

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

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

Prepared By: The Professional Staff of the Committee on Governmental Oversight and Accountability

BILL: CS/SB 1656

INTRODUCER: Innovation, Industry, and Technology Committee and Senator Albritton

SUBJECT: Reclaimed Water

DATE: February 14, 2020

REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	<u>Wiehle</u>	<u>Imhof</u>	<u>IT</u>	<u>Fav/CS</u>
2.	<u>Ponder</u>	<u>McVaney</u>	<u>GO</u>	<u>Pre-meeting</u>
3.	_____	_____	<u>AP</u>	_____

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 1656 prohibits domestic wastewater treatment facilities from disposing of effluent, reclaimed water, or reuse water by surface water discharge beginning January 1, 2026, with stated exceptions.

The bill provides for potable water reuse, deeming reclaimed water to be a water source for public water supply systems, declaring potable reuse to be an alternative water supply, declaring potable reuse projects to be eligible for alternative water supply funding, and prohibiting exclusion of use of potable reuse water from regional water supply planning. It requires the Florida Department of Environmental Protection (DEP) to review existing rules governing reclaimed water and potable reuse for necessary modifications and repeals and to adopt new rules. It requires the DEP to initiate rulemaking by December 31, 2020, and submit the adopted rules to the President of the Senate and the Speaker of the House of Representatives by December 12, 2021, for approval and incorporation into ch. 403, F.S. The rules may not be published as administrative rules by the DEP. The bill also sets out legislative intent on how the DEP is to perform these functions.

The bill requires the DEP and the water management districts to develop and execute a memorandum of agreement providing for the procedural requirements of a coordinated review of all permits associated with the construction and operation of an indirect potable reuse project.

The bill provides for permitting, tax, and funding benefits for a potable reuse project developed as a qualifying project.

The bill requires that the DEP coordinate with one or more technical working groups to adopt rules for the implementation of the potable reuse statute and sets out requirements for these rules.

It requires each county, municipality, and special district to provide specified benefits and incentives to developers for use of graywater technologies.

The bill states that the Legislature determines and declares that this act fulfills an important state interest.

The bill takes effect upon becoming a law.

II. Present Situation:

Drinking Water

The federal Safe Drinking Water Act (SDWA) was passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply.¹ The SDWA applies to all public water systems in the U.S., which are regulated by the Environmental Protection Agency (EPA).² However, the most direct oversight of water systems is conducted by state drinking water programs. States can apply to the EPA for "primacy," or the authority to implement the SDWA within their jurisdictions, if they can show that they will adopt standards at least as stringent as the EPA's and ensure their water systems meet these standards. All states and territories, except Wyoming and the District of Columbia, have received primacy.³

The Florida Safe Drinking Water Act (the Act)⁴ provides that it is the intent of the legislature to provide a water supply program. The DEP is charged with the primary responsibility for the safe drinking water program with support from the Department of Health and its units, including county health departments.⁵ The Act is intended to:

- Give effect to the federal Safe Drinking Water Act;
- Encourage cooperation between federal, state, and local agencies, not only in their enforcement role, but also in their service and assistance roles to city and county elected bodies; and
- Provide for safe drinking water at all times throughout the state, with due regard for economic factors and efficiency in government.

The Act establishes the Drinking Water State Revolving Fund (DWSRF) which is a federal-state partnership providing financial support to water systems and state drinking water programs. The

¹ United States Environmental Protection Agency, *Understanding the Safe Drinking Water Act* (June 2004), available at <https://www.epa.gov/sites/production/files/2015-04/documents/epa816f04030.pdf> (last visited February 11, 2020).

² *Id.*

³ *Id.* at 2.

⁴ Sections 403.850 – 403.891, F.S.

⁵ Section 403.851, F.S.

federal Department of Environmental Protection oversees each state's DWSRF program. In Florida, DEP administers the program and receives requests for funding throughout the year.⁶

State Objectives

Sections 403.064(1) and 373.250(1), F.S., establish the encouragement and promotion of water reuse as formal state objectives. These sections further provide that the use of reclaimed water⁷ provided by wastewater treatment plants permitted and operated under a reuse program by the DEP shall be considered environmentally acceptable and not a threat to public health and safety. Section 403.064(1), F.S., also provides that the reuse of reclaimed water is a critical component of meeting the state's water supply needs, and encourages incentive-based programs for reuse implementation.

