

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/CS/HB 1557 Department of Environmental Protection

SPONSOR(S): Infrastructure Strategies Committee, Water Quality, Supply & Treatment Subcommittee, Chaney and others

TIED BILLS: **IDEN./SIM. BILLS:** SB 1386

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Water Quality, Supply & Treatment Subcommittee	18 Y, 0 N, As CS	Curtin	Curtin
2) Agriculture & Natural Resources Appropriations Subcommittee	14 Y, 0 N	Byrd	Pigott
3) Infrastructure Strategies Committee	23 Y, 0 N, As CS	Curtin	Harrington

SUMMARY ANALYSIS

Each state must establish water quality standards for waters within their borders. The Department of Environmental Protection (DEP) is the state's lead agency for protecting and managing Florida's water resources at the state level. DEP works closely with each of the state's five water management districts (WMDs), which are responsible for protecting and managing Florida's water resources at the regional level.

The bill:

- Designates the Kristin Jacobs Coral Reef Ecosystem Conservation Area as an aquatic preserve.
- Requires each WMD, in coordination with DEP, to develop rules by December 31, 2025, that promote the reuse of reclaimed water.
- Expands the types of projects undertaken by municipalities and counties that may be awarded funding by the Resilient Florida Grant Program, and expands the information that must be submitted to DEP when vulnerability assessments are funded.
- Requires DEP to coordinate with the Chief Resilience Officer as well as the Florida Flood Hub for Applied Research and Innovation (Florida Flood Hub) in developing and maintaining the sea level rise data set and in updating the comprehensive statewide flood vulnerability and sea level rise data set, and requires that the assessment be updated at least every 5 years.
- Requires the Chief Science Officer to coordinate with the Chief Resilience Officer and the Florida Flood Hub when developing statewide sea level rise projections.
- Clarifies that the Legislature intends that the transfer of the regulation of the Onsite Sewage Program from the Department of Health (DOH) to DEP be completed in a phased approach, and requires that before the phased transfer, DEP shall coordinate with DOH to identify equipment and vehicles that were previously used to carry out the program in each county and that are no longer needed for such purpose and further requires DOH to transfer the agreed-upon equipment and vehicles to DEP to the extent that each county agrees to relinquish ownership of such equipment and vehicles to DOH.
- Requires DEP to adopt rules establishing and implementing a program of general permits for certain onsite sewage treatment and disposal systems (OSTDSs).
- Requires DEP to establish an enhanced nutrient-reducing OSTDS approval program that will expeditiously evaluate and approve such systems for use in this state.
- Requires that the annual report submitted by DEP regarding the Water Quality Improvement Grant Program must also include a status report on each project funded since 2021.
- Requires DEP to create a water quality dashboard.

The bill may have an indeterminate negative fiscal impact on local government and an insignificant fiscal impact on state government. The bill may have an indeterminate positive fiscal impact on the private sector.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Background

The Department of Environmental Protection (DEP) is the state's lead agency for protecting and managing Florida's water resources at the state level. DEP works closely with each of the state's five water management districts, which are responsible for protecting and managing Florida's water resources at the regional level.¹ All state agencies are required to, upon direction of DEP, make available scientific, technical, research, administrative, and operational services and facilities to facilitate DEP's protection and management of Florida's water resources.² In order to ensure compliance with the law and its rules and regulations, a representative of DEP may enter and inspect certain facilities and operators which it is required by law to regulate.³

Sovereign Submerged Lands

Title to, ownership of, and the right to manage and use lands beneath navigable waters within a state's boundaries are vested in that state.⁴ In Florida, the title to such lands "is held by the state, by virtue of its sovereignty, in trust for all the people."⁵ The trustees of the Board of Trustees of the Internal Improvement Trust Fund (BOT) are the custodians of this trust.⁶ Title to sovereign submerged lands is vested in the BOT,⁷ and the BOT is responsible for managing, protecting and administering those lands.⁸

Aquatic Preserves

Recognizing the environmental diversity and beauty of Florida's waters, the Florida Aquatic Preserve Act of 1975 was enacted to forever preserve state-owned submerged lands which have exceptional biological, aesthetic, and/or scientific value.⁹ An aquatic preserve is "maintained essentially in its natural or existing condition"¹⁰ "for the benefit of future generations."¹¹ These areas provide many benefits, such as serving as nurseries for aquatic life; providing seagrasses for manatees to feed on; providing habitat on which shorebirds thrive; and, providing residents and visitors alike with opportunities for fishing, swimming, boating, and many other recreational activities.¹²

Coastal landscapes and several inland waters throughout Florida have been declared aquatic preserves.¹³ In maintaining the preserves, the BOT is subject to a number of provisions, including:

- "No further sale, lease, or transfer of sovereignty submerged lands shall be approved or consummated by the trustees except when such sale, lease, or transfer is in the public interest"¹⁴."¹⁵

¹ "Because water constitutes a public resource benefiting the entire state, it is the policy of the Legislature that the waters in the state be managed on a state and regional basis." S. 373.016(4)(a), F.S.

² S. 403.061(4), F.S. These services and facilities are made available via interagency agreement, contract, or otherwise.

³ S. 403.091(1), F.S.

⁴ 43 U.S.C. § 1311. Florida acquired title to, ownership of, and the right to manage and use lands beneath navigable waters upon statehood on March 3, 1845.

⁵ Art. X, s. 11, Fla. Const.

⁶ *Hayes v. Bowman*, 91 So.2d 795, 800 (Fla. 1957).

⁷ S. 253.12(1), F.S.

⁸ Ss. 253.03(1) and 253.04, F.S.

⁹ Ss. 258.36 and 258.38, F.S.

¹⁰ S. 258.37(1), F.S.

¹¹ S. 258.36, F.S.

¹² Department of Environmental Protection (DEP), *Aquatic Preserve Program*, <https://floridadep.gov/rcp/aquatic-preserve> (last visited Jan. 5, 2024).

¹³ Ch. 258, part II, F.S.

¹⁴ "'Public interest' means demonstrable environmental, social, and economic benefits which would accrue to the public at large as a result of a proposed action, and which would clearly exceed all demonstrable environmental, social, and economic costs of the proposed action. In determining the public interest in a request for use, sale, lease, or transfer of interest in sovereignty lands or

- “The trustees shall not approve the waterward relocation or setting of bulkhead lines waterward of the line of mean high water within the preserve except when public road and bridge construction projects have no reasonable alternative and it is shown to be not contrary to the public interest.”¹⁶
- Further dredging or filling of submerged lands shall not be approved by the trustees except in certain limited circumstances.¹⁷

DEP’s Office of Resilience and Coastal Protection manages the Aquatic Preserve Program and oversees 42 aquatic preserves.¹⁸ The Nature Coast Aquatic Preserve, the last preserve to have been designated by the Legislature, was designated in 2020 and it was the state’s first new designation of an aquatic preserve in 32 years.¹⁹

Coral Reefs

Coral reefs have tremendous biodiversity and they are some of the most diverse ecosystems in the world.²⁰ Almost all corals are made up of hundreds to hundreds of thousands of individual animals.²¹ Healthy coral reefs provide numerous benefits, such as protecting against coastal flooding, tropical storms and shoreline erosion,²² and providing opportunities for education, recreation and commercial fishing.²³ In addition, some animals found on reefs produce chemical compounds that are used in medicines.²⁴

Florida’s Coral Reef and the Kristin Jacobs Coral Reef Ecosystem Conservation Area

Florida is unique in that it “is the only state in the continental United States with extensive shallow coral reef formations near its coasts.”²⁵ Florida’s coral reef, which came into existence 10,000 years ago, is approximately 350 miles long, beginning in Dry Tortugas National Park²⁶ and ending at the St. Lucie Inlet in Martin County.²⁷ “A study of natural and artificial reefs along Southeast Florida and the Florida Keys showed that fishing, diving, and boating-related expenditures generate \$6.3 billion in sales and income, and sustain more than 71,000 jobs annually.”²⁸

The reefs north of the Florida Keys National Marine Sanctuary and Biscayne National Park are managed by DEP’s Coral Reef Conservation Program (CRCP) with input from the Southeast Florida Coral Reef Initiative.²⁹ In 2021, the Legislature designated the area managed by the CRCP the Kristin

severance of materials from sovereignty lands, the Board shall consider the ultimate project and purpose to be served by said use, sale, lease, or transfer of lands or materials.” R. 18-20.003(46), F.A.C.

¹⁵ S. 258.42(1)(a), F.S.

¹⁶ S. 258.42(2), F.S.

¹⁷ S. 258.42(3)(a), F.S.

¹⁸ DEP, *Office of Resilience and Coastal Protection*, <https://floridadep.gov/orcp> (last visited Jan. 5, 2024).

¹⁹ CS/CS/HB 1061 (2020); DEP, *Nature Coast Aquatic Preserve* (last updated Aug. 14, 2023), <https://floridadep.gov/NatureCoastAP> (last visited Jan. 5, 2023).

²⁰ DEP, *Florida’s Coral Reefs* (last updated Aug. 14, 2023), <https://floridadep.gov/rcp/rcp/content/floridas-coral-reefs> (last visited Jan. 3, 2024); National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, *Corals Tutorial*, https://oceanservice.noaa.gov/education/tutorial_corals/ (last visited Jan. 3, 2024).

²¹ NOAA, National Ocean Service, *What are corals?*, https://oceanservice.noaa.gov/education/tutorial_corals/coral01_intro.html (last visited Jan. 3, 2024).

²² DEP, *Coral Reef Conservation Program*, <https://floridadep.gov/rcp/coral> (last visited Jan. 4, 2024).

²³ DEP CRCP, *Coral Reef Conservation Program 2020 – 2025 Strategic Plan*, https://floridadep.gov/sites/default/files/CRCP%20Strategic%20Plan%202020-2025_FINAL_508%20compliant.pdf, p.3 (last visited Jan 4, 2024).

²⁴ Coral Reef Alliance, *Coral Reefs: The Medicine Chests of the Sea* (Nov. 24, 2016), <https://coral.org/en/blog/coral-reefs-the-medicine-chests-of-the-sea/> (last visited Jan. 4, 2024).

²⁵ DEP, *supra* note 20.

