Volume I (General and Environmental)*, 2-10 (June 1, 2018), *available at* https://www.swfwmd.state.fl.us/sites/default/files/medias/documents/Appliicant_Hanbook_I_-_Combined.pd_0.pdf.
[101] DEP, *Stormwater Management*, 1 (2016), *available at* https://floridadep.gov/sites/default/files/stormwater-management_0.pdf. When rain falls on fields, forests, and other areas with naturally permeable surfaces the water not absorbed by plants filters through the soil and replenishes Florida's groundwater supply.
[102] DEP, *Stormwater Support*, https://floridadep.gov/water/engineering-hydrology-geology/content/stormwater-support (last visited Dec. 2, 2019); DEP, *Nonpoint Source Program Update*, 10 (2015), *available at* https://floridadep.gov/sites/default/files/NPS-ManagementPlan2015.pdf.
[103] National Pollutant Discharge Elimination System (NPDES), 33 U.S.C. s. 1342 (2019); 40 C.F.R. pt. 122.
[104] Chapter 373, pt. IV, F.S.; Fla. Admin. Code Ch. 62-330.
[105] A point source is discernible, confined and discrete conveyance, such as a pipe, ditch, channel, tunnel, conduit, discrete fissure, or container. *See* The Clean Water Act, 33 U.S.C. s. 1362(14) and 40 C.F.R. 122.2; Stormwater can be either a pointsource or a nonpoint source of pollution. EPA, *Monitoring and Evaluating Nonpoint Source Watershed Projects*, 1-1, *available at* https://www.epa.gov/sites/production/files/2016-02/documents/chapter_1_draft_aug_2014.pdf; DEP, *Nonpoint Source Program Update*, 9 (2015), *available at* https://floridadep.gov/sites/default/files/NPS-ManagementPlan2015.pdf.

- Runoff from certain construction activities; and
- Runoff from industrial activities.[106]

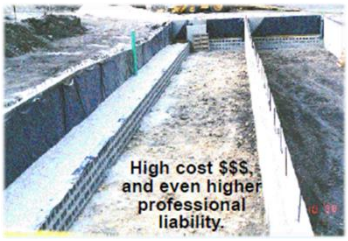
Florida's ERP Program includes regulation of activities that create stormwater runoff, as well as dredging and filling in wetlands and other surface waters.[107] ERPs are designed to prevent flooding, protect wetlands and other surface waters, and protect Florida's water quality from stormwater pollution.[108] The statewide ERP Program is implemented by DEP, the WMDs, and certain local governments. The ERP Applicant Handbook, incorporated by reference into DEP rules, provides guidance on DEP's ERP Program, including stormwater topics such as the design of stormwater management systems.[109]

DEP and the WMDs are authorized to require permits and impose reasonable conditions:
- To ensure that construction or alteration of stormwater management systems and related structures are consistent with applicable law and not harmful to water resources;[110] and
- For the maintenance or operation of such structures.[111]

DEP's stormwater rules are technology-based effluent limitations rather than water quality-based effluent limitations.[112] This means that stormwater rules rely on design criteria for BMPs to achieve a performance standard for pollution reduction, rather than specifying the amount of a specific pollutant that may be discharged to a waterbody and still ensure that the waterbody attains water quality standards.[113] The rules contain minimum stormwater treatment performance standards, which require design and performance criteria for new stormwater management systems to achieve at least 80 percent reduction of the average annual load of pollutants that

[106] *See generally* EPA, *NPDES Stormwater Program*, https://www.epa.gov/npdes/npdes-stormwater-program (last visited Dec. 2, 2019).
[107] DEP, *DEP 101: Environmental Resource Permitting*, https://floridadep.gov/comm/press-office/content/dep-101-environmental-resource-permitting (last visited Dec 2, 2019).
[108] South Florida Water Management District, *Environmental Resource Permits*, https://www.sfwmd.gov/doing-business-with-us/permits/environmental-resource-permits (last visited Dec. 2, 2019).
[109] Fla. Admin. Code R. 62-330.010(4); DEP and WMDs, *Environmental Resource Permit Applicant's Handbook Volume I (General and Environmental)*, 2-10 (June 1, 2018), *available at* https://www.swfwmd.state.fl.us/sites/default/files/medias/documents/Appliicant_Hanbook_I_-_Combined.pd_0.pdf; , *Environmental Resource Permit Applicant's Handbook Volume II, available at* https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/erp-stormwater (last visited Dec. 2, 2019).
[110] Section 373.413, F.S.; *see* s. 403.814(12), F.S.
[111] Section 373.416, F.S.
[112] DEP, *ERP Stormwater*, https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/erp-stormwater (last visited Nov. 8, 2019).
[113] See generally, EPA, National Pollutant Discharge Elimination System (NPDES), www.epa.gov/npdes/npdes-permit-limits (last visited Dec. 2, 2019).

"Filtered" Ponds



Underground Vaults

"Dry" Retention Ponds

"Wet" Detention Ponds

Underground Exfiltration Trenches

Pervious Pavement

would cause or contribute to violations of state water quality standards.[114] The standard is 95 percent reduction when applied to Outstanding Florida Waters. In 2007, an evaluation performed for DEP generally concluded that Florida's stormwater design criteria failed to consistently meet either the 80 percent or 95 percent target goals in DEP's rules.[115] The images shown here depict six major types of surface water management systems:[116]

DEP and the WMDs must require applicants to provide reasonable assurance that state water quality standards will not be violated.[117] If a stormwater management system is designed in accordance with the stormwater treatment requirements and criteria adopted by DEP or the WMDs, then the system design is presumed not to cause or contribute to violations of applicable state water quality standards.[118] If a stormwater management system is constructed, operated, and maintained for stormwater treatment in accordance with a valid permit or exemption, then the stormwater discharged from the system is presumed not to cause or contribute to violations of applicable state water quality standards.[119] If an applicant is unable to meet water quality standards because existing ambient water quality does not meet standards, DEP or a WMD must consider mitigation measures that cause a net improvement of the water quality in the water body that does not meet the standards.[120]

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[114] Fla. Admin. Code R. 62-40.432(2).
[115] Environmental Research & Design, Inc., *Evaluation of Current Stormwater Design Criteria Within the State of Florida*, 6-1 (2007), *available at* https://www.sfwmd.gov/sites/default/files/documents/sw%20treatment%20report-final71907.pdf. The report makes an exception for the St. John's River Water Management District's standards for on-line dry retention.
[116] Presentation to the Blue-Green Algae Task Force by Benjamin Melnik, Deputy Director of the Division of Water Resource Management, *Stormwater*, 12 (September 24, 2019) (on file with Committee on Environment and Natural Resources).
[117] Section 373.414(1), F.S.; *see* s. 373.403(11), F.S.; *see* Fla. Admin. Code Ch. 62-4, 62-302, 62-520, and 62-550.
[118] Section 373.4131(3)(b), F.S. Fla. Admin. Code R. 62-40.432(2); *see also* DEP, *ERP Stormwater*, https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/erp-stormwater (last visited Dec. 2, 2019) (stating that a key component of the stormwater rule is a "rebuttable presumption that discharges from a stormwater management system designed in accordance with the BMP design criteria will not cause harm to water resources").
[119] Section 373.4131(3)(c), F.S.
[120] Section 373.414(1)(b)3., F.S.