Water Reuse

Water reuse is an important component of both wastewater management and water resource management in Florida. Reuse is the deliberate application of reclaimed water for a beneficial purpose.⁸ Reuse offers an environmentally sound means for managing wastewater that dramatically reduces environmental impacts associated with discharge of wastewater effluent to surface waters.⁹ Thus, reuse involves taking what is considered to be wastewater, giving it a high degree of treatment and using the resulting high-quality reclaimed water for a new, beneficial use.¹⁰

Additionally, the use of reclaimed water provides an alternative water supply for activities that do not require potable quality water (e.g. irrigation, industrial use, fire protection etc.) which serves to conserve available supplies of potable quality water.¹¹ Reclaimed water is water from a domestic wastewater¹² treatment facility that has received at least secondary treatment¹³ and basic disinfection¹⁴ for reuse.¹⁵ Thus, water reuse represents the intersection of the full range of

⁶ Department of Environmental Protection, State Revolving Fund, DWSRF Program, <https://floridadep.gov/wra/srf/content/dwsrf-program> (last visited February 10, 2020).

⁷ Rule 62-610.200, F.A.C., provides that except as specifically provided in Chapter 62-610, F.A.C., "reclaimed water" means "water that has received at least secondary treatment and basic disinfection and is reused after flowing out of a domestic wastewater treatment facility."

⁸ Rule 62-610.200(52), F.A.C.

⁹ Reuse Coordinating Committee, the Water Conservation Initiative Water Reuse Work Group, *Water Reuse for Florida: Strategies for Effective Use of Reclaimed Water* (June 2003), https://floridadep.gov/sites/default/files/valued_resource_FinalReport_508C.pdf (last visited February 11, 2020).

¹⁰ Department of Environmental Protection, *Water Reuse*, https://floridadep.gov/sites/default/files/reusebrochure2010_reading.pdf (last visited February 11, 2020).

¹¹ *Id.* at 4.

¹² Section 367.021(5), F.S., defines the term "domestic wastewater" to mean wastewater principally from dwellings, business buildings, institutions, and sanitary wastewater or sewage treatment plants.

¹³ Rule 62-610.200(54), F.A.C., defines the term "secondary treatment" to mean "wastewater treatment to a level that will achieve the effluent limitations specified in paragraph 62-600.420(1)(a), F.A.C."

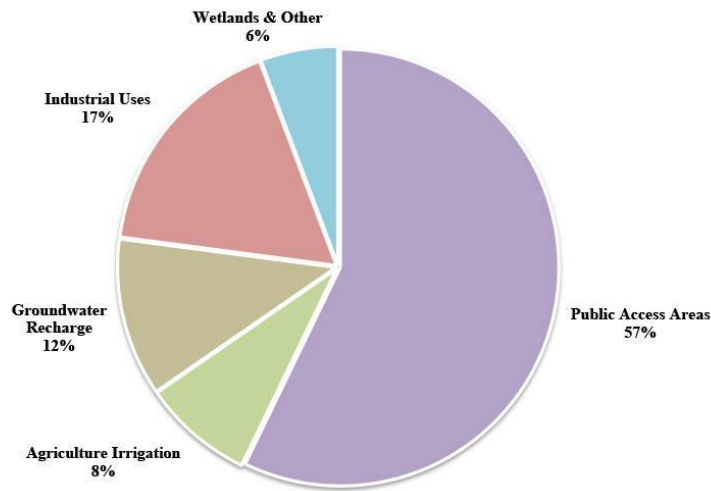
¹⁴ Rule 62-600.440(5), F.A.C., provides the requirements for basic disinfection.

¹⁵ Section 373.019(17), F.S.; Rule 62-610.200(48), F.A.C.

water programs – surface water, ground water, underground injection control, wetlands, and drinking water.¹⁶

According to the DEP report, over the past 30 years, Florida has made great strides in the expansion of reclaimed water systems and reuse is now an integral part of wastewater management, water resource management, and ecosystem management in Florida. In 2013, Florida reused approximately 719 million gallons per day (MGD) of reclaimed water, which represents approximately 45 percent of the total domestic wastewater flow in the state. Today Florida is recognized as a national leader in water reuse.¹⁷ The chart below shows the percentage of reclaimed water utilization by flow for each reuse type.¹⁸

Figure 1: Reclaimed Water Utilization by Flow



Note: Agriculture irrigation includes edible crops (e.g., citrus) as well as feed and fodder crops (e.g., spray fields).