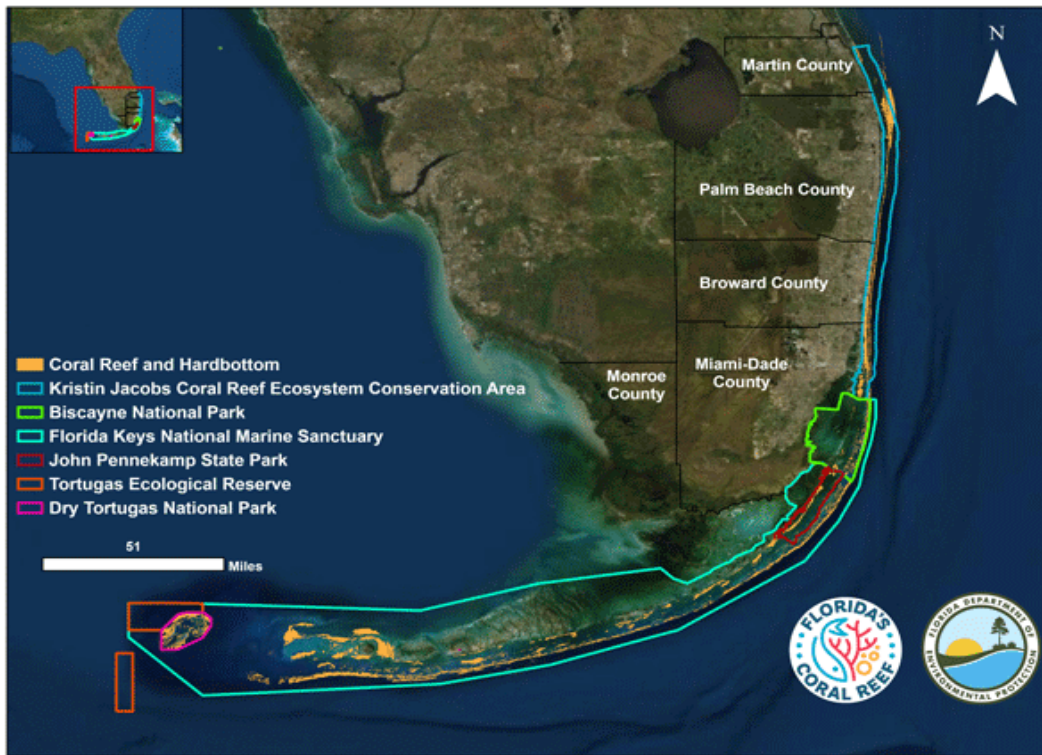
²⁶ The Dry Tortugas National Park is approximately 70 miles west of Key West; 99% of the park is open water. Florida’s Coral Reef, *Facts and History*, <https://floridascoralreef.org/the-reef/facts-and-history> (last visited Jan. 3, 2024).

²⁷ *Id.*

²⁸ DEP CRCP, *supra* note 23.

²⁹ DEP, *supra* note 20. “The Southeast Florida Coral Reef Initiative was developed through the collaborative effort of many government agencies, non-governmental organizations, universities and private partners and is coordinated by the CRCP.”

Jacobs Coral Reef Ecosystem Conservation Area, in honor of the late Representative Jacobs, who was a champion of protecting the environment, waterways, and wildlife.³⁰



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Wastewater

The proper treatment and disposal or reuse of domestic wastewater is an important part of protecting Florida's water resources. A person generates approximately 100 gallons of domestic wastewater³² per day.³³ This wastewater must be managed to protect public health, water quality, recreation, fish, wildlife, and the aesthetic appeal of the state's waterways.³⁴

Domestic Wastewater Treatment Facilities

The majority of Florida's domestic wastewater is controlled and treated by centralized treatment facilities regulated by DEP. DEP regulates approximately 2,000 domestic wastewater facilities which treat over 1.5 billion gallons per day of effluent³⁵ and reclaimed water^{36,37}. Methods of disposal include reuse and land application; groundwater disposal by underground injection; groundwater recharge and aquifer storage and recovery projects using injection wells; surface water discharges; and wetland discharges.³⁸

³⁰ WUSF, *Broward Lawmaker Kristin Jacobs Dies After Cancer Battle* (Apr. 11, 2020), <https://www.wusf.org/2020-04-11/broward-lawmaker-kristin-jacobs-dies-after-cancer-battle> (last visited Jan. 4, 2024).

³¹ DEP, *supra* note 20.

³² S. 367.021(5), F.S., defines "domestic wastewater" as wastewater principally from dwellings, business buildings, institutions, and sanitary wastewater or sewage treatment plants.

³³ DEP, *Domestic Wastewater Program*, <https://floridadep.gov/water/domestic-wastewater> (last visited Jan. 4, 2024).

³⁴ Ss. 381.0065(1) and 403.021, F.S.

³⁵ "Effluent," unless specifically stated otherwise, means water that is not reused after flowing out of any plant or other works used for the purpose of treating, stabilizing, or holding wastes." R. 62-600.200(22), F.A.C.

³⁶ "Reclaimed water," except as specifically provided in Chapter 62-610, F.A.C., means water that has received at least secondary treatment and basic disinfection and is reused after flowing out of a domestic wastewater treatment facility." R. 62-600.200(57), F.A.C.

³⁷ DEP, *General Facts and Statistics About Wastewater in Florida* (last updated Apr. 20, 2022), <https://floridadep.gov/water/domestic-wastewater/content/general-facts-and-statistics-about-wastewater-florida> (last visited Jan. 5, 2023).

³⁸ R. 62-600.440(4), F.A.C.

Onsite Sewage Treatment and Disposal Systems

Another method utilized to treat domestic wastewater is an onsite sewage treatment and disposal system (OSTDS); there are an estimated 2.6 million OSTDSs in Florida, which represents 12 percent of the septic systems in the United States.³⁹ These 2.6 million OSTDSs, commonly referred to as “septic systems,” provide wastewater disposal for 30 percent of the state’s population.⁴⁰

An OSTDS generally consists of two basic parts: the septic tank and the drainfield.⁴¹ 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 and it also filters the wastewater as gravity draws the water down through the layers of soil.⁴²



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Septic systems have been widely used since the 1940s; however, they were not designed to remove nutrients.⁴⁴ During the 2023 legislative session the Legislature passed House Bill 1379, which was comprehensive legislation relating to Florida’s water and land resources. Included amongst the bill’s many provisions are prohibitions on the installation of new OSTDSs constructed within certain areas⁴⁵ where connection to a publicly owned or investor-owned sewerage system is available.⁴⁶ In addition, on lots of 1 acre or less within such areas where a publicly owned or investor-owned sewerage system

³⁹ DEP, *Onsite Sewage Program*, <https://floridadep.gov/water/onsite-sewage> (last visited Jan. 11, 2024).

⁴⁰ *Id.*

⁴¹ Department of Health (DOH), *Septic System Information and Care* (last updated Oct. 17, 2014), <http://columbia.floridahealth.gov/programs-and-services/environmental-health/onsite-sewage-disposal/septic-information-and-care.html> (last visited Jan. 4, 2024); EPA, *Types of Septic Systems* (last updated Aug. 7, 2023), <https://www.epa.gov/septic/types-septic-systems> (last visited Jan. 4, 2024).

⁴² *Id.*

⁴³ EPA, *supra* note 41.

⁴⁴ Andrea Albertin, *Reducing the Impact of Septic Systems Through Advanced Nitrogen Treatment*, University of Florida Institute of Food and Agricultural Sciences (Apr. 9, 2021), <https://nwdistrict.ifas.ufl.edu/nat/2021/04/09/reducing-the-impact-of-septic-systems-through-advanced-nitrogen-treatment/> (last visited Jan. 13, 2024).

⁴⁵ The areas are those within a basin management action plan area adopted under section 403.067, F.S., a reasonable assurance plan, a pollution reduction plan, and Outstanding Florida Springs.

⁴⁶ Ch. 23-169, Laws of Fla.

is not available, the bill requires the installation of enhanced nutrient-reducing OSTDSs or other wastewater treatment systems that achieve at least 65 percent nitrogen reduction.⁴⁷

Enhanced Nutrient-Reducing OSTDSs

Florida's groundwater supplies 90 percent of the state's drinking water⁴⁸ and it is imperative that groundwater is protected. Enhanced nutrient-reducing (ENR) OSTDSs facilitate the protection of Florida's water resources by reducing the amount of nitrogen in groundwater and surface waters. "There are three types of ENR-OSTDS: NSF 245 aerobic treatment units; nitrogen-reducing performance-based treatment systems (nitrogen-reducing PBTs), and inground nitrogen-reducing biofilters (INRBs)."⁴⁹

Aerobic treatment units, unlike conventional systems, introduce air into the sewage in the tank using a pump so that the organic matter in the tank is broken down faster than in a conventional system.⁵⁰ Like a conventional septic system, effluent from an aerobic treatment unit is discharged into a drainfield for further treatment in the soil.⁵¹ Nitrogen-reducing PBTs "are specialized systems designed by professional engineers to meet specific levels of contaminant removal based on site and/or situation requirements."⁵² INRBs, also referred to as modified drainfields, "are nitrogen-reducing media layers placed underneath a conventional drainfield."⁵³

Onsite Sewage Program

The Onsite Sewage Program (Program) helps ensure that OSTDSs are properly designed, constructed, and maintained to help protect Florida's groundwater resources. The Florida Clean Waterways Act, enacted in 2020, was a significant piece of legislation that addressed a number of environmental issues relating to the maintenance and improvement of water quality in Florida. Section two of the Clean Waterways Act provided for the transfer of the Program from the Department of Health (DOH) to DEP, effective July 1, 2021.⁵⁴

The Program is being transferred over a period of five years, and guidelines for the transfer are provided by an interagency agreement.⁵⁵ Per the agreement, DEP has the primary powers and duties of the Program, and the county departments of health will implement the OSTDS program under the direction of DEP.⁵⁶ The county departments of health continue to handle permitting and inspection of OSTDSs.⁵⁷ In the event of an alleged violation of OSTDS laws, county departments of health will be responsible for conducting an inspection to gather information regarding the allegations.⁵⁸

Reclaimed Water

Reclaimed water is wastewater that has been disinfected⁵⁹ and received treatment sufficient to achieve certain effluent limitations⁶⁰ so that the resulting high-quality water may then be reused for beneficial purposes.⁶¹ Effluent limitations are established by DEP and there are limits on "chemical, physical, biological, or other constituents" which are discharged into waters of the state.⁶² Florida's physical

⁴⁷ *Id.*

⁴⁸ DEP, *supra* note 39.

⁴⁹ DEP, *Frequently Asked Questions (FAQs) House Bill (HB) 1379 Requirements for Enhanced Nutrient-Reducing Systems* (v.1 – July 18, 2023), p.1, <https://floridadep.gov/sites/default/files/Public%20ENR%20FAQ.pdf> (last visited Jan. 13, 2024).

⁵⁰ Albertin, *supra* note 44.

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ Ch. 2020-150, s. 2, Laws of Fla.

⁵⁵ S. 381.0065(3)(b), F.S.; DOH and DEP, *Interagency Agreement between DEP and DOH in Compliance with Florida's Clean Waterways Act for Transfer of the Onsite Sewage Program*, 5 (2021), <http://www.floridahealth.gov/environmental-health/onsite-sewage/documents/interagency-agreement-between-fdoh-fdep-onsite-signed-06302021.pdf> (last visited Dec. 27, 2023).

⁵⁶ *Id.* at 14.

⁵⁷ *Id.* at 11; DEP, *supra* note 39.

⁵⁸ DOH and DEP, *supra* note 55, at 11.

⁵⁹ R. 62-610.200(11) and R. 62-600.200(18), F.A.C.

⁶⁰ R. 62-610.200(45) and R. 62-600.200(57), F.A.C.

⁶¹ S. 373.019(17), F.S.