2010 Stormwater Rulemaking

From 2008 to 2010, DEP and the WMDs worked together on developing a statewide unified stormwater rule to protect Florida's surface waters from the effects of excessive nutrients in stormwater runoff.[121] A technical advisory committee was established. In 2010, DEP announced a series of workshops to present for public comment the statewide stormwater quality draft rule Chapter 62-347 of the Florida Administrative Code and an Applicant's Handbook.[122] The notice stated the goal of the rule was to "increase the level of nutrient treatment in stormwater discharges and provide statewide consistency by establishing revised stormwater quality treatment performance standards and best management practices design criteria."[123]

These rulemaking efforts produced a draft document called the "Environmental Resource Permit Stormwater Quality Applicant's Handbook: Design Requirements for Stormwater Treatment in Florida."[124] The 2010 draft handbook's stormwater quality permitting requirements:

- Provided for different stormwater treatment performance standards based on various classifications of water quality.[125]
- Included instructions for calculating a project's required nutrient load reduction based on comparing the predevelopment and post-development loadings.[126]
- Provided the required criteria for stormwater BMPs.
- Listed fifteen different types of stormwater treatment systems, including low impact design, pervious pavements, and stormwater harvesting.[127]

The new rule and revised handbook were expected to be adopted in 2011.[128] However, no such rules or revised handbook were ever adopted. While the draft Stormwater Quality Applicant's Handbook never went into effect, it can provide context for understanding what new rules on these topics may look like.

The Blue-Green Algae Task Force recommended that DEP revise and update stormwater design criteria and implement an effective inspection and monitoring program.[129]

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[121] South Florida Water Management District, *Quick Facts on the Statewide Unified Stormwater Rule*, *available at* https://www.sfwmd.gov/sites/default/files/documents/spl_stormwater_rule.pdf.
[122] Florida Administrative Register, Notices of Meetings, Workshops, and Public Hearings, *Notice of Rescheduling*, pg. 1885 (Apr. 23, 2010), *available at* https://www.flrules.org/Faw/FAWDocuments/FAWVOLUMEFOLDERS2010/3616/3616doc.pdf.
[123] *Id.*
[124] DEP and Water Management Districts, *March 2010 Draft, Environmental Resource Permit Stormwater Quality Applicant's Handbook, Design Requirements for Stormwater Treatment Systems in Florida* (2010), *available at* https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content2/roadway/drainage/files/stormwaterqualityapphb-draft.pdf?sfvrsn=579bf184_0.
[125] *Id.* at 6-7.
[126] *Id.* at 8-11.
[127] *Id.* at 3.
[128] Nicole C. Kibert, *Status of Low Impact Development in Florida and Legal Considerations for Operation and Maintenance of LID Systems*, FLORIDA BAR JOURNAL Vol. 85, No. 1 (2011), https://www.floridabar.org/the-florida-bar-journal/status-of-low-impact-development-in-florida-and-legal-considerations-for-operation-and-maintenance-of-lid-systems/ (last visited Nov. 14, 2019).
[129] DEP, *Blue-Green Algae Task Force Consensus Document #1* (Dec. 2, 2019), *available at* https://floridadep.gov/sites/default/files/Final%20Consensus%20%231_0.pdf.

Water Quality Monitoring

One of DEP's goals is to determine the quality of the state's surface and ground water resources. This goal is primarily accomplished through several water quality monitoring strategies that are administered through the Water Quality Assessment Program. Responsibilities of the program include: monitoring and assessing how water quality is changing over time; the overall water quality and impairment status of the state's water resources; and the effectiveness of water resource management, protection, and restoration programs.[130]

Within the Water Quality Assessment Program, DEP administers the Watershed Monitoring Program. This program is responsible for collecting reliable data through water samples from rivers, streams, lakes, canals, and wells around the state.[131] This information is used by DEP to determine which waters are impaired and what restoration efforts are needed.

The Blue-Green Algae Task Force recommended that science-based decision making and monitoring programs be enhanced, including the development of an expanded and more comprehensive statewide water quality monitoring strategy. Monitoring programs should focus on informing restoration project selection, implementation, and evaluation.[132]

Indian River Lagoon

The Indian River Lagoon (IRL) system is an estuary[133] that runs along 156 miles of Florida's east coast and borders Volusia, Brevard, Indian River, St. Lucie, and Martin counties.[134] The IRL system is composed of three main waterbodies: Mosquito Lagoon, Banana River, and the Indian River Lagoon.[135] Four BMAPs have been adopted for the IRL region.[136]

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.[137] The estimated economic value received from the IRL in 2014 was

[130] DEP, *Water Quality Assessment Program*, https://floridadep.gov/dear/water-quality-assessment (last visited Dec. 2, 2019).
[131] DEP, *Watershed Monitoring*, https://floridadep.gov/dear/watershed-monitoring-section (last visited Dec. 2, 2019).
[132] DEP, *Blue-Green Algae Task Force Consensus Document #1* (Oct. 11, 2019), *available at* https://floridadep.gov/sites/default/files/Final%20Consensus%20%231_0.pdf.
[133] 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 Dec. 2, 2019); NOAA, *What Is An Estuary?*, https://oceanservice.noaa.gov/facts/estuary.html (last visited Dec. 2, 2019).
[134] IRL National Estuary Program, *About the Indian River Lagoon*, http://www.irlcouncil.com/ (last visited Dec. 2, 2019).
[135] *Id*.
[136] 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; DEP, *Basin Management Action Plans (BMAPs)*, https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps (last visited Dec. 2, 2019).
[137] IRL National Estuary Program, *About the Indian River Lagoon*, http://www.irlcouncil.com/ (last visited Dec. 2, 2019).

approximately $7.6 billion.[138] Industry groups that are directly influenced by the IRL support nearly 72,000 jobs.[139]

The IRL ecosystem has been harmed by human activities in the region. Stormwater runoff from urban and agricultural areas, wastewater treatment facility discharges, canal discharges, septic systems, animal waste, and fertilizer applications have led to harmful levels of nutrients and sediments entering the lagoon.[140] These pollutants create cloudy conditions, feed algal blooms, and lead to muck accumulation, all of which negatively impact the seagrass that provides habitat for much of the IRL's marine life.[141]

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.[142]

Rural Areas of Opportunity

A rural area of opportunity (RAO) is a rural community or region of rural communities that has been adversely affected by an extraordinary economic event, severe or chronic distress, or a natural disaster or that presents a unique economic development opportunity of regional impact.[143] By executive order, the Governor may designate up to three RAOs, establishing each region as a priority assignment for Rural Economic Development Initiative (REDI) agencies. The Governor can waive the criteria, requirements, or any similar provisions of any state economic development incentive for projects in a RAO.[144]

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[138] 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.