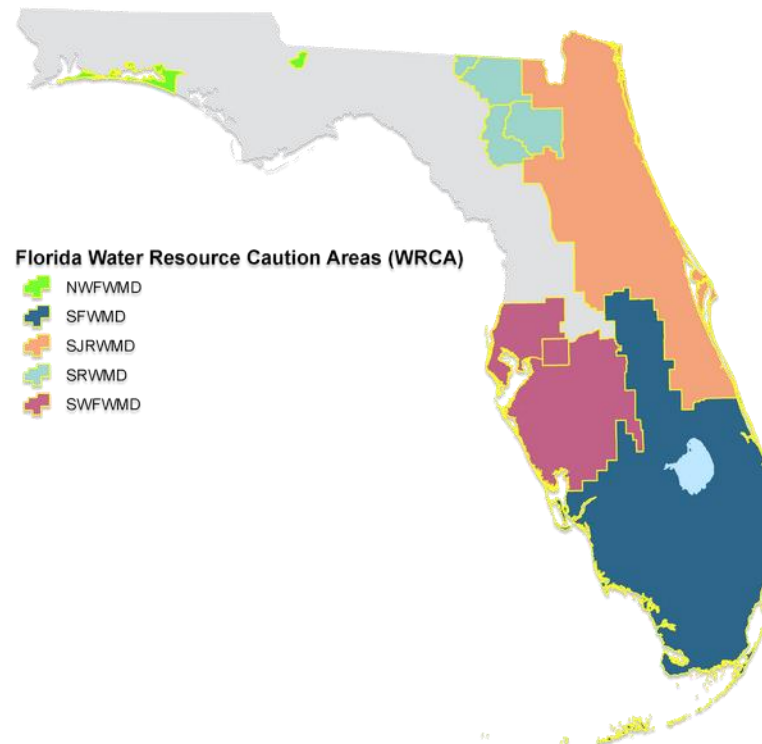
Reuse and other alternative resources plays a critical role in Florida’s “water resource caution areas” (WRCAs). These are areas designated as having current or future critical water supply problems where traditional water sources may not be adequate to meet expected water needs. The map below shows the water resource caution areas.¹⁹

¹⁶ Reuse Coordinating Committee, the Water Conservation Initiative Water Reuse Work Group, *Water Reuse for Florida: Strategies for Effective Use of Reclaimed Water*, *supra* note 9 at 8.

¹⁷ *Id.* at 19.

¹⁸ This chart is available from DEP’s *Florida’s Reuse Activities*, <https://floridadep.gov/water/domestic-wastewater/content/floridas-reuse-activities>.

¹⁹ This map is DEP’s In-house graphic map of water resource caution areas, *available at* <https://floridadep.gov/water/water/media/house-graphic-map-water-resource-caution-areas>.



Reuse Projects

Both the DEP and the water management districts (WMDs) – as entities who play a major role in the management of water resources – have been involved in promoting reuse and the use of reclaimed water.²⁰

The DEP classifies the following as “reuse” projects:

- Slow-rate land application projects with restricted access permitted under Part II of Chapter 62-610, F.A.C.
- Projects permitted under Part III of Chapter 62-610, F.A.C.
- Rapid-rate land application systems permitted under Part IV of Chapter 62-610, F.A.C.
- Projects making reclaimed water from domestic wastewater sources available for industrial applications, as described in Part VII of Chapter 62-610, F.A.C.
- Ground water recharge projects permitted under Part V of Chapter 62-610, F.A.C.
- Indirect potable reuse projects permitted under Part V of Chapter 62-610, F.A.C.
- Wetlands creation, restoration, and enhancement projects, if the applicant provides an affirmative demonstration that reclaimed water will be used to create, restore, or enhance wetlands. The wetlands creation, restoration, or enhancement aspects shall be described in detail and documented.
- Projects previously identified as “reuse.”
- Uses specifically addressed in Part III of Chapter 62-610, F.A.C., such as toilet flushing, fire protection, construction dust control, aesthetic purposes, and recreational uses.

²⁰ Department of Environmental Protection, Office of Water Policy, *Report on Expansion of Beneficial Use of Reclaimed Water, Stormwater and Excess Surface Water*, 16 (December 1, 2015) available at <https://floridadep.gov/sites/default/files/SB536%20Final%20Report.pdf>.

- Uses not addressed elsewhere in Chapter 62-610, F.A.C., if the applicant provides an affirmative demonstration that reclaimed water will be used for a beneficial purpose or the use of reclaimed water will eliminate the need for use of a potable water or a water that could be used as a source of potable water.²¹

Additionally, Rule 62-610.480, F.A.C., provides for a framework of approval of other uses of reclaimed water not specifically identified in Chapter 62-610, F.A.C. The rule specifies that the DEP must approve other uses of reclaimed water if the: (i) all requirements of Part III of Chapter 62-610, F.A.C., are met and (ii) the engineering report provides reasonable assurance that the intended use will meet applicable rules of the Department and will protect the public health.²²

Florida's Water Reuse Program

A key component to Florida's reuse program are reuse feasibility studies which are conducted to evaluate the capability of a domestic wastewater treatment plant to implement reuse.²³ Section 403.064(2), F.S., requires reuse feasibility studies to meet the DEP's guidelines and to include:

- Evaluation of monetary costs and benefits for several levels and types of reuse.
- Evaluation of water savings if reuse is implemented.
- Evaluation of rates and fees necessary to implement reuse.
- Evaluation of environmental and water resource benefits associated with reuse.
- Evaluation of economic, environmental, and technical constraints.
- A schedule for implementation of reuse that considers phased implementation.