⁶² S. 403.031(3), F.S.

geography – with limited groundwater supplies near coastal areas and slow flowing, warm streams that are unable to assimilate large discharges of wastewater – necessitate the continued development and management of sophisticated wastewater facilities.⁶³

Reuse of Reclaimed Water

Florida is a national leader in water reuse and in 2021 at least 908 million gallons per day of reclaimed water was used for beneficial purposes.⁶⁴ Reuse can help meet the groundwater management, as well as the water supply, needs of Florida's growing population.⁶⁵ The Legislature has long recognized the potential and necessity of reusing reclaimed water:

The encouragement and promotion of water conservation, and reuse of reclaimed water, as defined by [DEP], are state objectives and are considered to be in the public interest. The Legislature finds that the reuse of reclaimed water is a critical component of meeting the state's existing and future water supply needs while sustaining natural systems. The Legislature further finds that for those wastewater treatment plants permitted and operated under an approved reuse program by [DEP], the reclaimed water shall be considered environmentally acceptable and not a threat to public health and safety.⁶⁶

Reclaimed water may be reused for a number of purposes, including:

- "Irrigation of golf courses, parks, residential properties, highway medians and other landscaped areas.
- Urban uses such as toilet flushing, car washing, dust control and aesthetic purposes (i.e., decorative lakes, ponds and fountains).
- Agricultural uses such as irrigation of edible food crops such as citrus, corn and soybeans; pasture lands, grasslands, and other feed and fodder crops; and irrigation at nurseries.
- Wetlands creation, restoration and enhancement.
- Recharging groundwater with the use of rapid infiltration basins (percolation ponds), absorption fields and direct injection to groundwaters.
- Augmentation of surface waters that are used for drinking water supplies.
- Industrial uses including plant wash down, processing water, and cooling water purposes."⁶⁷

"All applicants for permits to construct or operate a domestic wastewater treatment facility located within, serving a population located within, or discharging within a water resource caution area shall prepare a reuse feasibility study as part of their application for the permit."⁶⁸ Water resource caution areas are identified by WMDs as areas where in the near future demand for water will exceed supply and that water conservation will help meet future water demand.⁶⁹ Also known as water use caution areas, these areas require a regional approach to address cumulative water withdrawals.⁷⁰ Domestic wastewater treatment facilities that dispose of effluent by Class I deep well injection⁷¹ are required to implement reuse to the degree that it is feasible as determined by the reuse feasibility study.⁷²

⁶³ DEP, *Why Reuse Water?*, (last updated Jan. 5, 2023), <https://floridadep.gov/water/domestic-wastewater/content/reuse-facts> (last visited Jan. 8, 2024).

⁶⁴ DEP, Division of Water Resource Management, *2021 Reuse Inventory*, p. 2 (March 2022),

<https://floridadep.gov/sites/default/files/2021%20Reuse%20Inventory.pdf>. (Domestic wastewater facilities with permitted capacities of .1 million gallons per day (mgd) and greater that provide reclaimed water for reuse are required to submit an annual reuse report to DEP. p. 1. DEP received 91% of the required 2021 annual reuse reports. P.1. Thus, at least 908 mgd of reclaimed water was used in 2021.)

⁶⁵ DEP, *supra* note 63.

⁶⁶ S. 403.064(1), F.S.; *see also* S. 373.250(1)(a), F.S.

⁶⁷ DEP, *Uses of Reclaimed Water* (last updated Sept. 6, 2023), <https://floridadep.gov/water/domestic-wastewater/content/uses-reclaimed-water> (last visited Jan. 8, 2024).

⁶⁸ S. 403.064(2), F.S.

⁶⁹ S. 373.228(1), F.S.

⁷⁰ Southwest Florida WMD, *Southern Water Use Caution Area*, <https://www.swfwmd.state.fl.us/projects/southern-water-use-caution-area> (last visited Jan. 13, 2024).

⁷¹ Class I injection wells include: "(1) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one-quarter mile of the well bore, **STORAGE NAME:** h1557e.ISC **PAGE: 7**
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Florida's Water Resources

All groundwater and surface water in Florida is a public resource.⁷³ It is this state's policy to promote the conservation and proper utilization of surface and groundwater;⁷⁴ “promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems;”⁷⁵ and “to protect, maintain, and improve the quality [of the waters of the state] for public water supplies, for the propagation of wildlife and fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses and to provide that no wastes be discharged into any waters of the state without first being given the degree of treatment necessary to protect the beneficial uses of such water.”⁷⁶

Consumptive Use Permits

“[A]ny use of water that reduces the supply from which it is withdrawn or diverted” is referred to as the consumptive use of water.⁷⁷ With certain exceptions, a permit must be obtained prior to the consumptive use of water in Florida.⁷⁸ Consumptive Use Permits (CUPs) are issued by the WMDs. In order to obtain a CUP, the applicant must pass what has been referred to as the three-prong test⁷⁹ and “establish that the proposed use of water: [i]s a reasonable-beneficial use as defined in s. 373.019⁸⁰; [w]ill not interfere with any presently existing legal use of water; and [i]s consistent with the public interest.”⁸¹ CUPs require water conservation and limit how much water may be withdrawn.⁸²

To ensure that consumptive use does not lower the amount of water in a waterbody to the point that the resource is harmed, the WMDs are required to establish minimum flows or minimum water levels (MFLs) to protect those resources.⁸³ Scientific assessments of the resource values associated with each unique water system are conducted to determine the point at which further withdrawals would significantly harm the water resources or ecology of the area; this point is the MFL.⁸⁴ Each WMD is required to implement a recovery or prevention strategy for waterbodies that are below their MFL or are anticipated to fall below their MFL within 20 years.⁸⁵

an underground source of drinking water. (2) Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water. (3) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore.” 40 C.F.R. § 144.6(a).

⁷² S. 403.064(14), F.S.

⁷³ Ch. 373, F.S.

⁷⁴ S. 373.016(3)(b), F.S.

⁷⁵ S. 373.016(3)(d), F.S.

⁷⁶ Ss. 373.016(3)(h) and 403.021(2), F.S.

⁷⁷ R. 62-40.210(4), F.A.C.

⁷⁸ S. 373.219(1), F.S.; R. 40B-2.041(1), F.A.C.; R. 40E-2.041(a), F.A.C.

⁷⁹ *Marion Cnty. v. Greene*, 5 So. 3d 775, 777 (Fla. 5th DCA 2009) (en banc) (citing *Sw. Fla. Water Mgmt. Dist. v. Charlotte Cnty.*, 774 So. 2d 903 (Fla. 2d DCA 2001)).

⁸⁰ “‘Reasonable-beneficial use’ means the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest.” S. 373.019(16), F.S.

⁸¹ S. 373.223(1), F.S.

⁸² South Florida WMD, *Consumptive Water Use Permits*, <https://www.sfwmd.gov/doing-business-with-us/permits/water-use-permits> (last visited Jan. 9, 2024).

⁸³ S. 373.042, F.S.

⁸⁴ DEP, *Minimum Flows and Minimum Water Levels and Reservations* (last updated Sept. 23, 2023),

<https://floridadep.gov/owper/water-policy/content/minimum-flows-and-minimum-water-levels-and-reservations> (last visited Feb. 7, 2024).

⁸⁵ *Id.*

Water Quality Standards

Each state must establish water quality standards for waters within their borders and then develop a list of impaired waters that do not meet the established water quality standards and develop a list of threatened waters that may not meet water quality standards in the following reporting cycle.⁸⁶ Waterbodies that do not meet water quality standards are referred to as impaired waters.⁸⁷

Total Maximum Daily Load

If DEP determines that any waters are impaired, the waterbody or segment must be placed on the verified list of impaired waters (Verified List) and a total maximum daily load (TMDL) must be calculated.⁸⁸ A TMDL is based on science and it is the maximum amount of a pollutant that the waterbody or segment may take in and still maintain water quality standards.⁸⁹

DEP is the lead agency coordinating the development and implementation of TMDLs.⁹⁰ A waterbody or waterbody segment may be removed from the list at any time during the TMDL process if the waterbody or waterbody segment attains water quality standards.⁹¹ If DEP determines that a waterbody is impaired, but further study is needed to determine the causative pollutants or other factors contributing to impairment before the waterbody is placed on the Verified List, the waterbody or segment will be placed on the statewide comprehensive study list.⁹²

The Florida Watershed Restoration Act guides the development and implementation of TMDLs.⁹³ TMDLs must include reasonable and equitable pollutant load allocations between or among point sources (e.g., pipes and culverts discharging from a permitted facility, such as a domestic wastewater treatment facility) and nonpoint sources (e.g., agriculture, septic tanks, golf courses) that will alone, or in conjunction with other management and restoration activities, reduce pollutants and achieve water quality standards.⁹⁴ As of December 2022, 459 TMDLs had been established for impaired waters in Florida, and 8 of those were adopted in calendar year 2022.⁹⁵

⁸⁶ *Id.*; 40 C.F.R. § 130.7 (Following the development of the list of impaired waters, states must develop a total maximum daily load for every pollutant/waterbody combination on the list. A total maximum daily load 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); DEP, *Watershed Evaluation and Total Maximum Daily Loads (TMDL) Section* (last updated Oct. 12, 2023), <https://floridadep.gov/dear/water-quality-evaluation-tmdl/content/total-maximum-daily-loads-tmdl-program> (last visited Jan. 14, 2024).

⁸⁷ R. 62-300.200(7), F.A.C. (“‘Impaired water’ shall mean a waterbody or waterbody segment that does not meet its applicable water quality standards as set forth in Chapters 62-302 and 62-4, F.A.C. . . . due in whole or in part to discharges of pollutants from point or nonpoint sources.”)

⁸⁸ S. 403.067(1), F.S.; DEP, *Verified List Waterbody Ids (WBIDs)*, <https://geodata.dep.state.fl.us/datasets/FDEP::verified-list-waterbody-ids-wbids/about> (last visited Jan. 14, 2023); and s. 403.067(4), F.S.

⁸⁹ S. 403.031(20), F.S.

⁹⁰ S. 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. S. 403.061(22), F.S., allows DEP to advise, consult, cooperate, and enter into agreements with other state agencies, the federal government, other states, interstate agencies, etc.

⁹¹ S. 403.067(5), F.S.

⁹² S. 403.067(2), F.S.; R. 62-303.150(1), F.A.C.

⁹³ S. 403.067, F.S.; Ch. 99-223, Laws of Fla.

⁹⁴ S. 403.067(6)(b), F.S.

⁹⁵ EDR, *Annual Assessment of Florida’s Water Resources: Quality*, 5 (2023), <http://edr.state.fl.us/Content/natural-resources/2023-AnnualAssessmentWaterResources-Chapter4.pdf> (last visited Jan. 13, 2024).

Basin Management Action Plans

Once a TMDL is adopted,⁹⁶ DEP may develop and implement a basin management action plan (BMAP), which is a restoration plan for the watersheds and basins connected to the impaired waterbody⁹⁷ that is included on DEP's Verified List. BMAPs are one of the primary mechanisms DEP utilizes to achieve TMDLs, and a BMAP addresses the pollutant causing the impairment.⁹⁸

“Each new or revised [BMAP] must include:

- The appropriate management strategies available through existing water quality protection programs to achieve [TMDLs];
- A description of best management practices [BMPs]⁹⁹ adopted by rule;
- For the applicable 5-year milestone, a list of projects that will achieve the pollutant load reductions needed to meet the TMDL or established load allocations with a planning-level cost estimate and estimated date of completion for each listed project;
- The source and amount of financial assistance to be made available by DEP, a water management district, or other entity for each listed project, if applicable; and
- A planning-level estimate of each listed project's expected load reduction, if applicable.”¹⁰⁰

Producers of nonpoint source pollution included in a BMAP must comply with the established pollutant reductions by either implementing the appropriate BMPs or by monitoring water quality.¹⁰¹ A nonpoint source discharger may be subject to enforcement action by DEP or a WMD based on a failure to implement these requirements.¹⁰²

A BMAP must integrate appropriate management strategies available to the state through existing water quality protection programs to achieve the TMDL.¹⁰³ 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.”¹⁰⁴ 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 governments, community leaders, and the public to collectively determine and share water quality cleanup responsibilities.¹⁰⁵ BMAPs are adopted by secretarial order,¹⁰⁶ and thirty-three BMAPs have been developed statewide.¹⁰⁷

“[BMAPs] must include 5-year milestones for implementation and water quality improvement,” as well as a water quality monitoring component to evaluate whether reasonable progress is being achieved

⁹⁶ S. 403.067(6)(c), F.S.