[139] *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.

[140] Tetra Tech, Inc. & Closewaters, LLC, *Draft Save Our Indian River Lagoon Project Plan 2019 Update for Brevard County, Florida, xii (Mar. 2019), available at https://www.dropbox.com/s/j9pxd59mt1baf7q/Revised%202019%20Save%20Our%20Indian%20River%20Lagoon%20Project%20Plan%20Update%20032519.pdf?dl=0*.

[141] *Id*.

[142] Section 20.06(2), F.S.

[143] Section 288.0656(2)(d), F.S.

[144] Section 288.0656(7), F.S.

The currently designated RAOs are: [145]

- Northwestern RAO: Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, Liberty, Wakulla, and Washington counties, and part of Walton County.
- South Central RAO: DeSoto, Glades, Hardee, Hendry, Highlands, and Okeechobee counties, and the cities of Pahokee, Belle Glade, South Bay (Palm Beach County), and Immokalee (Collier County).
- North Central RAO: Baker, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Jefferson, Lafayette, Levy, Madison, Putnam, Suwannee, Taylor, and Union counties.

Statement of Estimated Regulatory Cost

If a proposed agency rule will have an adverse impact on small business or is likely to increase directly or indirectly regulatory costs in excess of $200,000 aggregated within one year after implementation, an agency must prepare a statement of estimated regulatory costs (SERC).[146] The SERC must include an economic analysis projecting a proposed rule's adverse effect on specified aspects of the state's economy or an increase in regulatory costs. If the SERC shows that the adverse impact or regulatory costs of the proposed rule exceeds $1 million in the aggregate within five years after implementation, then the proposed rule must be submitted to the Legislature for ratification and may not take effect until it is ratified by the Legislature.[147]

Biosolids

Approximately two-thirds of Florida's population is served by around 2,000 domestic wastewater facilities permitted by DEP.[148] When domestic wastewater is treated, solid, semisolid, or liquid residue known as biosolids[149] accumulates in the wastewater treatment plant and must be removed periodically to keep the plant operating properly.[150] Biosolids also include products and treated material from biosolids treatment facilities and septage management facilities regulated by DEP.[151] The collected residue is high in organic content and contains moderate amounts of nutrients.[152]

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[145] Department of Economic Opportunity, *Rural Areas of Opportunity*, http://www.floridajobs.org/community-planning-and-development/rural-community-programs/rural-areas-of-opportunity (last visited Dec. 2, 2019).
[146] Section 120.541, F.S.
[147] *Id*.
[148] 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 Dec. 9, 2019).
[149] Section 373.4595, F.S. Biosolids are the solid, semisolid, or liquid residue generated during the treatment of domestic wastewater in a domestic wastewater treatment facility and include products and treated material from biosolids treatment facilities and septage management facilities. The term does not include the treated effluent or reclaimed water from a domestic wastewater treatment facility, solids removed from pump stations and lift stations, screenings and grit removed from the preliminary treatment components of domestic wastewater treatment facilities, or ash generated during the incineration of biosolids.
[150] DEP, *Domestic Wastewater Biosolids*, https://floridadep.gov/water/domestic-wastewater/content/domestic-wastewater-biosolids (last visited Dec. 9, 2019).
[151] Fla. Admin. Code R. 62-640.200(6).
[152] *Id*.

DEP has stated that wastewater treatment facilities produce about 340,000 dry tons of biosolids each year.[153] Biosolids can be disposed of in several ways: transfer to another facility, placement in a landfill, distribution and marketing as fertilizer, incineration, bioenergy, and land application to pasture or agricultural lands.[154] About one-third of the total amount of biosolids produced is used for land application[155] and is subject to regulatory requirements established by DEP to protect public health and the environment.[156]

Land application is the use of biosolids at a permitted site to provide nutrients or organic matter to the soil, such as agricultural land, golf courses, forests, parks, or reclamation sites. Biosolids are applied in accordance with restrictions based on crop nutrient needs, phosphorus limits in the area, and soil fertility.[157] Biosolids contain macronutrients (such as nitrogen and phosphorus) and micronutrients (such as copper, iron, and manganese) that are utilized by crops. The application of these nutrient-rich biosolids increases the organic content of the soil, fostering more productive plant growth.[158] To prevent odor or the contamination of soil, crops, livestock, and humans, land application sites must meet site management requirements such as site slopes, setbacks, and proximity to groundwater restrictions.[159] There are approximately 140 permitted land application sites in Florida, with waste haulers being the most common site permittees.[160]

[153] DEP, *Presentation to Senate Committee on Environment and Natural Resources*, 40-62 (Nov. 13, 2019) *available at* http://www.flsenate.gov/Committees/Show/EN/MeetingPacket/4733/8393_MeetingPacket_4733.13.19.pdf; DEP Technical Advisory Committee, *Biosolids Use and Regulations in Florida Presentation*, 5 (Sept. 2018), *available at* https://floridadep.gov/sites/default/files/Biosolids101-TAC-090518.pdf (last visited Dec. 9, 2019).
[154] *Id*. at 4.
[155] *Id*. at 5.
[156] Fla. Admin. Code R. 62-640.
[157] DEP Technical Advisory Committee, *Biosolids Use and Regulations in Florida*, 8 (Sept. 2018), *available at* https://floridadep.gov/sites/default/files/Biosolids101-TAC-090518.pdf (last visited Dec. 9, 2019); *see also*, United States EPA, A Plain English Guide to the EPA Part 503 Biosolids Rule, 26 (Sept. 1994), *available at* https://www.epa.gov/sites/production/files/2018-12/documents/plain-english-guide-part503-biosolids-rule.pdf (last visited Dec.. 9, 2019).
[158] *Id.* at 20.
[159] *Id*. at 9.
[160] DEP, *Presentation to Senate Committee on Environment and Natural Resources*, 40-62 (Nov. 13, 2019) *available at* http://www.flsenate.gov/Committees/Show/EN/MeetingPacket/4733/8393_MeetingPacket_4733.13.19.pdf; DEP Technical Advisory Committee, *Biosolids Use and Regulations in Florida Presentation*, 20 (Sept. 2018), *available at* https://floridadep.gov/sites/default/files/Biosolids101-TAC-090518.pdf (last visited Dec. 9, 2019). Wastewater treatment facilities commonly contract with waste haulers instead of applying the biosolids themselves.

Regulation of Biosolids by DEP

The DEP regulates three classes of biosolids for beneficial use.

- Class B - minimum level of treatment;
- Class A - intermediate level of treatment; and
- Class AA - highest level of treatment.[161]

The DEP categorizes the classes based on treatment and quality. Treatment of biosolids must:

- Reduce or completely eliminate pathogens;
- Reduce the attractiveness of the biosolids for pests (such as insects and rodents); and
- Reduce the amount of toxic metals in the biosolids.[162]

Class AA biosolids can be distributed and marketed as fertilizer. Because they are the highest quality, they are not subject to the same regulations as Class A and Class B biosolids and are exempt from nutrient restrictions.[163] Typically, Class B biosolids are used in land application.[164]

[161] *Id*. at 6.
[162] *Id*. at 7.
[163] *Id*. at 8.
[164] *Id.* at 6.