Feasibility studies are required by:

- Section 403.064, F.S., for domestic wastewater facilities located within, serving a population within, or discharging within designated WRCAs;
- The Indian River Lagoon system and Basin Act, contained in Chapter 90-262, L.O.F.;
- The antidegradation policy in Rules 62-4.242 and 62-302.300, F.A.C., for new or expanded surface water discharges; and
- By rules of the applicable water management district.

A reuse feasibility study is not required if the domestic wastewater treatment facility has an existing or proposed permitted or design capacity less than 0.1 MGD or the permitted reuse capacity equals or exceeds the total permitted capacity of the domestic wastewater treatment facility.²⁴

Potable Reuse

The use of reclaimed water for the purpose of directly or indirectly augmenting drinking water supplies is known as potable reuse. Indirect potable reuse is the planned discharge of reclaimed water to ground or surface waters for the development or supplementation of potable water supply. Direct potable reuse is the introduction of advanced treated reclaimed water into a raw

²¹ Rule 62-610.810(2), F.S.

²² Rule 62-610.480(1), F.A.C.

²³ Department of Environmental Protection, *Reuse Feasibility Studies*, <https://floridadep.gov/water/domestic-wastewater/content/reuse-feasibility> (last visited February 11, 2020).

²⁴ Section 403.064(5), F.S.,

water supply immediately upstream of a drinking water treatment facility or directly into a potable water distribution system.²⁵

Although regulations currently exist in Florida for using reclaimed water for indirect potable reuse for augmenting surface water, there are no regulations that address using reclaimed water for indirect potable reuse involving groundwater replenishment or direct potable reuse.²⁶

Potable Reuse Commission

The Potable Reuse Commission (PRC) was organized “to create a consensus driven partnership to develop the framework for implementation of potable reuse in Florida.”²⁷ The framework will support the use of potable reuse as a water supply alternative in Florida to meet future supply needs while protecting public health and environment. The PRC identified a number of proposed regulatory changes needed to ensure protection of public health and the environment:

- Move Florida’s existing reclaimed water regulations that apply to potable reuse into the appropriate drinking water regulations.
- Create new regulations addressing potable reuse to be placed within Florida’s drinking water program regulations.
- Revise existing drinking water regulations to specify reclaimed water as a water supply source and employ appropriate treatment technologies to address pathogens (such as bacteria and viruses) and emerging constituents²⁸ (such as pharmaceuticals and personal care products).
- Require potable reuse to meet drinking water standards.
- Provide pathogen treatment to meet drinking water standards.
- Make existing industrial pretreatment requirements apply to potable reuse projects and make domestic wastewater facilities used for potable reuse also implement source control.
- Address emerging constituents, such as pharmaceuticals and personal care products, in potable reuse.²⁹

The PRC also recommended to:

- Continue the exemption of direct potable reuse from having to obtain a consumptive use permit or water use permit.
- Revise existing regulations to clarify that indirect potable reuse projects must comply with existing spring discharge standards.
- Expand the current definition of “indirect potable reuse” to include groundwater so that all types of indirect potable reuse projects fit within the definition.

²⁵ *Id.* at xxiv.

²⁶ *Id.*

²⁷ Potable Reuse Commission (2019), *Framework for the Implementation of Potable Reuse in Florida, Prepared for Florida Potable Reuse Commission*, Published by the WaterReuse Association, Alexandria, VA (January 2020), xxvii-xxviii, available at <http://prc.watereuseflorida.com/wp-content/uploads/Framework-for-Potable-Reuse-in-Florida-FINAL-January-2020-web10495.pdf> (last visited February 10, 2020).

²⁸ The term “emerging constituents” is defined to mean pharmaceuticals, personal care products, and other unregulated chemicals. Also referred to as constituents of emerging concern. *Id.* at xx.

²⁹ Potable Reuse Commission (2019), *Framework for the Implementation of Potable Reuse in Florida, Prepared for Florida Potable Reuse Commission*, *supra* note 35, at xxvii-xxviii.