⁹⁷ S. 403.067(7)(a)1., F.S.

⁹⁸ DEP, Division of Environmental Assessment and Restoration, *Guidance on Developing Restoration Plans as Alternatives to TMDLs – Assessment Category 4b and 4e Plans*, p. 2 (June 2015) <https://floridadep.gov/sites/default/files/4b4ePlansGuidance.pdf> (last visited Jan. 14, 2024).

⁹⁹ BMPs are defined by law, and they are a balance between improvements to water quality and agricultural productivity. They are based on research, field-testing, and expert review, and they are a practice or practices determined by the coordinating agencies to be the most effective and practicable means by which to improve water quality in agricultural and urban discharges. Economic and technological matters are also taken into consideration in developing BMPs. S. 373.4595(2)(a), F.S.; see also Department of Agriculture & Consumer Services, *Agricultural Best Management Practices*, <https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Best-Management-Practices> (last visited Jan. 14, 2024).

¹⁰⁰ S. 403.067(7)(a)4., F.S.

¹⁰¹ S. 403.067(7)(b)2.g., F.S. Examples of BMPs for agriculture include activities such as managing irrigation water to minimize losses and limiting the use of fertilizers.

¹⁰² S. 403.067(7)(b)2.h., F.S.

¹⁰³ *Id.*

¹⁰⁴ S. 403.067(7)(a)2., F.S.

¹⁰⁵ DEP, *Basin Management Action Plans (BMAPs)*, <https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps> (last visited Jan. 14, 2024).

¹⁰⁶ S. 403.067(7)(a)5., F.S.

¹⁰⁷ Office of Economic & Demographic Research (EDR), *Annual Assessment of Florida's Water Resources: Quality*, p. 5 (2023), [http://edr.state.fl.us/Content/natural-resources/2023 AnnualAssessmentWaterResources_Chapter4.pdf](http://edr.state.fl.us/Content/natural-resources/2023%20AnnualAssessmentWaterResources_Chapter4.pdf) (last visited Jan. 14, 2024).

over time.¹⁰⁸ An assessment of progress must be conducted every five years, and revisions to the BMAP must be made as appropriate.¹⁰⁹

A BMAP for a nutrient TMDL must also include a wastewater treatment plan that addresses domestic wastewater if DEP identifies domestic wastewater treatment facilities or OSTDSs as contributors of at least 20 percent of point source or nonpoint source nutrient pollution or if DEP determines remediation is necessary to achieve the TMDL.¹¹⁰ This plan must be developed by the respective local government along with DEP, the applicable WMD, and public and private domestic wastewater facilities located within the jurisdiction.¹¹¹ Special districts and private domestic wastewater facilities providing wastewater services to a local government are not currently required to provide information to that local government or DEP to assist in preparing wastewater treatment plans.

Alternative Restoration Plans

Impaired waterbodies with plans that provide reasonable assurance that they will attain water quality standards may avoid placement on DEP's Verified List.¹¹² Alternative Restoration Plans employ the early implementation of restoration activities to avoid being placed on the Verified List and the development of TMDLs and BMAPs.¹¹³ There are two categories of Alternative Restoration Plans, 4b and 4e plans.¹¹⁴

Category 4b plans include waterbodies that are impaired, but do not require development of a TMDL because existing or proposed measures will allow the waterbody to attain water quality standards.¹¹⁵ A reasonable assurance plan (RAP) is a control measure that DEP may implement for category 4b impaired waterbodies.¹¹⁶

If DEP determines a waterbody is impaired or is likely to become impaired within five years, it must evaluate whether "existing or proposed technology-based effluent limitations and other pollution control programs . . . are sufficient to result in the attainment of water quality standards . . . [and] [i]f the waterbody is expected to attain water quality standards in the future and to make reasonable progress towards attainment of those standards in a certain timeframe, the waterbody will not be placed on the Verified List."¹¹⁷ DEP's decision must be based on a plan that provides reasonable assurance that water quality standards will be attained.¹¹⁸ RAPs are adopted by order of the Secretary of DEP,¹¹⁹ and they "may obviate the need to use limited state resources to . . . implement BMAPs."¹²⁰ Five RAPs have been adopted.¹²¹

A waterbody may "be placed in category 4e if it is impaired but recently completed restoration activities or ongoing restoration activities are underway to restore the designated uses of the waterbody."¹²² Waterbodies placed in the 4e category have their placement on the Verified List postponed for four years to allow for implementation of the plan and progress toward restoration to be evaluated.¹²³

¹⁰⁸ S. 403.067(7)(a)6., F.S.

¹⁰⁹ *Id.*

¹¹⁰ S. 403.067(7)(a)9., F.S.

¹¹¹ S. 403.067(7)(a)9.a., F.S.

¹¹² R. 62-303.600(2), F.A.C.

¹¹³ DEP, *Alternative Restoration Plans*, <https://floridadep.gov/DEAR/Alternative-Restoration-Plans> (last visited Jan. 14, 2024).

¹¹⁴ *Id.*

¹¹⁵ EDR, *supra* note 107, at 14.

¹¹⁶ DEP, *supra* note 113.

¹¹⁷ R. 62-303.600(1), F.A.C.

¹¹⁸ *Id.*

¹¹⁹ EDR, *supra* note 107, at 29.

¹²⁰ *Id.* at 27.

¹²¹ *Id.* at 29.

¹²² *Id.*

¹²³ *Id.*

Water Quality Improvement Grant Program

The Water Quality Improvement Grant Program (WQIP), previously known as the Wastewater Grant Program, is managed by DEP.¹²⁴ Projects eligible for funding by WQIP must reduce the amount of nutrients entering “waterbodies that: are not attaining nutrient or nutrient-related standards; have an established TMDL; or are located within a BMAP area, a RAP area adopted by final order, an accepted alternative restoration plan area, or a rural area of opportunity” (RAO)^{125, 126}

DEP is required to coordinate with the WMDs to identify grant recipients in each district¹²⁷ and to coordinate with local governments and other stakeholders to identify the most effective and beneficial projects.¹²⁸ DEP must consider and prioritize the estimated reduction in nutrient load per project; project readiness; the cost-effectiveness of the project; the cost share identified by the applicant, except for RAOs; the overall environmental benefit of a project; the location of a project; and previous state involvement in the project.¹²⁹

DEP is required to submit a report to the Governor and the Legislature each year regarding the projects funded by WQIP.¹³⁰ “The report must include a list of those projects receiving funding and include the following information for each project:

- A description of the project;
- The cost of the project;
- The estimated nutrient load reduction;
- The location of the project;
- The waterbody or waterbodies where the project would reduce nutrients; and
- The total cost-share being provided.”¹³¹

Sea Level Rise and Flooding

With 1,350 miles of coastline and relatively low elevations, Florida is particularly vulnerable to coastal flooding.¹³² There are three primary causes of coastal flooding: sea level rise, storm surge intensity, and rainfall intensity and frequency.¹³³ Sea level rise is an observed increase in the average local sea level or global sea level trend.¹³⁴

The two major causes of global sea level rise are thermal expansion caused by the warming of the oceans and the loss of land-based ice due to melting.¹³⁵ Since 1880, the average global sea level has risen approximately eight to nine inches, and the rate of global sea level rise has been accelerating.¹³⁶ The National Oceanic and Atmospheric Administration (NOAA) utilizes tide gauges to measure changes in sea level and provides data on local sea level rise trends.¹³⁷ Analysis of this data shows

¹²⁴ S. 403.0673, F.S.

¹²⁵ A RAO is a community or region of communities which are uniquely distressed and are priority assignments for the Rural Economic Development Initiative. S. 288.0656(2)(d) and (7)(a), F.S. The Governor may designate no more than three RAOs. S. 288.0656(7)(a), F.S.

¹²⁶ S. 403.0673(1), F.S.

¹²⁷ S. 403.0673(4), F.S.

¹²⁸ S. 403.067(5), F.S.

¹²⁹ S. 403.0673(3), F.S.

¹³⁰ S. 403.0673(7), F.S.

¹³¹ *Id.*

¹³² Florida Division of Emergency Management (DEM), *Enhanced State Hazard Mitigation Plan, State of Florida* [hereinafter “SHMP”] (2018), 107-108, 162, https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl-shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 8, 2024).

¹³³ *Id.* at 107.

¹³⁴ DEP, *Florida Adaptation Planning Guidebook: Glossary* [“DEP Guidebook”] (2018), <https://floridadep.gov/sites/default/files/AdaptationPlanningGuidebook.pdf> (last visited Jan. 8, 2024).

¹³⁵ National Aeronautics and Space Administration (NASA), *Facts: Sea Level*, <https://climate.nasa.gov/vital-signs/sea-level/> (last visited Jan. 8, 2024).

¹³⁶ U.S. Global Change Research Program, *Fourth National Climate Assessment* [NCA4] (2018), 757, https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 8, 2024).

¹³⁷ NOAA, *What is a Tide Gauge?*, <https://oceanservice.noaa.gov/facts/tide-gauge.html> (last visited Jan. 8, 2024); NOAA, Tides and Currents, *Sea Level Trends*, <https://tidesandcurrents.noaa.gov/sltrends/> (last visited Jan. 8, 2024).

that some low-lying areas in the southeastern United States experience higher local rates of sea level rise than the global average.¹³⁸

Florida's coastal communities are experiencing high-tide flooding events with increasing frequency because sea level rise increases the height of high tides.¹³⁹ In the U.S., sea level rise and flooding threaten an estimated \$1 trillion in coastal real estate value, and analysts estimate that Florida could lose more than \$300 billion in property value by the year 2100.¹⁴⁰ Sea level rise further affects the salinity of both surface water and groundwater through saltwater intrusion, posing a particular risk for shallow coastal aquifers.¹⁴¹ Sea level rise also pushes saltwater further upstream in tidal rivers and streams, raises coastal groundwater tables, and pushes saltwater further inland at the margins of coastal wetlands.¹⁴²

Storm surge intensity and the intensity and precipitation rates of hurricanes are generally projected to increase,¹⁴³ and higher sea levels will cause storm surges to travel farther inland and impact more properties than in the past.¹⁴⁴ Stronger storms and sea level rise are likely to lead to increased coastal erosion.¹⁴⁵

Increases in evaporation rates and water vapor in the atmosphere increase rainfall intensity and extreme precipitation events, and the sudden onset of water can overwhelm stormwater infrastructure.¹⁴⁶ As sea levels and groundwater levels rise, low areas drain more slowly, and the combined effects of rising sea levels and extreme rainfall events are increasing the frequency and magnitude of coastal and lowland flood events.¹⁴⁷

¹³⁸ NCA4 at 757.

¹³⁹ SHMP at 108, 101; NOAA, *High-Tide Flooding*, <https://toolkit.climate.gov/topics/coastal-flood-risk/shallow-coastal-flooding- nuisance-flooding> (last visited Jan. 8, 2024).

¹⁴⁰ NCA4 at 324, 758.

¹⁴¹ SHMP at 106.

¹⁴² *Id.* at 108.

¹⁴³ SHMP at 106, 141; NCA4 at 95, 97, 116-117, 1482.

¹⁴⁴ NCA4 at 758; SHMP at 107.

¹⁴⁵ NCA4 at 331, 340-341, 833, 1054, 1495; SHMP at 108, 221.

¹⁴⁶ SHMP at 99, 106, 116, 141, 181; NCA4 at 88, 762-763.

¹⁴⁷ SHMP at 106; NCA4 at 763.