Biosolids are regulated under Rule 62-640 of the Florida Administrative Code. The rules provide minimum requirements, including monitoring and reporting requirements, for the treatment, management, use, and disposal of biosolids. The rules are applicable to wastewater treatment facilities, appliers, and distributors[165] and include permit requirements for both treatment facilities and biosolids application sites.[166]

Each permit application for a biosolids application site must include a site-specific nutrient management plan (NMP) that establishes the specific rates of application and procedures to apply biosolids to land.[167] Biosolids may only be applied to land application sites that are permitted by DEP and have a valid NMP.[168] Biosolids must be applied at rates established in accordance with the nutrient management plan and may be applied to a land application site only if all concentrations of minerals do not exceed ceiling and cumulative concentrations determined by rule.[169] According to the St. Johns Water Management District, application rates of biosolids are determined by crop nitrogen demand, which can often result in the overapplication of phosphorus to the soil and can increase the risk of nutrient runoff into nearby surface waters.[170]

Once a facility or site is permitted, it is subject to monitoring, record-keeping, reporting, and notification requirements.[171] The requirements are site-specific and can be increased or reduced by DEP based on the quality or quantity of wastewater or biosolids treated; historical variations in biosolids characteristics; industrial wastewater or sludge contributions to the facility; the use, land application, or disposal of the biosolids; the water quality of surface and ground water and the hydrogeology of the area; wastewater or biosolids treatment processes; and the compliance history of the facility or application site.[172]

State Bans on the Land Application of Biosolids

Section 373.4595, F.S., sets out the statutory guidelines for the Northern Everglades and Estuaries Protection Program. This statute is designed to protect and promote the hydrology of Lake Okeechobee, and the Caloosahatchee and St. Lucie Rivers and their estuaries. As part of those protections, the Legislature banned the disposal of domestic wastewater biosolids within the Lake Okeechobee, Caloosahatchee River, and St. Lucie River watersheds unless the applicant can affirmatively demonstrate that the nutrients in the biosolids will not add to nutrient loadings in the watershed.[173] The prohibition against land application in these watersheds does not apply to Class AA biosolids that are distributed as fertilizer products in accordance with Rule 62-640.850 of the Florida Administrative Code.[174]

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[165] Fla. Admin. Code R. 62-640.100.
[166] Fla. Admin. Code R. 62-640.300.
[167] Fla. Admin. Code R. 62-640.500.
[168] *Id*.
[169] Fla. Admin. Code R. 62-640.700.
[170] Victoria R. Hoge, Environmental Scientist IV, St. Johns River Water Management District, *Developing a Biosolids Database for Watershed Modeling Efforts*, *abstract available at* http://archives.waterinstitute.ufl.edu/symposium2018/abstract_detail.asp?AssignmentID=1719 (last visited Mar. 8, 2019).
[171] Fla. Admin. Code R. 62-640.650.
[172] *Id*.
[173] Chapter 2016-1, Laws of Florida; *see* s. 373.4595, F.S.
[174] *Id*.

The land application of Class A and Class B biosolids is also prohibited within priority focus areas in effect for Outstanding Florida Springs if the land application is not in accordance with a NMP that has been approved by DEP.[175] The NMP must establish the rate at which all biosolids, soil amendments, and nutrient sources at the land application site can be applied to the land for crop production while minimizing the amount of pollutants and nutrients discharged into groundwater and waters of the states.[176]

Local Regulation of Biosolids

The Indian River County Code addresses land application of biosolids by providing criteria for designated setbacks, reporting requirements, and required approval. In July 2018, the Indian River County Commission voted for a six-month moratorium on the land application of Class B biosolids on all properties within the unincorporated areas of the county.[177] The ordinance also directs the County Administrator to coordinate with DEP on a study to report the findings and recommendations concerning Class B biosolids land application activities and potential adverse effects.[178] The County Commission voted in January 2019 to extend the moratorium for an additional six months.[179]

The City Council of Fellsmere adopted a similar moratorium, Ordinance 2018-06, in August 2018, authorizing a temporary moratorium for 180 days or until a comprehensive review of the impact on the city's ecosystem is completed.[180] In January 2019, the ordinance was extended for an additional 180 days.[181]

The Treasure Coast Regional Planning Council held a Regional Biosolids Symposium in June 2018, where regional representatives and stakeholders discussed biosolids and alternative techniques for disposal.[182] At its meeting in July, the Treasure Coast Regional Planning Council adopted a resolution encouraging state and local governments to prioritize the reduction and eventual elimination of the land application of human wastewater biosolids.[183] It also encouraged the state to establish a Pilot Projects Program to incentivize local utilities to implement new wastewater treatment technologies that would allow more efficient use of biosolids.[184]

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[175] Section 373.811(4), F.S.
[176] *Id*.
[177] Indian River County Commission Ordinance 18-2020 (Jul. 17, 2018), *available at* http://ircgov.granicus.com/player/clip/183?view_id=1&meta_id=64650 (last visited Dec. 9, 2019).
[178] *Id*.
[179] Indian River County Commission Ordinance 18-2642 (Jan. 14, 2019), *available at* http://ircgov.granicus.com/player/clip/204?view_id=1&meta_id=77302 (last visited Dec. 9, 2019).
[180] Fellsmere City Council Meeting, *Agenda* (Aug. 16, 2018), *available at* https://www.cityoffellsmere.org/sites/default/files/fileattachments/city_council/meeting/8301/co20180816agenda.pdf.
[181] Fellsmere City Council Meeting, *Agenda* (Feb. 7, 2019), *available at* https://www.cityoffellsmere.org/sites/default/files/fileattachments/city_council/meeting/14391/co20190221agenda.pdf.
[182] Treasure Coast Regional Planning Council Regional Biosolids Symposium, *Charting the Future of Biosolids Management Executive Summary* (Jun. 18, 2018), *available at* http://www.tcrpc.org/announcements/Biosolids/summit%20summary.pdf.
[183] Treasure Coast Regional Planning Council Resolution 18-03 (Jul. 20, 2018), *available at* http://www.flregionalcouncils.org/wp-content/uploads/2019/01/Treasure-Coast-Resolution-No.-18-03.pdf.
[184] *Id*.