- Specify a point of compliance with drinking water standards for potable reuse - at the point where finished potable water is finally discharged from the drinking water treatment facility.
- Have the DEP and the water management districts enter into a memorandum of agreement to coordinate permitting for indirect potable water projects.
- Have the DEP review current groundwater recharge requirements in Chapter 62-610, F.A.C.³⁰

Wastewater Treatment Facilities

The proper treatment and disposal or reuse of domestic wastewater is an important part of protecting Florida's water resources. The majority of Florida's domestic wastewater is controlled and treated by centralized treatment facilities regulated by the DEP. Florida has approximately 2,000 permitted domestic wastewater treatment facilities.^{31,32}

Unless exempted by rule or statute, any facility or activity which discharges wastes into waters of the State or which will reasonably be expected to be a source of water pollution must obtain a permit from the DEP.³³ Generally, persons who intend to collect, transmit, treat, dispose, or reuse wastewater are required to obtain a wastewater permit. A wastewater permit issued by the DEP is required for both operation and certain construction activities associated with domestic or industrial wastewater facilities or activities. A DEP permit must also be obtained prior to construction of a domestic wastewater collection and transmission system.³⁴

The National Pollution Discharge Elimination System (NPDES) Program is a federal program established by the Clean Water Act (CWA) to control point source and stormwater discharges.³⁵ Under section 402 of the CWA, any discharge of a pollutant from a point source to surface waters (i.e., the navigable waters of the United States or beyond) must obtain an NPDES permit. NPDES permit requirements for most wastewater facilities or activities (domestic or industrial) that discharge to surface waters are incorporated into a state-issued permit, thus giving the permittee one set of permitting requirements rather than one state and one federal permit.³⁶ The DEP issues operation permits for a period of 5 years for facilities regulated under the NPDES program and up to 10 years for other domestic wastewater treatment facilities.³⁷

³⁰ *Id.* at xxix.

³¹ Department of Environmental Protection, *General Facts and Statistics about Wastewater in Florida*, available at <https://floridadep.gov/water/domestic-wastewater/content/general-facts-and-statistics-about-wastewater-florida> (last visited February 10, 2020).

³² For purposes of permitting, wastewater facilities are categorized as either industrial or domestic based on the type of wastewater the facility handles. Domestic wastewater is wastewater from dwellings, business buildings, and the like, commonly referred to as sanitary wastewater or sewage. All wastewater that is not defined as domestic wastewater is considered industrial wastewater.

³³ *See* Section 403.087, F.S.

³⁴ Department of Environmental Protection, *Wastewater Permitting*, available at <https://floridadep.gov/water/domestic-wastewater/content/wastewater-permitting> (last visited February 10, 2020).

³⁵ 33 U.S.C. s. 1342.

³⁶ Sections 403.061 and 403.087, F.S.

³⁷ Section 403.087(3), F.S.

Consumptive Use Permits

The State's five WMDs implement the consumptive use permitting program. A consumptive water use permit allows the holder to withdraw a specified amount of water from the ground (aquifers) or a canal, lake, river (surface water) for reasonable-beneficial uses.³⁸ The DEP or the governing board of a WMD may require permits for the consumptive use of water and may impose reasonable conditions necessary to assure such use is consistent with the overall objectives of the WMD or the DEP and is not harmful to the water resources of the area.³⁹ To obtain a consumptive use permit (CUP), the applicant must establish that the proposed use of water:

- Is a reasonable beneficial use as defined in s. 373.019;⁴⁰
- Will not interfere with any presently existing legal use of water; and
- Is consistent with the public interest.⁴¹

It is possible for consumptive use to lower the flows and levels of water bodies to a point that the resource values are significantly harmed. To prevent this harm, the WMDs are responsible for identifying and establishing the limit at which further water withdrawals would be significantly harmful to the water resources or ecology of the area, known as the minimum flow⁴² or minimum level (MFL).⁴³

For water bodies that are below their MFL, or are projected to fall below it within 20 years, the WMDs are required to implement a recovery or prevention strategy to ensure the MFL is maintained.⁴⁴ A recovery or prevention strategy must include the development of additional water supplies and other actions to achieve recovery to the established MFL as soon as practicable or prevent the existing flow or water level from falling below the established MFL.⁴⁵ A recovery or prevention strategy must also include a phased-in approach or a timetable that will allow for the provision of sufficient water supplies for all existing and projected reasonable-beneficial uses, including implementation of conservation and other efficiency measures to offset reductions in permitted withdrawals.⁴⁶

³⁸ South Florida Water Management District, *Consumptive Water Use Permits*, <https://www.sfwmd.gov/doing-business-with-us/permits/water-use-permits> (last visited February 11, 2020).