Sea Level Rise Projections

The following table displays projections for future sea level rise, both globally and in regions of Florida:

Sea Level Rise Projections				
Source	Scale	Years	Low (feet)	High (feet)
Intergovernmental Panel on Climate Change ¹⁴⁸	Global	2046-2065	0.79	1.05
		2081-2100	1.28	2.32
		2100	1.41	2.76
U.S. Global Change Research Program ¹⁴⁹	Global	2030	0.3	0.6
		2050	0.5	1.2
		2100	1	4.3
Southeast Florida Regional Climate Change Compact Sea Level Rise Work Group ¹⁵⁰	Southeast Florida	2040	0.83	1.42
		2070	1.75	4.5
		2120	3.33	11.33
Tampa Bay Climate Science Advisory Panel ¹⁵¹	Tampa Bay Region	2050	1	2.5
		2100	2	8.5

¹⁴⁸ Intergovernmental Panel on Climate Change (IPCC), *The Ocean and Cryosphere in a Changing Climate*, SPM-7, 4-4, CCB9-21, AI-23, https://www.ipcc.ch/site/assets/uploads/sites/3/2019/12/SROCC_FullReport_FINAL.pdf (last visited Jan. 8, 2024). These projected ranges are based on climate models using “representative concentration pathways (RCPs),” which are scenarios of future emissions and concentrations of the full suite of greenhouse gases and aerosols, and chemically active gases, as well as land use/land cover.

¹⁴⁹ NCA4 at 406, 758.

¹⁵⁰ Southeast Florida Regional Climate Change Compact Sea Level Rise Work Group (SFRCCC), *Unified Sea Level Rise Projection: Southeast Florida* (2019), 9, https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 8, 2024). These projections have been accepted or adopted by all four of the Compact counties. See SFRCCC, *Unified Sea Level Rise Projections*, <https://southeastfloridaclimatecompact.org/unified-sea-level-rise-projections/> (last visited Jan. 8, 2024).

¹⁵¹ Tampa Bay Climate Science Advisory Panel, *Recommended Projections of Sea Level Rise in the Tampa Bay Region* (Apr. 2019), 1, 7, https://www.mymanatee.org/gisapps/pm/climateAdaptation/CSAP_SLR_Recommendation_2019.pdf (last visited Jan. 8, 2024).

The following table displays the NOAA 2022 Global and Regional Sea Level Rise Scenarios for the United States:¹⁵²

NOAA Sea Level Rise Projections				
Scale	Years	Low (feet)	Intermediate (feet)	High (feet)
Global	2030	.3	.43	.49
	2040	.39	.62	.89
	2050	.49	.92	1.41
	2100	.98	3.28	6.56
	2150	1.31	6.23	12.14
Contiguous United States	2030	.59	.69	.72
	2040	.82	.98	1.15
	2050	1.02	1.31	1.71
	2100	1.97	3.94	7.22
	2150	2.62	7.22	12.80

State, Regional, and Local Programs

Many state, regional, and local programs and policies are in place that address issues relating to sea level rise and coastal flooding.

State Programs

In January 2019, Governor DeSantis issued Executive Order 19-12, creating the Office of Resilience and Coastal Protection within DEP to help prepare Florida's coastal communities and habitats for impacts from sea level rise by providing funding, technical assistance, and coordination among state, regional, and local entities.¹⁵³ In August 2019, the Governor appointed Florida's first Chief Resilience Officer, who collaborates with state agencies, local communities, and stakeholders to prepare for the impacts of sea level rise and climate change.¹⁵⁴

DEP's Office of Resilience and Coastal Protection implements numerous programs related to sea level rise and coastal issues, including the Coastal Construction Control Line Program and the Beach Management Funding Assistance Program.¹⁵⁵ In addition, DEP implements the Florida Resilient Coastlines Program, which helps prepare coastal communities and habitats for the effects of climate change, especially sea level rise, by offering technical assistance and funding to communities dealing with coastal flooding, erosion, and ecosystem changes.¹⁵⁶

DEP also operates the Florida Coastal Management Program, which implements the Coastal Partnership Initiative. This initiative makes funding from NOAA available to Florida's 35 coastal

¹⁵² NOAA, *2022 Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines*, 15, 20,

<https://aambpublicoceanservice.blob.core.windows.net/oceanserviceprod/hazards/sealevelrise/noaa-nos-techrpt01-global-regional-SLR-scenarios-US.pdf> (last visited Jan. 8, 2024).

¹⁵³ Office of the Governor, *Executive Order Number 19-12*, 5 (2019), <https://www.flgov.com/wp-content/uploads/2019/01/EO-19-12.pdf> (last visited Jan. 8, 2024).

¹⁵⁴ Governor Ron DeSantis, *News Releases: Governor Ron DeSantis Announces Dr. Julia Nesheiwat as Florida's First Chief Resilience Officer* (Aug. 1, 2019), <https://flgov.com/2019/08/01/governor-ron-desantis-announces-dr-julia-nesheiwat-as-floridas-first-chief-resilience-officer/> (last visited Jan. 9, 2024); Governor DeSantis appointed Wesley Brooks as the third Chief Resilience Officer in November 2021. Associated Press, *DeSantis Appoints New Florida Chief Resilience Officer*, <https://apnews.com/article/climate-donald-trump-florida-environment-ron-desantis-e40102bdcb145f0b739897a91bf5da63> (last visited Jan. 8, 2024).

¹⁵⁵ DEP, *Beaches: About Us*, <https://floridadep.gov/rcp/beaches> (last visited Jan. 8, 2024).

¹⁵⁶ DEP, *Florida Resilient Coastlines Program*, <https://floridadep.gov/rcp/florida-resilient-coastlines-program> (last visited Jan. 8, 2024).

counties, and cities therein, that are required to include a coastal zone protection element in their comprehensive plans.¹⁵⁷ Grant applications must benefit the management of coastal resources and meet the purpose of at least one of the initiative's priority areas, which are resilient communities, coastal resource stewardship, access to coastal resources, and working waterfronts.¹⁵⁸

Additionally, DEP incentivizes the use of living shorelines as an alternative to traditional permits for coastal armoring, which is defined as manmade structures, such as seawalls or bulkheads, that protect upland properties and structures from erosion, wave action, or currents.¹⁵⁹ Living shorelines are a nature-based approach to coastal protection, using natural elements such as ecosystems, vegetation, stone, or organic materials to increase coastal resilience and adapt to sea level rise.¹⁶⁰ DEP provides exemptions from environmental resource permitting for small-scale shoreline stabilization projects, including living shorelines projects.¹⁶¹

Coastal resilience in Florida is being addressed by several state agencies other than DEP utilizing a number of strategies:

- The Department of Transportation (FDOT) prepares Florida's transportation system for potential hazards by creating and updating a long-range resilience plan that provides policy guidance for all transportation partners and establishes a framework for expenditure of state and federal funding.¹⁶² Additionally, FDOT has developed a resilience action plan for the State Highway System.¹⁶³
- The Department of Commerce works with DEP on the Community Resiliency Initiative, assisting communities with adaptation planning.¹⁶⁴
- The Fish and Wildlife Conservation Commission works as Florida's lead agency on addressing the impacts of climate change on fish and wildlife, including adaptation strategies for Florida's coastal ecosystems.¹⁶⁵
- The Division of Emergency Management maintains a statewide emergency management program, which administers federal mitigation grant programs, and serves as Florida's state coordinating agency for the National Flood Insurance Program.¹⁶⁶

Regional Programs

The WMDs address flood protection as a core part of their respective missions, and many of their activities are related to resilience efforts. For example, the St. Johns River WMD provides resources and cost-sharing to increase community resilience,¹⁶⁷ and the South Florida WMD is implementing comprehensive plans for addressing sea level rise, including a flood protection level of service program,

¹⁵⁷ DEP, *Florida Coastal Management Program*, <https://floridadep.gov/rcp/fcmp> (last visited Jan. 8, 2024); DEP, *Coastal Partnership Initiative*, <https://floridadep.gov/rcp/fcmp/content/coastal-partnership-initiative> (last visited Jan. 8, 2024).

¹⁵⁸ R. Ch. 62S-4, F.A.C.

¹⁵⁹ Ss. 161.053 and 161.085, F.S.; rr. 62B-33.0051, 62B-34.010(4), and 62B-41.002(4), F.A.C.

¹⁶⁰ Bilkovic et. al., *Living Shorelines: The Science and Management of Nature-Based Coastal Protection*, Taylor & Francis Group, 11-25 (2017); Florida Living Shorelines, *Home*, <http://floridalivingshorelines.com/> (last visited Jan. 8, 2024).

¹⁶¹ R. 62-330.051(12)(e), F.A.C.

¹⁶² FDOT, *Florida Transportation Plan (FTP): Resilience*, <http://www.floridatransportationplan.com/resilience.htm> (last visited Jan. 8, 2024); FDOT, *What is the Florida Transportation Plan?*, <http://floridatransportationplan.com/policyelement2020.pdf> (last visited Jan. 8, 2024).

¹⁶³ S. 339.157, F.S.; FDOT, Resilience Action Plan State Highway System (June 2023),

[https://fdotwww.blob.core.windows.net/sitefinity/docs/default-](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/policy/resilience/report_fdot_resilienceactionplan_final-main.pdf?sfvrsn=3a61b390_2)

[source/planning/policy/resilience/report_fdot_resilienceactionplan_final-main.pdf?sfvrsn=3a61b390_2](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/policy/resilience/report_fdot_resilienceactionplan_final-main.pdf?sfvrsn=3a61b390_2) (last visited Jan. 8, 2024).

¹⁶⁴ Florida Commerce, *Adaptation Planning – Planning for Coastal Flooding and Sea Level Rise*,

<https://www.floridajobs.org/community-planning-and-development/programs/community-planning-table-of-contents/adaptation-planning> (last visited Jan. 8, 2024).

¹⁶⁵ Fish and Wildlife Conservation Commission (FWC), *What FWC is Doing*, <https://myfwc.com/conservation/special-initiatives/climate-change/fwc/> (last visited Jan. 8, 2024); FWC, *A Guide to Climate Change Adaptation for Conservation*, 6-81–6-108, 9-35–9-51 (2016), <https://myfwc.com/media/5864/adaptation-guide.pdf> (last visited Jan. 8, 2024).

¹⁶⁶ DEM, *Mitigation*, <https://www.floridadisaster.org/dem/mitigation/> (last visited Jan. 8, 2024); DEM, *State Flood Plain Management Program*, <https://www.floridadisaster.org/dem/mitigation/floodplain/> (last visited Jan. 8, 2024).