Rule Development

In 2018, the DEP created a Biosolids Technical Advisory Committee (TAC) to establish an understanding of potential nutrient impacts of the land application of biosolids, evaluate current management practices, and explore opportunities to better protect Florida's water resources. The TAC members represent various stakeholders, including environmental and agricultural industry experts, large and small utilities, waste haulers, consultants, and academics.[185]

The TAC convened on four occasions from September 2018 to January 2019 and discussed the current options for biosolids management in the state, ways to manage biosolids to improve the protection of water resources, and research needs to build upon and improve biosolids management.[186]

Based on recommendations of the TAC and public input, DEP published a draft rule on October 29, 2019.[187] Key proposals in the draft rule include:

- A prohibition on the land application of biosolids where the seasonal high water table is within 15 cm of the soil surface or 15 cm of the intended depth of biosolids placement. The existing rule requires a soil depth of two feet between the depth of biosolids placement and the water table level at the time the Class A or Class B biosolids are applied to the soil.
- A requirement that land application must be done in accordance with applicable BMAPs.
- Definitions for "capacity index," "percent water extractable phosphorus," and "seasonal high water table."
- More stringent requirements must be provided in the Nutrient Management Plan.
- All biosolids sites must enroll in a DACS BMP Program.
- All biosolids applications are considered projects of heightened public concern/interest,[188] meaning that a permit applicant must publish notice of their application one time only within fourteen days after a complete application is filed.[189]
- Increased monitoring for surface and groundwater.
- The requirement measures to be taken to prevent leaching of nutrients for the storage of biosolids.
- Existing facilities must be in compliance with the new rule within three years of the adoption date.

This biosolids rule required a SERC that exceeds the threshold to trigger the requirement for legislative ratification.[190] The SERC makes the following statements:

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[185] The seven members of TAC included two academic representatives from the University of Florida, two representatives of small and large utilities, and one representative each for environmental interests, agricultural interests, and waste haulers.
[186] DEP, *DEP Biosolids Technical Advisory Committee*, https://floridadep.gov/water/domestic-wastewater/content/dep-biosolids-technical-advisory-committee (last visited Mar. 6, 2019).
[187] Florida Department of State, Notice of Proposed Rule: Rule No.: 62-640.100, 62-640.200, 62-640.210, 62-640.300, 62-640.500, 62-640.600, 62-640.650, 62-640.700, 62-640.800, 62-640.850, 62-640.880 (Oct. 29, 2019), https://www.flrules.org/gateway/View_Notice.asp?id=22546212 (last visited Dec. 5, 2019).
[188] Note: the draft rule uses the phrase "public interest" but the rule crossreferenced in the draft rule uses the phrase "public concern."
[189] Fla. Admin. Code R. 62-110.106(6).
[190] DEP, *Statement of Estimated Regulatory Costs (SERC), available at* https://content.govdelivery.com/attachments/FLDEP/2019/10/29/file_attachments/1313532/62-640%20SERC.pdf .

The revised rule may significantly reduce biosolids land application rates (the amount applied per acre on an annual basis) by an estimated 75%. In 2018, just under 90,000 dry tons of Class B biosolids were applied to biosolids land application sites with about 84,000 acres of the currently permitted 100,000 acres in Florida. Reduced land application rates would necessitate the permitting about 4 to 10 times more land to accommodate the current quantity of land applied Class B biosolids.

As haulers have already permitted land application sites closer to the domestic wastewater facilities that generate biosolids, any additional sites are expected to be at greater distances from these facilities. This could result in longer hauling distances. Additionally, some existing sites may cease land application completely, either because the site may not be suitable for land application or because the landowner may not want to subject their property to ground water or surface water quality monitoring. The additional site monitoring requirements for ground water and surface water will also increase operational costs, so some biosolids site permittees, especially for smaller sites, may choose to cease operations. Under the proposed rule, some portion of currently land-applied Class B biosolids are expected to then be disposed of in landfills or be converted to Class AA biosolids. The reduction in land application rates, loss of land application sites, and shift away from land application could result in:
• Loss of biosolids hauling contracts.
• Loss of jobs with biosolids hauling companies.
• Loss of grass production and income for landowners.
• Increased operational expenses for biosolids haulers, and;
• Loss of cost savings and production for cattle ranchers and hay farmers.

Under the revised rule, biosolids land application rates will drop by an average of 75%. Some farmers indicate an economic value of about $60 per acre in fertilizer savings through biosolids land application. In 2018, approximately 84,000 acres were utilized for the land application of biosolids, which would represent a current fertilizer cost savings of approximately $5,040,000. This would be a loss of $3,780,000 in cost savings annually if 75% less biosolids can be applied per acre.[191]

The SERC includes the following statewide estimates:
- Capital costs for new permitting and land application sites of $10 million;
- Recurring costs for additional sites and transportation of wet biosolids of at least $31 million; and
- Additional monitoring costs of $1 million.[192]

DEP expects more biosolids to be converted to class AA biosolids/fertilizer. They estimate the capital cost for additional class AA biosolids projects will be between $300-$400 million.[193]

[191] *Id*.
[192] *Id*.
[193] *Id*.

DEP is currently reviewing lower cost regulatory alternatives that have been submitted.[194] The next step will be a hearing before the Environmental Regulation Commission and adoption of the rule. Following rule adoption, legislative ratification is required.[195]

III. Effect of Proposed Changes:

The bill provides a series of whereas clauses related to water quality issues the state is seeking to resolve.

Section 1 titles the bill the "Clean Waterways Act."

Section 2 takes the following steps toward shifting regulation of onsite sewage treatment and disposal systems (OSTDSs) from the Department of Health (DOH) to the Department of Environmental Protection (DEP):

- By July 1, 2020, DOH must provide a report to the Governor and Legislature detailing the following information regarding OSTDSs:
  - The average number of permits issued each year;
  - The number of department employees conducting work on or related to the program each year; and
  - The program's costs and expenditures, including, but not limited to, salaries and benefits, equipment costs, and contracting costs.
- By December 31, 2020, DOH and DEP must submit recommendations to the Governor and Legislature regarding the transfer of the Onsite Sewage Program from DOH to DEP. The recommendations must address all aspects of the transfer, including the continued role of the county health departments in the permitting, inspection, data management, and tracking of onsite sewage treatment and disposal systems under the direction of DEP.
- By June 30, 2021, DOH and DEP must enter into an interagency agreement that must address all agency cooperation for a period not less than 5 years after the transfer, including:
  - The continued role of the county health departments in the permitting, inspection, data management, and tracking of OSTDSs under the direction of DEP.
  - The appropriate proportionate number of administrative positions, and their related funding levels and sources and assigned property, to be transferred from DOH to DEP.
  - The development of a recommended plan to address the transfer or shared use of facilities used or owned by DOH.
  - Any operating budget adjustments that are necessary to implement the requirements of the bill. The bill details how operating budget adjustments will be made. The appropriate substantive committees of the Senate and the House of Representatives will be notified of the proposed revisions to ensure their consistency with legislative policy and intent.
- Effective July 1, 2021, the regulation of OSTDSs relating to the Onsite Sewage Program in DOH is transferred by a type two transfer to DEP. Transferred employees will retain their leave.

[194] Email from Justin Wolfe, General Counsel, DEP, RE: Biosolids Rule (Dec. 2. 2019)(on file with the Environment and Natural Resources Committee).
[195] Section 120.541(3), F.S.