³⁹ Section 373.219(1), F.S.; No permit is required for domestic consumption of water by individual users.

⁴⁰ Section 373.019(16), F.S., defines "reasonable-beneficial use" to mean "the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner that is both reasonable and consistent with the public interest."

⁴¹ Section 373.223(1), F.S.

⁴² Section 373.042(1)(a), F.S., provides that the minimum flow for a given watercourse is the limit at which further water withdrawals would be significantly harmful to the water resources or ecology of the area.

⁴³ Section 373.042(1)(b), F.S., provides that the minimum level is the level of groundwater in an aquifer or the level of a surface waterbody at which further withdrawals will significantly harm the water resources of the area. DEP, *Minimum Flows and Minimum Water Levels and Reservations*, available at <https://floridadep.gov/water-policy/water-policy/content/minimum-flows-and-minimum-water-levels-and-reservations> (last visited Jan. 27, 2020).

⁴⁴ DEP, *Minimum Flows and Minimum Water Levels and Reservations*, available at <https://floridadep.gov/water-policy/water-policy/content/minimum-flows-and-minimum-water-levels-and-reservations> (last visited Jan. 27, 2020).

⁴⁵ Section 373.042(2), F.S.

⁴⁶ *Id.*

Aquifer Storage and Recovery and Aquifer Recharge

DEP has general regulatory authority over underground water, lakes, rivers, streams, canals, ditches, and coastal waters under the jurisdiction of the state to the extent that the pollution of these waters may impact public health or impair the interests of the public or persons lawfully using the waters.⁴⁷ Accordingly, through its Aquifer Protection Program, DEP regulates the disposal of appropriately treated fluids, such as reclaimed water, through underground injection wells while also protecting underground sources of drinking water.⁴⁸ The program is aimed at preventing degradation of the quality of aquifers adjacent to the injection zone.⁴⁹

Aquifer storage and recovery (ASR) is the underground injection and storage of water into a subsurface formation for the purpose of withdrawing the water for beneficial purposes at a later date.⁵⁰ ASR provides for storage of large quantities of water for both seasonal and long-term storage and ultimate recovery that would otherwise be unavailable due to land limitations, loss to tides, or evaporation.⁵¹ Similar to ASR, aquifer recharge (AR) is the underground injection and storage of water into an aquifer, but the water used to recharge the aquifer is not being stored for the purpose of withdrawing the water from the same facility at a later date.⁵² AR is primarily considered a water resource development and conservation strategy used to preserve and enhance water resources and natural systems (e.g., sustain water levels, meet MFLs) and to attenuate flooding.⁵³

For both ASR and AR, the aquifer acts as an underground reservoir for the recharged water. Whereas ASR is most commonly utilized near major population centers requiring storage to ensure water system reliability (e.g., public supply and commercial/industrial/mining uses), AR is most effective as a water management strategy in sparsely populated rural areas whose water resources rely on stable regional aquifer levels.⁵⁴

ASR and AR wells are regulated as Class V injection wells, which include all wells that inject non-hazardous fluids into or above formations that contain underground sources of drinking water. While ASR wells are all wells associated with an ASR facility, AR wells include:

- Recharger wells, which replenish, augment, or store water in an aquifer;
- Saltwater intrusion barrier wells, which inject water into a fresh water aquifer to prevent the intrusion of salt water into the fresh water;
- Subsidence control wells, which inject fluids into a zone that does not produce oil or gas to reduce or eliminate subsidence associated with the overdraft of fresh water; and

⁴⁷ Section 403.062, F.S.

⁴⁸ Rule 62-528.200(66), F.A.C., defines the term “underground source of drinking water” to mean aquifer. DEP, *Aquifer Protection Program – UIC*, available at <https://floridadep.gov/water/aquifer-protection> (last visited Jan. 27, 2020).

⁴⁹ Department of Environmental Protection, *Aquifer Protection Program -UIC*, available at <https://floridadep.gov/water/aquifer-protection> (last visited February 11, 2020); see ch. 62-528, F.A.C., for underground injection control permitting requirements.

⁵⁰ Office of Water Policy, *Report on Expansion of Beneficial Use of Reclaimed Water, Stormwater and Excess Surface Water*, *supra* note 20 at 83.

⁵¹ Department of Environmental Protection, *Aquifer Protection Program –UIC*, *supra* note 66.