¹⁶⁷ St. John's River WMD, *Sea-Level Rise*, <https://www.sjrwm.com/localgovernments/sea-level-rise/#projects> (last visited Jan. 8, 2024).

incorporating sea level rise projections into planning, conducting vulnerability assessments, and assisting local governments.¹⁶⁸

In 2010, through a proactive regional collaboration to address climate change, four counties - Broward, Miami-Dade, Monroe, and Palm Beach - signed on to the Southeast Florida Regional Climate Change Compact (Compact).¹⁶⁹ The Compact has developed a regional climate action plan as well as a Unified Sea Level Rise Projection.¹⁷⁰ One of the many recommendations in the regional plan is for local governments in the region to incorporate resilience and sustainability objectives, inclusive of the Regionally Unified Sea Level Rise Projections in city, county and regional agency comprehensive plans, transportation and other infrastructure plans and capital improvement plans.¹⁷¹

Local Governments

Florida law requires local governments located in coastal areas to include a coastal management element in their comprehensive plans.¹⁷² In 2015, the Legislature passed Senate Bill 1094, known as the “peril of flood law,” which required local governments to include a redevelopment component in the coastal management element of their comprehensive plans.¹⁷³ The redevelopment component must:

- Include development and redevelopment principles, strategies, and engineering solutions that reduce the flood risk in coastal areas resulting from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea level rise.
- Encourage the use of best practices development and redevelopment principles, strategies, and engineering solutions that will result in the removal of coastal real property from flood zone designations established by the Federal Emergency Management Agency (FEMA).
- Identify site development techniques and best practices that may reduce losses due to flooding and claims made under flood insurance policies issued in the state.
- Be consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable federal flood plain management regulations.
- Require that any construction activities seaward of the coastal construction control line be consistent with chapter 161, F.S., which regulates coastal construction.
- Encourage local governments to participate in the National Flood Insurance Program Community Rating System administered by FEMA to achieve flood insurance premium discounts for their residents.¹⁷⁴

Additionally, Florida’s Community Planning Act authorizes local governments to establish an “adaptation action area” designation in their comprehensive plans for low-lying coastal zones that are experiencing coastal flooding and are vulnerable to the impacts of sea level rise.¹⁷⁵ This enables local governments to develop policies and funding priorities that improve coastal resilience and to plan for sea level rise.

Resilient Florida Legislation

In 2021, the Legislature passed SB 1954,¹⁷⁶ which established several new programs and initiatives aimed at addressing the impacts of flooding and sea level rise on the state. To assist local

¹⁶⁸ South Florida WMD, *Resiliency and Flood Protection*, <https://www.sfwmd.gov/our-work/resiliency-and-flood-protection> (last visited Jan. 8, 2024).

¹⁶⁹ Regional Climate Leadership Summit, *SFRCCC* (2010), <http://southeastfloridaclimatecompact.org/wp-content/uploads/2014/09/compact.pdf> (last visited Jan. 8, 2024); SFRCCC, *What is the Compact?*, <http://southeastfloridaclimatecompact.org/about-us/what-is-the-compact/> (last visited Jan. 8, 2024).

¹⁷⁰ SFRCCC, *Regional Climate Action Plan 3.0* (Nov. 2022), https://southeastfloridaclimatecompact.org/wp-content/uploads/2023/10/SEFL_RCAP3_Final.1.pdf (last visited Jan. 8, 2024); SFRCCC, *Unified Sea Level Rise Projection, Southeast Florida* (2015), 5, 11, 13, 33, <http://www.southeastfloridaclimatecompact.org/wp-content/uploads/2015/10/2015-Compact-Unified-Sea-Level-Rise-Projection.pdf> (last visited Jan. 8, 2024).

¹⁷¹ SFRCCC, *Regional Climate Action Plan 3.0* (November 2022), 89, https://southeastfloridaclimatecompact.org/wp-content/uploads/2023/10/SEFL_RCAP3_Final.1.pdf (last visited Jan. 8, 2024).

¹⁷² Ss. 380.24 and 163.3177(6)(g), F.S.

¹⁷³ Ch. 2015-69, Laws of Fla.

¹⁷⁴ S. 163.3178(2)(f), F.S.

¹⁷⁵ Ss. 163.3177(6)(g), 163.3177(10) and 163.3164(1), F.S.; ch. 2011-139, Laws of Fla.

¹⁷⁶ Ch. 2021-28, Laws of Fla.

governments in resilience planning, the Legislature created the Resilient Florida Grant Program, which authorized DEP to provide grants to cities or counties to fund the costs of community resilience planning and necessary data collection for such planning. Upon completion of a vulnerability assessment, the city or county must submit to DEP a report detailing the findings of the assessment, all electronic mapping data used to illustrate the sea level rise impacts identified in the vulnerability assessment, and a list of critical assets,¹⁷⁷ including regionally significant assets, that are impacted by sea level rise.¹⁷⁸

In an effort to begin developing a coordinated statewide approach to addressing risks to the state,¹⁷⁹ SB 1954 required DEP, by July 1, 2022, to complete the development of a comprehensive flood vulnerability and sea level rise data set.¹⁸⁰ In addition, DEP must, by July 1, 2023, use the data set to complete a comprehensive statewide flood vulnerability and sea level rise assessment that identified inland and coastal infrastructure, geographic areas, and communities that are vulnerable to flooding and sea level rise and the associated risks.¹⁸¹

SB 1954 also directed DEP to annually develop a three-year Statewide Flooding and Sea Level Rise Resilience Plan and submit it to the Legislature, which must review and approve funding for the plan, subject to appropriation.¹⁸² The plan must consist of ranked projects that address risks of flooding and sea level rise to coastal and inland communities.¹⁸³ DEP is required to implement a scoring system for assessing each project submitted for inclusion in the plan, and each project must have a minimum 50 percent cost-share, with certain exceptions.¹⁸⁴ The bill specified that the first two annual plans (which were required to be submitted before DEP was required to complete development of the comprehensive statewide vulnerability assessment) must be preliminary plans that address risks identified in local government vulnerability assessments.¹⁸⁵ The first plan was submitted to the Legislature in December 2021 and proposed funding for projects beginning in Fiscal Year 2022-23.¹⁸⁶ DEP provided a list categorizing those projects by county.¹⁸⁷ DEP publishes the Statewide Resilience Plan on its website each December.¹⁸⁸

Finally, SB 1954 created the Florida Flood Hub for Applied Research and Innovation (Florida Flood Hub) within the University of South Florida College of Marine Science¹⁸⁹ to organize existing data needs, establish community-based programs to improve flood monitoring, and develop opportunities to partner with other flood and sea level rise research and innovation leaders.¹⁹⁰ Building off of SB 1954, the Legislature passed HB 7053¹⁹¹ in 2022. HB 7053 codified the Statewide Office of Resilience and moved it within the Executive Office of the Governor, which is headed by the Chief Resilience Officer, who is appointed by the Governor.¹⁹² Additionally, HB 7053 authorized DEP to

¹⁷⁷ S. 380.93(2)(a), F.S.

¹⁷⁸ S. 380.93(3)(c), F.S.

¹⁷⁹ S. 380.93(1)(c), F.S.

¹⁸⁰ S. 380.93(4)(a), F.S.

¹⁸¹ S. 380.93(4)(b), F.S.

¹⁸² S. 380.93(5)(a), F.S.

¹⁸³ *Id.*

¹⁸⁴ S. 380.93(5)(e), F.S.

¹⁸⁵ S. 380.93(5)(b), F.S.

¹⁸⁶ Governor Ron DeSantis, *News Releases: Governor Ron DeSantis Announces First Ever Statewide Flooding Resilience Plan* (Dec. 8, 2021), <https://www.flgov.com/2021/12/08/governor-ron-desantis-announces-first-ever-statewide-flooding-resilience-plan/> (last visited Jan. 8, 2024).

¹⁸⁷ DEP, *Protecting Florida Together: 2022-23 Statewide Flooding and Sea Level Rise Resilience Plan*, <https://protectingfloridatogether.gov/sites/default/files/documents/RF%20statewide%20plan%20PFT%5B2%5D.pdf> (last visited Jan. 8, 2024).

¹⁸⁸ The fiscal year 2024-2025 Statewide Resilience Plan is the most up to date plan, published in December 2023. DEP, *Statewide Resilience Plan 2024-2025*, <https://floridadep.gov/sites/default/files/2024-2025%20Statewide%20Resilience%20Plan-FINAL.pdf> (last visited Jan. 9, 2024).

¹⁸⁹ S. 380.0933, F.S.

¹⁹⁰ S. 380.0933(2), F.S.

¹⁹¹ Ch. 2022-89, Laws of Fla.

¹⁹² S. 14.2031, F.S.

provide grants to cities or counties to fund preconstruction activities¹⁹³ for projects to then be submitted for inclusion in the Statewide Flooding and Sea Level Rise Resilience Plan that are located in a city that has a population of 10,000 or fewer or a county that has a population of 50,000 or fewer according to the most recent April 1 population estimates posted on the Office of Economic & Demographic Research's website.¹⁹⁴

With respect to the Statewide Flooding and Sea Level Rise Resilience Plan, HB 7053 required DEP to rank and include in the plan all eligible projects that were submitted for the plan and to include a detailed narrative overview describing how the plan was developed.¹⁹⁵ In addition, HB 7053 specified that the plan submitted in 2023 must be an update to the preliminary plan submitted in 2021 and clarified that the preliminary plan and updates to the preliminary plan submitted in 2021, 2022, and 2023 may include projects submitted by WMDs that mitigate the risks of flooding or sea level rise on water supplies or water resources of the state.¹⁹⁶ HB 7053 also authorized drainage districts, erosion control districts, regional water supply authorities, and certain special districts to submit proposed projects for the plan under certain circumstances.¹⁹⁷

HB 7053 also required the Florida Flood Hub to provide tidal and storm surge flooding data to cities and counties for vulnerability assessments that are conducted pursuant to the grant program.¹⁹⁸

In 2023, the Legislature continued to expand on the Resilient Florida Grant Program by authorizing counties and municipalities to use Resilient Florida Grant Program funds for feasibility studies and permitting costs for nature-based solutions that reduce the impact of flooding and sea level rise.¹⁹⁹ The 2023 legislation also authorized WMDs to use Resilient Florida Grant funds to support local government adaptation planning.²⁰⁰

Flood Insurance

FEMA administers the National Flood Insurance Program (NFIP), which was created to offer federally subsidized flood insurance to property owners and to encourage land use controls in floodplains.²⁰¹ The NFIP makes flood insurance available to communities that adopt and enforce a floodplain management ordinance to reduce future flood risk to new construction in floodplains.²⁰² Communities eligible to participate in the NFIP Community Rating System receive discounts on flood insurance premiums.²⁰³

An important aspect of the NFIP are the flood maps that FEMA creates to support the program.²⁰⁴ A Flood Insurance Rate Map is an official map of a community on which FEMA has delineated both the special hazard areas and the risk premium zones applicable to the community.²⁰⁵ These maps have many applications relevant to resilience planning, including communicating base flood elevations and

¹⁹³ “‘Preconstruction activities’ means activities associated with a project that occur before construction begins, including, but not limited to, design of the project, permitting for the project, surveys and data collection, site development, solicitation, public hearings, local code or comprehensive plan amendments, establishing local funding sources, and easement acquisition.” S. 380.093(2)(c), F.S.

¹⁹⁴ S. 380.093(3)(b)1.d., F.S.

¹⁹⁵ S. 380.093(5), F.S.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ S. 380.0933(3), F.S.

¹⁹⁹ Ch. 2023-231, Laws of Fla.

²⁰⁰ *Id.*

²⁰¹ 42 U.S.C. § 4001 *et seq.*; 44 C.F.R. Ch. I, Subchap. B.; FEMA, *Flood Insurance*, <https://www.fema.gov/national-flood-insurance-program> (last visited Jan. 8, 2024).

²⁰² FEMA, *Flood Insurance*, <https://www.fema.gov/national-flood-insurance-program> (last visited Jan. 8, 2024).

²⁰³ FEMA, *National Flood Insurance Program Community Rating System*, <https://www.fema.gov/floodplain-management/community-rating-system> (last visited Jan. 8, 2024).

²⁰⁴ FEMA, *FEMA Flood Map Service Center: Welcome!*, <https://msc.fema.gov/portal/home> (last visited Jan. 8, 2024).