Section 3 amends s. 373.4131, F.S., relating to statewide environmental resource permitting (ERPs). The bill requires DEP to train its staff on coordinating field inspections of stormwater structural controls, such as stormwater retention or detention ponds.

By January 1, 2021:
- DEP and the water management districts (WMDs) must initiate rulemaking to update the stormwater design and operation regulations using the most recent scientific information available; and
- DEP must evaluate inspection data relating to compliance by those entities that self-certify stormwater ERPs and must provide the Legislature with recommendations for improvements to the self-certification program.

Note: More stringent stormwater rules would likely exceed the regulatory cost threshold of $1 million in the aggregate within five years after implementation; therefore, the proposed rule may have to be submitted to the Legislature for ratification and may not take effect until it is ratified by the Legislature.[196]

Section 4 amends s. 381.0065, F.S., relating to OSDTS regulation, effective July 1, 2021, to coincide with DEP's role as the regulating entity for OSTDSs.

The bill requires DEP to adopt rules to locate OSTDSs, including establishing setback distances, to prevent groundwater contamination and surface water contamination and to preserve the public health. The rulemaking process must be completed by July 1, 2022. The rules must consider conventional and advanced OSTDS designs, impaired or degraded water bodies, wastewater and drinking water infrastructure, potable water sources, nonpotable wells, stormwater infrastructure, the OSTDS remediation plans developed as part of the basin management action plans (BMAPs), nutrient pollution, and the recommendations of the OSTDS technical advisory committee created by the bill.

Upon adoption of these rules, the rules will supersede existing statutory revisions relating to setbacks. DEP must report the date of adoption of the rules to the Division of Law Revision for incorporation into the statutes.

The bill deletes language that is inconsistent with these provisions.

Note: New OSTDS rules would likely exceed the regulatory cost threshold of $1 million in the aggregate within five years after implementation; therefore, the proposed rule may have to be submitted to the Legislature for ratification and may not take effect until it is ratified by the Legislature.[197]

Section 5 creates s. 381.00652, F.S., to create an OSTDS technical advisory committee (TAC) within DEP.

The responsibilities of the TAC are to:

[196] *Id.*
[197] *Id.*

- Provide recommendations to increase the availability in the marketplace of nutrient-removing OSTDSs, including systems that are cost-effective, low-maintenance, and reliable.
- Consider and recommend regulatory options, such as fast-track approval, prequalification, or expedited permitting, to facilitate the introduction and use of nutrient-removing OSTDSs that have been reviewed and approved by a national agency or organization, such as the American National Standards Institute 245 systems approved by the National Sanitation Foundation International (this may not be the correct title, see Related Issues).
- Provide recommendations for appropriate setback distances for OSTDSs from surface water, groundwater, and wells.

DEP must use existing and available resources to administer and support the activities of the TAC.

By August 1, 2021, DEP, in consultation with DOH, will appoint nine members to the TAC:
- A professional engineer.
- A septic tank contractor.
- A representative from the home building industry.
- A representative from the real estate industry.
- A representative from the OSTDS industry.
- A representative from local government.
- Two representatives from the environmental community.
- A representative of the scientific and technical community who has substantial expertise in the areas of the fate and transport of water pollutants, toxicology, epidemiology, geology, biology, or environmental sciences.

Members will serve without compensation and are not entitled to reimbursement for per diem or travel expenses.

By January 1, 2022, the TAC will submit its recommendations to the Governor and Legislature.

The TAC is repealed on August 15, 2022.

Section 6 repeals DOH's technical review and advisory panel, effective July 1, 2021.

Section 7 amends s. 403.061, F.S., which sets out DEP's powers and duties to adopt rules to reasonably limit, reduce, and eliminate leaks, seepages, or inputs into the underground pipes of wastewater collection systems.

The bill authorizes DEP to require public utilities or their affiliated companies that hold or are seeking a wastewater discharge permit to file reports and other data regarding transactions or allocations of common costs among the utility or entity and such affiliated companies. DEP may require such reports or other data necessary to ensure a permitted entity is reporting expenditures on pollution mitigation and prevention, including, but not limited to, the prevention of sanitary sewer overflows, collection and transmission system pipe leakages, and inflow and infiltration. DEP is required to adopt rules to implement this subsection.

Note: Such rules would likely exceed the regulatory cost threshold of $1 million in the aggregate within five years after implementation; therefore, the proposed rule may have to be submitted to the Legislature for ratification and may not take effect until it is ratified by the Legislature.[198]

Section 8 creates s. 403.0616, F.S., to establish a real-time water quality monitoring program within DEP, subject to appropriation. The program's purpose is to assist in the restoration, preservation, and enhancement of impaired waterbodies and coastal resources. DEP is encouraged to form public-private partnerships with established scientific entities with existing, proven real-time water quality monitoring equipment and experience in deploying such equipment.

Section 9 amends s. 403.067(7), F.S., relating to basin management action plans (BMAPs), to set out parameters for an OSTDS remediation plan and a wastewater treatment plan. It prohibits DEP from requiring a higher cost option for a wastewater project within a BMAP if it achieves the same nutrient load reduction as a lower-cost option. It also makes revisions relating to agricultural best management practices (BMPs).

If DEP identifies domestic wastewater facilities or OSTDSs as contributors of at least 20 percent of point source or nonpoint source nutrient pollution or if DEP determines that remediation is necessary to achieve the total maximum daily load (TMDL), the BMAP for a nutrient TMDL must create a wastewater treatment plan and/or an OSTDS remediation plan.

A wastewater treatment plan must address domestic wastewater and be developed by each local government in cooperation with DEP, the WMD, and the public and private domestic wastewater facilities within the jurisdiction of the local government. The wastewater treatment plan must:

- Provide for construction, expansion, or upgrades necessary to achieve the TMDL requirements applicable to the domestic wastewater facility.
- Include: the permitted capacity in gallons per day for the domestic wastewater facility; the average nutrient concentration and the estimated average nutrient load of the domestic wastewater; a timeline of the dates by which the construction of any facility improvements will begin and be completed and the date by which operations of the improved facility will begin; the estimated cost of the improvements; and the identity of responsible parties.

The wastewater treatment plan must be adopted as part of the BMAP no later than July 1, 2025. A local government that does not have a domestic wastewater treatment facility in its jurisdiction is not required to develop a wastewater treatment plan unless there is a demonstrated need to establish a domestic wastewater treatment facility within its jurisdiction to improve water quality necessary to achieve a TMDL.

An OSTDS remediation plan must be developed by each local government in cooperation with DEP, the Department of Health, WMDs, and public and private domestic wastewater facilities. The OSTDS remediation plan must identify cost-effective and financially feasible projects necessary to achieve the nutrient load reductions required for OSTDSs. To identify cost-effective and financially feasible projects for remediation of OSTDSs, the local government shall:

- Include an inventory of OSTDSs based on the best information available;

[198] *Id.*

- Identify OSTDSs that would be eliminated through connection to existing or future central wastewater infrastructure, that would be replaced with or upgraded to advanced nutrient-removal systems, or that would remain on conventional OSTDSs;
- Estimate the costs of potential OSTDS connections, upgrades, or replacements; and
- Identify deadlines and interim milestones for the planning, design, and construction of projects.