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

- Connector wells, which connect two aquifers to allow the interchange of water between them.⁵⁵

Fiscally Constrained Counties

A rural area of opportunity (RAO) is a rural community, or a region composed of rural communities, designated by the Governor that presents a unique economic development opportunity of regional impact or that has been adversely affected by an extraordinary economic event, severe or chronic distress, or a natural disaster.⁵⁶ The three designated RAOs are the:

- Northwest RAO, which includes Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, Liberty, Wakulla, and Washington Counties, and the City of Freeport;
- South Central RAO, which includes DeSoto, Glades, Hardee, Hendry, Highlands, and Okeechobee Counties, and the Cities of Pahokee, Belle Glade, South Bay, and Immokalee; and
- North Central RAO, which includes Baker, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Jefferson, Lafayette, Levy, Madison, Putnam, Suwannee, Taylor, and Union Counties.⁵⁷

A fiscally constrained county is a county that is entirely within a RAO or a county for which the value of a mill will raise no more than \$5 million in revenue.⁵⁸

Evaluation of the Impacts of Eliminating Surface Water Discharges from Domestic Wastewater Facilities in Florida

Carollo Engineers, Inc.,⁵⁹ at the request of the Florida Water Environment Association Utility Council,⁶⁰ evaluated the ramifications and developed planning level costs associated with eliminating the discharge of treated effluent to surface waters from domestic wastewater treatment facilities (DWWTFs).⁶¹ This bill as well as House Bill 715 were the impetus for the evaluation. The final evaluation notes the following limitations on different alternative effluent management practices and methods:

- Public access reclaimed water systems provide a tremendous benefit in offsetting the use of potable water for non-potable uses, but experiences significant fluctuations in demand and requires an alternative effluent management or reuse mechanism during low-demand periods.

⁵⁵ Rule 62-528.300(1)(e), F.A.C.

⁵⁶ Section 288.0656(2)(d), F.S.

⁵⁷ Florida Department of Economic Opportunity, *RAO*, available at <http://www.floridajobs.org/business-growth-and-partnerships/rural-and-economic-development-initiative/rural-areas-of-opportunity> (last visited Jan. 16, 2019).

⁵⁸ Section 218.67(1), F.S.

⁵⁹ Carollo Engineers is an environmental engineering firm that specializes in the planning, design, and construction of water and wastewater facilities. See <https://www.carollo.com/who-we-are> (last visited January 31, 2020).

⁶⁰ According to its website, the “Florida Water Environment Association Utility Council was formed in 1998 to promote sound public policy in the water quality and wastewater industry. The Utility Council consists of wastewater utilities throughout the state who are working together to address legislative and regulatory issues. The Utility Council monitors proposed legislation and regulations and keeps its members informed of the latest developments. The Utility Council also works to educate policy makers about the intricacies of water quality and wastewater management.” See <https://www.fwea.org/history.php> (last visited January 31, 2020).

⁶¹ Florida Water Environment Association Utility Council, Carollo Engineers, Inc., *Evaluation of the Impacts of Eliminating Surface Water Discharges from Domestic Wastewater Facilities in Florida* (Jan. 2020).

- Public access reclaimed water systems are most cost effective when used with new development, and extension into existing, densely urbanized areas provides little benefit at a very high cost. Many existing surface water discharges are located in developed areas far from new development.
- In the 1980s, other alternatives such as rapid infiltrations basis (RIBs) were developed in reaction to studies showing that the historical use of surface water discharge was degrading surface water quality. Surface water discharges have been all but eliminated in Central Florida by pairing urban and agricultural irrigation with RIBs. Use of RIBs, however, depends on the existence of hydrogeology which favors ground water recharge, and this is limited to Central Florida. Similarly, another method that was developed, deep well injection, can provide exceptional reliability but is dependent on suitable subsurface conditions and is becoming increasingly limited across the state.
- Active surface discharge permits are located where these methods cannot be used, and where there are large receiving water bodies which can accommodate the discharge without environmental degradation.⁶²

Based on limitations on effluent management and reuse alternatives, the evaluation determined that potable reuse provided a strategy for elimination of existing surface water discharges. Potable reuse is relatively expensive related to existing reuse practices, but avoids many of the limitations of other reuse and effluent management practices, and is the most viable option.⁶³

The report recognized four significant challenges.

- Implementing potable reuse will require revisions to current regulations to allow direct potable reuse and to clarify the requirements for indirect potable reuse. DWWTFs will be unable to begin the facility design and permitting process until the new rules are adopted.
- Public acceptance will require education and time.
- Technical challenges will arise in developing new treatments to turn reclaimed water into potable water.
- Costs may be significant.⁶⁴

A project schedule for transitioning from surface water discharge to potable reuse must include:

- Time for Florida to adopt new reuse regulations which will allow direct potable reuse and clarify existing regulations for indirect potable reuse. To assure compliance with these new regulations, it will be necessary to defer design and permitting potable reuse projects until the new regulations have been adopted.
- Securing project funding will require an additional twelve to eighteen months. This would include major rate adjustments and related public meetings. The magnitude of debt may affect bond ratings and will require financial analysis to ensure financial solvency.
- Typical project upgrades would include:
 - Preliminary and final design;
 - A twelve-month pilot project currently required for all potable reuse projects;
 - Permitting;

⁶² *Id.* at 40-41.