²⁰⁵ 44 C.F.R. § 59.1.

flood risk, establishing special flood hazard areas where flood insurance is required, and setting local floodplain and building standards.²⁰⁶

To demonstrate the elevation of property which has been developed pursuant to FEMA floodplain management regulations, a surveyor and mapper completes an elevation certificate.²⁰⁷ Surveyors and mappers must, within 30 days after completion, submit to the Division of Emergency Management a copy of each elevation certificate that they complete.²⁰⁸ The copy must be unaltered, except that the surveyor and mapper may redact the name of the property owner.²⁰⁹

Office of Economic and Demographic Research

The Office of Economic and Demographic Research (EDR) is a research arm of the Legislature which forecasts economic and social trends that affect revenues, policy making, and appropriations.²¹⁰ EDR is required to conduct an annual assessment of Florida's water resources and conservation lands²¹¹ and submit the assessment to the President of the Senate and the Speaker of the House of Representatives each year.²¹²

Each county, municipality, or special district (collectively "providers") that provides wastewater or stormwater services is required to create a 20-year needs analysis.²¹³ Beginning June 30, 2022, and every 5 years thereafter, providers must submit their respective needs analysis "to the county within which the largest portion of its service area is located."²¹⁴ Each county must compile the analyses into a single document, include its own analysis in the document, and submit the document to EDR no later than July 31, 2022, and every 5 years thereafter.²¹⁵ EDR then evaluates the submissions and develops a statewide needs analysis, which must be included in EDR's annual assessment of Florida's water resources and conservation lands.²¹⁶

Effect of the Bill

Aquatic Preserves

The bill designates the Kristin Jacobs Coral Reef Ecosystem Conservation Area as an aquatic preserve.

Reuse of Reclaimed Water

The bill requires each of the state's five WMDs, in coordination with DEP, to develop rules by December 31, 2025, that promote the reuse of reclaimed water and encourage potable water offsets that produce significant water savings beyond those required in a CUP. The rules must provide all of the following:

- If an applicant for a CUP proposes a water supply development or water resource development project using reclaimed water as part of their application, and the reclaimed water product meets advanced waste treatment standards such that the product contains not more, on a permitted annual average basis, than 3 milligrams per liter (mg/l) of total nitrogen (TN) and 1 mg/l of total phosphorous (TP), then the applicant is eligible for a permit duration of up to 30

²⁰⁶ FEMA, *Flood Maps*, available at https://www.fema.gov/media-library-data/1516468489259-8eb4bfef27ab35159b2f140a2926e809/What_Goes_Into_a_Flood_Map.pdf (last visited Jan. 8, 2024); SHMP at 102-103; DEP Guidebook at 40-41.

²⁰⁷ S. 472.0366(1)(a), F.S.

²⁰⁸ S. 472.0366(2), F.S.

²⁰⁹ *Id.*

²¹⁰ EDR, *About Us* (last updated Oct. 25, 2001),

<http://edr.state.fl.us/Content/about/index.cfm#:~:text=The%20Office%20of%20Economic%20and%20Demographic%20Research%200%28EDR%29,trends%20that%20affect%20policy%20making%2C%20revenues%2C%20and%20appropriations.> (last visited Dec. 27, 2023).

²¹¹ S. 403.928, F.S.

²¹² S. 403.928(6), F.S.

²¹³ Ss. 403.9301 and 403.9302, F.S.

²¹⁴ Ss. 403.9301(3)-(4) and 403.9302(3)-(4), F.S.

²¹⁵ Ss. 403.9301(4)

²¹⁶ S. 403.9301(5), F.S.

years if there is sufficient data to provide reasonable assurance that the conditions for permit issuance will be met for the duration of the permit.

- Authorization for a CUP permittee to seek a permit extension of up to 10 years if the permittee proposes a water supply development or water resource development project using reclaimed water that meets advanced waste treatment standards such that the reclaimed water product contains not more, on a permitted annual average basis, than 3 mg/l of TN and 1 mg/l of TP, during the term of its permit which results in the reduction of groundwater or surface water withdrawals or is completed to benefit a waterbody with a MFL with a recovery or prevention strategy.

The bill requires:

- All applicants for permits to construct or operate a domestic wastewater treatment facility, not just applicants located within, serving a population located within, or discharging within a water resource caution area, to prepare a reuse feasibility study as part of their application for the permit.
- A domestic wastewater treatment facility, after preparing the reuse feasibility study, to implement reuse to the degree that reuse is feasible, with consideration given to direct ecological or public water supply benefits afforded by any disposal of effluent.

Resilient Florida Grant Program

The bill defines and redefines terms and expands the types of projects undertaken by municipalities and counties that may be awarded funding by the program to include:

- Updates to the county's or municipality's inventory of critical assets, including regionally significant assets that are currently or reasonably expected to be impacted by flooding and sea level rise. Requires the updated inventory, at the time it is submitted to DEP, to reflect all such assets that are currently, or within 50 years may reasonably be expected to be, impacted by flooding and sea level rise.
- The development of strategies, as well as the development of projects, plans, and policies, that enhance community preparations for threats from flooding and sea level rise, and includes adaptation plans that help local governments prioritize project development and implementation across one or more jurisdictions in a manner consistent with DEP guidance.

The bill requires that municipalities and counties eligible for funding by the program for preconstruction activities for projects which are then submitted for inclusion in the Statewide Flooding and Sea Level Rise Resilience Plan also have a per capita annual income that is less than the state's per capita annual income.

The bill clarifies the date each year by which entities eligible to submit to DEP a list of proposed projects that address risks of flooding or sea level rise must do so. The bill allows such entities, for plans submitted by December 1, 2024, to submit projects identified in existing vulnerability assessments that do not comply with certain requirements if the existing vulnerability assessment was completed utilizing previously compliant statutory requirements, and clarifies that projects identified from this category of vulnerability assessments will be eligible for submittal until the prior vulnerability assessment has been updated to meet current statutory requirements.

The bill expands the information that must be submitted to DEP when vulnerability assessments are funded by the program as well as requirements for conducting vulnerability assessments funded under the program, including:

- Upon completion of vulnerability assessments funded by the program, local governments, in addition to providing information regarding critical assets, must include assets that are within 50 years reasonably expected to be impacted by flooding and sea level rise.
- Vulnerability assessments must make use of the best available information through the Florida Flood Hub as certified by the Chief Science Officer²¹⁷ in consultation with the Chief Resilience Officer.

²¹⁷ “Immediately upon taking office in 2019, Governor DeSantis announced major water policy reforms for the state by signing Executive Order 19-12 (Achieving More Now for Florida’s Environment). Among many other initiatives, the executive order called

The bill requires DEP to:

- Develop and maintain (not just complete) a comprehensive statewide flood vulnerability and sea level rise data set;
- Coordinate with the Chief Resilience Officer as well as the Florida Flood Hub in developing and maintaining the sea level rise data set;
- Coordinate with the Chief Resilience Officer and the Florida Flood Hub in completing a comprehensive statewide flood vulnerability and sea level rise assessment that identifies inland and coastal infrastructure, geographic areas, and communities in Florida which are vulnerable to flooding and sea level rise and the associated risks;
- Coordinate with the Chief Resilience Officer and the Florida Flood Hub in updating the comprehensive statewide flood vulnerability and sea level rise data set with the best available information each year and update the assessment at least every 5 years.

The bill requires the Chief Science Officer to coordinate with the Chief Resilience Officer and the Florida Flood Hub when developing statewide sea level rise projections.

Regarding the Statewide Flooding and Sea Level Rise Resilience Plan, the bill:

- Allows DEP, in consultation with the Chief Resilience Officer, to include projects which address risks of flooding and sea level rise to critical assets not yet identified in the comprehensive statewide flood vulnerability and sea level rise assessment.
- Allows regional resilience entities acting on behalf of one or more member counties or municipalities to submit plans and provides restrictions on the submittal of such plans.
- Expands the types of communities that are not required to provide a 50 percent cost share for projects included in the plan to include cities and counties that have a per capita annual income that is equal to or less than 75 percent of the state's per capita annual income.
- Clarifies the date each year by which DEP must develop and submit the plan to the Legislature and the Governor.

The bill removes the requirement that DEP initiate certain rulemaking by August 1, 2021, and simply requires DEP to engage in rulemaking.

The bill clarifies that regional planning councils and estuary partnerships whose responsibilities include planning for the resilience needs of communities and coordinating intergovernmental solutions to mitigate adverse impacts of flooding and sea level rise are eligible for funding.

Onsite Sewage Program

The bill clarifies that the Legislature intends that the transfer of the regulation of the Program from DOH to DEP be completed in a phased approach.

The bill requires that before the phased transfer, DEP must coordinate with DOH to identify equipment and vehicles that were previously used to carry out the program in each county and that are no longer needed for such purpose and further requires DOH to transfer the agreed-upon equipment and vehicles to DEP to the extent that each county agrees to relinquish ownership of such equipment and vehicles to DOH.

The bill prohibits DOH, once DEP has begun implementing the Program within a county, from implementing or collecting fees for the program unless specified by separate delegation or contract with DEP.

for the appointment of a C[hief] S[cience] O[fficer] to coordinate and prioritize scientific data, research, monitoring and analysis needs to ensure alignment with current and emerging environmental concerns most pressing to Floridians.” Governor Ron DeSantis, *News Releases: Governor Ron DeSantis Appoints Dr. Mark Rains as Florida’s Next Chief Science Officer* (Mar. 30, 2021), <https://www.flgov.com/2021/03/30/governor-ron-desantis-appoints-dr-mark-rains-as-floridas-next-chief-science-officer/> (last visited Jan. 16, 2024)

Onsite Sewage Treatment and Disposal Systems

The bill clarifies that all references to part I of chapter 386 in s. 381.0065, F.S., onsite sewage treatment and disposal systems, relate solely to nuisances involving improperly built or maintained OSTDSs and untreated or improperly treated or transported waste from OSTDSs.

The bill provides that DEP:

- Has all of the duties and authorities of DOH in part I of chapter 386 for nuisances involving OSTDSs, and declares that DEP's authority under part I of chapter 386 is in addition to and may be pursued independently of or simultaneously with certain other enforcement remedies.
- Has all of the judicial and administrative remedies available to it pursuant to the Florida Air and Water Pollution Control Act and removes provisions regarding the ability of DEP to issue citations and how it may issue citations.
- Has certain judicial and administrative remedies available to it for violations of laws and rules governing OSTDSs.

The bill requires DEP to:

- Adopt rules establishing and implementing a program of general permits for OSTDSs for projects, or categories of projects, which have, individually or cumulatively, a minimal adverse impact on public health or the environment, and provides certain matters which must be addressed in the rules.
- Deposit certain damages, costs or penalties it collects in the Water Quality Assurance Trust Fund, and deposit certain funds it collects in the Florida Permit Fee Trust Fund.
- Establish an enhanced nutrient-reducing OSTDS approval program that will expeditiously evaluate and approve such systems for use in this state.
- Assess a penalty of \$2,000 for failure to obtain an OSTDS permit or comply with certain laws and rules governing OSTDSs, and specifies that each day the cause of a sanitary nuisance is not addressed constitutes a separate offense.

The bill authorizes DEP to:

- Contract with or delegate certain of its powers and duties to a county.
- Upon proper affidavit being made, issue an inspection warrant:
 - When it appears that the properties to be inspected may be connected with or contain evidence of the violation of laws, rules and standards governing OSTDSs; or
 - When the inspection sought is an integral part of a larger scheme of systematic routine inspections which are necessary to, and consistent with, the continuing efforts of DEP to ensure compliance with laws, rules and standards governing OSTDSs.