DEP must adopt the OSTDS remediation plan as part of the BMAP no later than July 1, 2025, or as required by existing law for Outstanding Florida Springs.

The bill requires the Department of Agriculture and Consumer Services (DACS) to collect fertilization and nutrient records from each agricultural producer enrolled in BMPs that address nutrients. These records must include rates of application in pounds per acre; application method; fertilizer type or source; acres covered; formulation of the applied fertilizer, including nitrogen and phosphorus content; location; grade; and dates applied. By each March 1, DACS must provide the previous year's records to DEP.

At least every 2 years, the DACS must perform on-site inspections of each agricultural producer that enrolls in a BMP to ensure that such practice is being properly implemented.

The bill authorizes DACS, the University of Florida Institute of Food and Agricultural Sciences, and other state universities and Florida College System institutions with agricultural research programs to annually develop research plans and legislative budget requests to:
- Evaluate and suggest enhancements to the existing adopted BMPs to reduce nutrients;
- Develop new BMPs that, if proven effective, DACS may adopt by rule; and
- Develop agricultural nutrient reduction projects that willing participants could implement on a site-specific, cooperative basis, in addition to BMPs. DEP may consider these projects for inclusion in a BMAP. These nutrient reduction projects must reduce the nutrient impacts from agricultural operations on water quality when evaluated with the projects and management strategies currently included in the BMAP.

To be considered for funding, the University of Florida Institute of Food and Agricultural Sciences and other state universities and Florida College System institutions that have agricultural research programs must submit such plans to DEP and DACS by August 1 of each year.

Section 10 creates s. 403.0673, F.S., a wastewater grant program within DEP. Subject to appropriation, DEP may provide grants for projects that will reduce excess nutrient pollution for:
- Projects to retrofit OSTDSs to upgrade them to nutrient-reducing OSTDSs.
- Projects to construct, upgrade, or expand facilities to provide advanced waste treatment.
- Projects to connect OSTDSs to central sewer facilities.

In allocating such funds, priority must be given to projects that subsidize the connection of OSTDSs to a wastewater treatment plant. In determining priorities, DEP must consider:
- The estimated reduction in nutrient load per project;
- Project readiness;

- Cost-effectiveness of the project;
- The overall environmental benefit of a project;
- The location of a project within the plan area;
- The availability of local matching funds; and
- Projected water savings or quantity improvements associated with a project.

Each grant must require a minimum of a 50 percent local match of funds. However, DEP may waive, in whole or in part, this consideration of the local contribution for proposed projects within an area designated as a rural area of opportunity. DEP and the WMDs will coordinate to identify grant recipients in each district.

Beginning January 1, 2021, and each January 1 thereafter, DEP must submit a report regarding the projects funded by the grant program to the Governor and Legislature.

Section 11 creates s. 403.0855, F.S., on biosolids management. The bill provides legislative findings, requires DEP to adopt rules for biosolids management, and exempts such rules from legislative ratification if they are adopted prior to the 2021 legislative session.

Section 12 amends s. 403.086, F.S., relating to sewage disposal facilities.

The bill prohibits facilities for sanitary sewage disposal from disposing of waste into Indian River Lagoon or its tributaries without providing for advanced waste treatment, beginning July 1, 2025.

The bill requires facilities for sanitary sewage disposal to have a power outage contingency plan that mitigates the impacts of power outages on the utility's collection system and pump stations.

All facilities for sanitary sewage that control a collection or transmission system of pipes and pumps to collect and transmit wastewater from domestic or industrial sources to the facility must take steps to prevent sanitary sewer overflows or underground pipe leaks and ensure that collected waste water reaches the facility for appropriate treatment. Facilities must use inflow and infiltration studies and leakage surveys to develop pipe assessment, repair, and replacement action plans that comply with DEP rule to limit, reduce, and eliminate leaks, seepages, or inputs into wastewater treatment systems' underground pipes. These facility action plans must be reported to DEP. The facility report must include information regarding the annual expenditures dedicated to the inflow and infiltration studies and replacement action plans required herein, as well as expenditures dedicated to pipe assessment, repair, and replacement.

DEP must adopt rules regarding the implementation of inflow and infiltration studies and leakage surveys.

Substantial compliance with the action plan described above is evidence in mitigation for the purposes of assessing certain penalties.

Note: Such rules would likely exceed the regulatory cost threshold of $1 million in the aggregate within five years after implementation; therefore, the proposed rule may have to be submitted to the Legislature for ratification and may not take effect until it is ratified by the Legislature.[199]

Section 13 amends s. 403.087, F.S., to require DEP to issue operating permits for up to 10 years (rather than up to 5) for facilities regulated under the National Pollutant Discharge Elimination System Program if the facility is meeting the stated goals in the action plan relating to the prevention of sanitary sewer overflows or underground pipe leaks.

Section 14 amends s. 403.088, F.S., relating to water pollution operation permits. The bill requires the permit to include a deliberate, proactive approach to investigating or surveying a significant percentage of the wastewater collection system throughout the duration of the permit to determine pipe integrity, which must be accomplished in an economically feasible manner.

The permittee must submit an annual report to DEP, which details facility revenues and expenditures in a manner prescribed by DEP rule. The report must detail any deviation from annual expenditures related to inflow and infiltration studies; model plans for pipe assessment, repair, and replacement; and pipe assessment, repair, and replacement.

Substantial compliance with the requirements above is evidence in mitigation for the purposes of assessing penalties.

No later than March 1 of each year, DEP must submit a report to the Governor and Legislature which identifies all wastewater utilities that experienced a sanitary sewer overflow in the preceding calendar year. The report must identify the utility name, operator, number of overflows, and total quantity of discharge released. DEP will include with this report the annual report required of the utility relating to sanitary sewer overflows and underground pipe leaks for each utility that experienced an overflow.

Note: Rules required to implement this section would likely exceed the regulatory cost threshold of $1 million in the aggregate within five years after implementation; therefore, the proposed rule may have to be submitted to the Legislature for ratification and may not take effect until it is ratified by the Legislature.[200]

Section 15 amends s. 403.0891, F.S., to require DEP and the Department of Economic Opportunity to develop model ordinances that target nutrient reduction practices and use green infrastructure.

Section 16 amends s. 403.121, F.S., to add "failure to survey an adequate portion of the wastewater collection system and take steps to reduce sanitary sewer overflows, pipe leaks, and inflow and infiltration" to DEP's penalty schedule. Such a violation will result in a $2,000 penalty.