BMAPs and TMDLs

A BMAP for a nutrient TMDL must also include a wastewater treatment plan that addresses domestic wastewater if DEP identifies domestic wastewater treatment facilities or OSTDSs as contributors of at least 20 percent of point source or nonpoint source nutrient pollution or if DEP determines remediation is necessary to achieve the TMDL. The bill requires private domestic wastewater facilities and special districts providing domestic wastewater services to provide the required wastewater facility information to the applicable local governments.

The bill requires, by July 1, 2034, any wastewater treatment facility providing reclaimed water that will be used for commercial or residential irrigation or be otherwise land applied within a nutrient BMAP or RAP area to meet advanced waste treatment standards such that the reclaimed water product contains not more, on a permitted annual average basis, of 3 mg/l of TN and 1 mg/l of TP if DEP has determined that the use of reclaimed water is causing or contributing to the nutrient impairment being addressed in the BMAP or RAP. For such determinations made by DEP after July 1, 2024, the applicable facility has 10 years to meet the advanced waste treatment standards. The provisions in this paragraph do not apply to reclaimed water that is land applied as part of a water quality restoration project or water resource development project approved by DEP to meet a TMDL or MFL and where the TN and TP will be at or below advanced waste treatment standards prior to entering groundwater or surface water.

Cooperation by Counties

The bill requires counties to make scientific, technical, research, administrative, and operational services and facilities available to DEP by interagency agreement, contract, or otherwise.

Transparency and Return on Investment of Water Programs and Projects

The bill requires the annual report submitted by DEP regarding WQIP to include a status report on each project funded since 2021 and requires the status report to, at a minimum, identify which projects have been completed and, if such information is available, provide information regarding nutrient-load improvements or water quality testing data for the waterbody.

The bill requires DEP, by July 1, 2025, to include projects funded by WQIP on a user-friendly website or dashboard. The website or dashboard must allow users to see the information required to be included in the annual report and the website or dashboard must be updated at least annually.

The bill requires EDR to provide a publicly-accessible data visualization tool on its website that allows for comparative analyses of key information contained in its statewide wastewater and stormwater needs analysis.

B. SECTION DIRECTORY:

- Section 1. Amends s. 253.04, F.S., relating to the duty of the Board of Trustees of the Internal Improvement Trust Fund to protect, etc., state lands; state may join in any action brought.
- Section 2. Amends s. 258.39, F.S., relating to boundaries of Aquatic Preserves.
- Section 3. Amends s. 373.250, F.S., relating to the reuse of reclaimed water.
- Section 4. Redesignates, creates, and amends provisions in s. 380.093, F.S., relating to the Resilient Florida Grant Program.
- Section 5. Amends s. 381.0061, F.S., relating to administrative fines.
- Section 6. Creates provisions relating to the Onsite Sewage Program.
- Section 7. Creates and amends provisions in s. 381.0065, F.S., relating to the regulation of onsite sewage and disposal systems; regulation.
- Section 8. Amends s. 381.0066, F.S., relating to onsite sewage and disposal systems; fees.
- Section 9. Amends s. 403.061, F.S., relating to the powers and duties of the Department of Environmental Protection.
- Section 10. Amends s. 403.064, F.S., relating to the reuse of reclaimed water.
- Section 11. Amends s. 403.067, F.S., relating to the establishment and implementation of total maximum daily loads.
- Section 12. Amends s. 403.0673, F.S., relating to the water quality improvement grant program.
- Section 13. Amends s. 403.086, F.S., relating to sewage disposal facilities; advanced and secondary waste treatment.
- Section 14. Amends s. 403.121, F.S., relating to enforcement by the Department of Environmental Protection.
- Section 15. Amends s. 403.0671, F.S., relating to basin management action plan wastewater reports.

- Section 16. Amends s. 403.0673, F.S., relating to the water quality improvement grant program.
- Section 17. Amends s. 403.9301, F.S., relating to wastewater services projections.
- Section 18. Amends s. 403.9302, F.S., relating to stormwater management projections.
- Section 19. Reenacts paragraph (x) of subsection (1) of s. 327.73, F.S., relating to noncriminal infractions.
- Section 20. Reenacts paragraph (a) of subsection (4) and paragraph (a) of subsection (6) of s. 381.0072, F.S., relating to food service protection.
- Section 21. Reenacts subsection (4) of s. 381.0086, F.S., relating to rules.
- Section 22. Reenacts subsection (7) of s. 381.0098, F.S., relating to biomedical waste.
- Section 23. Reenacts subsection (2) of s. 513.10, F.S., relating to operating without a permit.
- Section 24. Provides an effective date of July 1, 2024.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

The bill includes a number of provisions that may have a negative fiscal impact as follows:

- Maintain a comprehensive statewide flood vulnerability and sea level rise data set;
- Create a user-friendly website or dashboard for projects funded by WQIP; and
- Coordination with the Florida Flood Hub when developing statewide sea level rise projections.

DEP has indicated the additional workload can be absorbed within existing resources²¹⁸.

The bill requires DEP to establish an enhanced nutrient-reducing onsite sewage treatment and disposal system approval program. The department included a request of 41 FTE and \$7.4 million in its Fiscal Year 2024-2025 Legislative Budget Request to support the onsite sewage treatment and disposal system approval program. This can be addressed in the budget process.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

The bill may have an indeterminate negative impact on counties associated with requiring counties which apply for permits to construct or operate a domestic wastewater treatment facility to prepare a reuse feasibility study as part of their application for the permit and requiring counties, after preparing the reuse feasibility study, to implement reuse to the degree that reuse is feasible.

²¹⁸ Based on phone call with DEP on January 30, 2024.
STORAGE NAME: h1557e.ISC
DATE: 2/8/2024

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill may have an indeterminate positive fiscal impact on businesses which facilitate the preparation of reuse feasibility studies.

D. FISCAL COMMENTS:

The bill requires DEP and the governing boards of the WMDs to adopt rules that promote the reuse of reclaimed water and encourage potable water offsets that produce significant water savings beyond those required in a CUP, which may require those agencies to expend funds to promulgate rules.

The bill requires DEP to adopt rules establishing and implementing a program of general permits for OSTDSs for projects, or categories of projects, which have, individually or cumulatively, a minimal adverse impact on public health or the environment, which may require DEP to expend funds to promulgate rules.

However, such rulemaking provisions will have an insignificant negative fiscal impact on DEP and the WMDs and may be absorbed within existing resources.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable. This bill does not appear to require counties or municipalities to spend funds or take action requiring the expenditures of funds; reduce the authority that counties or municipalities have to raise revenues in the aggregate; or reduce the percentage of state tax shared with counties or municipalities.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

The bill requires each of the state's five WMDs, in coordination with DEP, to develop rules by December 31, 2025, that promote the reuse of reclaimed water and encourage potable water offsets that produce significant water savings beyond those required in a CUP.

The bill requires DEP to adopt rules establishing and implementing a program of general permits for OSTDSs for projects, or categories of projects, which have, individually or cumulatively, a minimal adverse impact on public health or the environment.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE CHANGES

On January 24, 2024, the Water Quality, Supply & Treatment Subcommittee considered four amendments, which were adopted, and reported the bill favorably as a committee substitute.

Amendment 221333: The amendment adds a requirement that municipalities and counties eligible for funding from the Resilient Florida Grant Program for preconstruction activities for projects which are then submitted for inclusion in the Statewide Flooding and Sea Level Rise Resilience Plan also have a per capita annual income that is less than the state's per capita annual income.

The amendment expands the types of communities that are not required to provide a 50 percent cost share for projects included in the Statewide Flooding and Sea Level Rise Resilience Plan to include cities and counties that have a per

capita annual income that is 75 percent less than the state's per capita annual income.

Amendment 720215: The amendment clarifies the date each year by which DEP must develop and submit to the Legislature and the Governor the Statewide Flooding and Sea Level Rise Resilience Plan.

The amendment clarifies the date each year by which entities eligible to submit to DEP a list of proposed projects that address risks of flooding or sea level rise must do so. The amendment allows such entities, for plans submitted by December 1, 2024, to submit projects identified in existing vulnerability assessments that do not comply with certain requirements if the existing vulnerability assessment was completed utilizing previously compliant statutory requirements, and clarifies that projects identified from this category of vulnerability assessments will be eligible for submittal until the prior vulnerability assessment has been updated to meet current statutory requirements.

Amendment 202077: The amendment requires the annual report submitted by DEP regarding WQIP to include a status report on each project funded since 2021 and requires the status report to, at a minimum, identify which projects have been completed and, if such information is available, provide information regarding nutrient-load improvements or water quality testing data for the waterbody.

The amendment requires DEP, by July 1, 2025, to include projects funded by WQIP on a user-friendly website or dashboard. The website or dashboard must allow users to see the information required to be included in the annual report and the website or dashboard must be updated at least annually.

Amendment 975541: The amendment requires EDR to provide a publicly-accessible data visualization tool on its website that allows for comparative analyses of key information contained in its statewide wastewater and stormwater needs analysis.

On February 8, 2024, the Infrastructure Strategies Committee considered four amendments, which were adopted, and reported the bill favorably as a committee substitute.

Amendment 458565: The amendment requires the WMDs, in rules they are required to develop in coordination with DEP relating to applications for CUPs and applications for extensions to CUP permits, to specify that water supply development or water resource development projects using reclaimed water as part of the CUP application must meet advanced waste treatment standards such that the reclaimed water product contains not more, on a permitted annual average basis, than 3 mg/l of TN and 1 mg/l of TP in order to be eligible for a permit of up to 30 years or a permit extension of up to 10 years.

The amendment requires the WMDs, in rules they are required to develop in coordination with DEP relating to applications for CUPs, to include a requirement that a permittee demonstrate how the new water supply development or water resource development project either meets water demands beyond a 20-year permit duration or is completed for the purpose of meeting the requirements of an adopted recovery or prevention strategy for a MFL.

The amendment requires the WMDs, in rules they are required to develop in coordination with DEP relating to CUP permittees seeking an extension of their permit, to include a requirement that the permittee demonstrate how the new water supply development or water resource development project either meets water demands beyond the issued permit duration or is completed for the

purpose of meeting the requirements of an adopted recovery or prevention strategy for a MFL.

Amendment 057967: The amendment clarifies the date each year by which entities eligible to submit to DEP a list of proposed projects that address risks of flooding or sea level rise identified in the comprehensive statewide flood vulnerability and sea level rise assessment or vulnerability assessments that meet certain requirements must do so.

Amendment 865093: The amendment clarifies that the types of communities that are not required to provide a 50 percent cost share for projects included in the Statewide Flooding and Sea Level Rise Resilience Plan include cities and counties that have a per capita annual income that is equal to or less than 75 percent of the state's per capita annual income.

Amendment 984357: The amendment clarifies that, by July 1, 2034, any wastewater treatment facility providing reclaimed water that will be used for commercial or residential irrigation or be otherwise land applied within a nutrient BMAP or RAP area must meet advanced waste treatment standards such that the reclaimed water product contains not more, on a permitted annual average basis, than 3 mg/l of TN and 1 mg/l of TP *if DEP has determined that the use of reclaimed water is causing or contributing to the nutrient impairment being addressed in the BMAP or RAP.* For such determinations made by DEP after July 1, 2024, the applicable facility has 10 years to meet the advanced waste standards. The provisions of this amendment do not apply to reclaimed water that is land applied as part of a water quality restoration project or water resource development project approved by DEP to meet a TMDL or MFL and where the TN and TP will be at or below advanced waste treatment standards prior to entering groundwater or surface water.

The staff analysis has been updated to reflect the committee substitute as approved by the Infrastructure Strategies Committee.