[199] *Id.*
[200] *Id.*

Section 17 amends s. 403.885, F.S., relating to the Water Projects Grant Program, to require DEP to prioritize grant proposals submitted by a domestic wastewater utility in accordance with the Clean Water Revolving Loan Fund, which implements the requirements of the bill relating to the prevention of sanitary sewer overflows and underground pipe leaks.

Section 18 provides a statement that this act fulfills an important state interest.

Sections 19-43 make conforming changes.

Section 44 directs the Division of Law Revision to replace certain language in the bill with the date DEP adopts certain rules on OSTDSs as required by the bill.

Section 45 states that except as otherwise expressly provided in the bill, the act will take effect July 1, 2021.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

The county/municipality mandates provision of Art. VII, section 18, of the Florida Constitution may apply to this bill because it requires local governments to develop OSTDS remediation plans and wastewater treatment plans. If the bill does qualify as a mandate, the law must fulfill an important state interest and final passage must be approved by two-thirds of the membership of each house of the Legislature.

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:

The following discussion identifies aspects of the bill that may cause a negative fiscal impact because they implement more stringent environmental requirements. However, it is worth noting that there are costs associated with failing to address pollution issues. Cleanup costs, human health impacts, ecosystem deterioration, loss of tourism, and decreased real estate values are some key examples of possible costs associated with pollution.

Updating stormwater rules and adopting new OSTDS and wastewater rules would likely cause a negative fiscal impact to the private sector. However, if that impact exceeds $1 million over 5 years, the rules will require legislative ratification, which means they will not go into effect without additional legislation.

The additional requirements of OSTDS remediation plans and wastewater treatment plans may cause a negative fiscal impact to the private sector entities within BMAPs that must address OSTDS or wastewater pollution to meet the TMDL.

Private wastewater utilities that discharge into Indian River Lagoon may have costs associated to conversion to advanced waste treatment.

Utilities that fail to survey an adequate portion of the wastewater collection system and take steps to reduce sanitary sewer overflows, pipe leaks, and inflow and infiltration will be subject to a $2,000 fine for each violation.

C. Government Sector Impact:

DEP will incur additional costs in developing multiple new regulatory programs, updating BMAPs, and developing, submitting, and reviewing new reports.

The additional requirements of OSTDS remediation plans and wastewater treatment plans may cause a negative fiscal impact to local governments that must address OSTDS or wastewater pollution to meet their TMDL. However, there is flexibility in how these plans are developed, which makes these costs speculative and subject to the development of each specific OSTDS remediation plan or wastewater treatment plan.

The implementation of a real-time water quality monitoring program will have a negative fiscal impact on DEP, but this provision is subject to appropriation.

The wastewater grant program would have a positive fiscal impact on local governments, but this provision is subject to appropriation. DEP will likely incur some costs associated with the development of this grant program and the report to the Governor and Legislature.

Public wastewater utilities that discharge into Indian River Lagoon may have costs associated with conversion to advanced waste treatment. However, the local governments

in the region are spending substantial amounts on pollution cleanup. Lessening the pollutants in this waterbody may have a positive fiscal impact in the long term.

The impact of exempting the biosolids rule from ratification is speculative at this time because the rule has not been adopted. There is likely a negative fiscal impact to both the public and private sectors to meet the requirements of the new rule. There may be a long-term positive fiscal impact as a result of reduced cleanup costs and reduced damage to the natural systems associated with more rigorous land application requirements.

VI. Technical Deficiencies:

The term "National Sanitation Foundation International" may not be the correct title of the organization. The organization appears to have changed its name from the National Sanitation Foundation to NSF International. The staff recommendation would be to replace "National Sanitation Foundation" with "NSF."

VII. Related Issues:

There is no definition for advanced OSTDS or nutrient-reducing OSTDS. While DEP will have ample rule authority to create definitions, if these terms are intended to mean the same category of OSTDSs, a single term should probably be used in statute to avoid the implication that they are two different things.

Springs BMAPs will have DEP in charge of the OSTDS remediation plan, but the general BMAP statute will give local governments the primary responsibility for the OSTDS remediation plan. To avoid confusion, one recommendation would be to amend the springs provision to be consistent with the general BMAP requirements.

In section 17 of the bill, it is unclear whether the utilities at issue get priority funding for the Water Projects Grant Program or grants under the State Revolving Loan fund program under s. 403.1835, F.S., or both.

VIII. Statutes Affected:

This bill substantially amends the following sections of the Florida Statutes: 153.54, 153.73, 163.3180, 180.03, 311.105, 327.46, 373.250, 373.414, 373.4131, 373.705, 373.707, 373.709, 376.307, 380.0552, 381.006, 381.0061, 381.0064, 381.0065, 381.00651, 381.00652, 403.061, 403.067, 403.086, 403.08601, 403.087, 403.0871, 403.0872, 403.088, 403.0891, 403.121, 403.1835, 403.707, 403.861, 403.885, 489.551, and 590.02.

This bill creates the following sections of the Florida Statutes: 381.00652, 403.0616, 403.0673, and 403.0855.

This bill repeals section 381.0068 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Community Affairs on December 9, 2019:
The committee substitute:

- Effectuates a type two transfer of septic system oversight from DOH to DEP rather than just requiring a report;
- Requires DEP to develop rules relating to the location of septic systems;
- Revises language related to DEP updating its stormwater rules;
- Requires DEP to make recommendations to the Legislature on self-certification of stormwater permits rather than prohibiting the use of self-certification in BMAP areas;
- Leaves the BMAP process for Outstanding Florida Springs while revising the requirement for OSTDS remediation plans and adding a requirement for wastewater treatment plans in the general BMAP statute;
- Requires that these new plans be incorporated into the BMAP by 2025;
- Removes provisions relating to Florida-Friendly Fertilizer Ordinances;
- Adds rural areas of opportunities to the possible grant recipients for the wastewater grant created by the bill;
- Removes provisions that would make agricultural BMPs enforceable earlier and in more impaired waterbodies;
- Adds a requirement that DACS conduct onsite inspections of BMPs at least every two years;
- Adds a requirement that DACS collect and remit certain records relating to agricultural BMPs to DEP;
- Adds language authorizing DACS and certain institutions of higher education to submit budget requests for certain activities relating to the improvement of agricultural BMPs;
- Removes the provision requiring additional notification and penalties related to sanitary sewer overflows and replaces it with numerous requirements relating to the prevention of sanitary sewer overflows, inflow and infiltration, and leakage;
- Removes provisions increasing penalties but adds “failure to survey an adequate portion of the wastewater collection system and take steps to reduce sanitary sewer overflows, pipe leaks, and inflow and infiltration” to the penalty schedule;
- Deletes the DOH OSTDS technical advisory committee and creates a DEP OSTDS technical advisory committee that will expire on August 15, 2022, after making recommendations to the Governor and Legislature regarding the regulation of OSTDSs;
- Requires DEP to adopt rules relating to biosolids management and exempts such rules from legislative ratification if they are adopted before the 2021 legislative session.
- Directs the Division of Law Revision to incorporate the date of rule adoption into the statutes.

B. Amendments:

None.