⁶³ *Id.* at 41.

⁶⁴ *Id.* at 41 and 45-48.

- Advertising, bidding, and awarding the project; and
- Construction and startup.

The report concludes that the earliest a potable water reuse project could be completed is September 2026, and the latest June 2028.⁶⁵

Cost projections are based on use of a potable reuse treatment process that, while more expensive, is a proven technology capable of treating almost any waste stream to potable quality. The report also discusses design capacity for projects, planning level cost estimates, and treatment infrastructure components. The report projects that the total statewide cost will be \$28,010,000,000. As mentioned above, the magnitude of debt may affect bond ratings and will require financial analysis to ensure financial solvency. Also, the high cost of these improvements would put a significant burden on the ratepayers of the DWWTFs affected by the discharge elimination requirement.⁶⁶

III. Effect of Proposed Changes:

Prohibition against Surface Water Discharge

Section 1 prohibits domestic wastewater treatment facilities from disposing of effluent, reclaimed water, or reuse water by surface water discharge beginning January 1, 2026, except the prohibition does not apply to:

- Indirect potable reuse projects;
- Domestic wastewater treatment facility discharges during wet weather which occur in accordance with the applicable department permit;
- Discharges into a stormwater management system which are subsequently withdrawn by a user for irrigation purposes;
- Domestic wastewater treatment facilities located in fiscally constrained counties;
- Projects where reclaimed water is recovered from an aquifer recharge system and subsequently discharged into a surface water for potable reuse;
- Wetlands creation, restoration, and enhancement projects;
- Minimum flows and levels recovery or prevention strategy plan projects;
- Domestic wastewater treatment facilities with reuse systems that provide a minimum of 90 percent of a facility's annual average flow for authorized reuse purposes;
- Domestic wastewater treatment facilities located in municipalities that have less than \$10 million in total revenue; or
- Domestic wastewater treatment facilities located in municipalities that are entirely within a rural area of opportunity.

Potable Reuse

Section 2 creates section 403.8531, F.S., to provide for potable water reuse recognizing that sufficient water supply is imperative to the future of the state and that potable reuse is one source of water which may assist in meeting future demands.

⁶⁵ *Id.* at 48.

⁶⁶ *Id.* at 46 and 42.

The section sets forth the legislative intent that the DEP adopt rules for potable reuse which:

- Protect the public health and environment by ensuring that the potable reuse rules meet federal and state drinking water and water quality standards, including, but not limited to, the Clean Water Act, the Safe Drinking Water Act, and water quality standards pursuant to chapter 403, and, when possible, implement such rules through existing regulatory programs.
- Support reclaimed water being used for potable reuse purposes.
- Implement the recommendations set forth in the Potable Reuse Commission's 2020 report "Advancing Potable Reuse in Florida: Framework for the Implementation of Potable Reuse in Florida."
- Require that the point of compliance with drinking water standards for potable reuse projects is the final discharge point for finished water from the water treatment facility.
- Protect the aquifer and Florida's springs and surface waters by ensuring that potable reuse projects do not cause or contribute to violations of water quality standards in surface waters, including groundwater discharges that flow by interflow and affect water quality in surface waters, and that potable reuse projects shall be designed and operated to ensure compliance with groundwater quality standards.

This section provides the following definitions:

- "Advanced treated reclaimed water" means the water produced from an advanced water treatment process for potable reuse applications.
- "Advanced treatment technology" means the treatment technology selected by a utility to address emerging constituents and pathogens in reclaimed water as part of a potable reuse project.
- "Direct potable reuse" means the introduction of advanced treated reclaimed water into a raw water supply immediately upstream from a drinking water treatment facility or directly into a potable water supply distribution system.
- "Emerging constituents" means pharmaceuticals, personal care products, and other chemicals not regulated as part of drinking water quality standards.
- "Indirect potable reuse" means the planned delivery or discharge of reclaimed water to groundwater or surface waters for the development of, or to supplement, the potable water supply.
- "Off-spec reclaimed water" means reclaimed water that does not meet the standards for potable reuse.
- "Potable reuse" means the augmentation of a drinking water supply with advanced treated reclaimed water from a domestic wastewater treatment facility, and consists of direct potable reuse and indirect potable reuse.
- "Reclaimed water" means water that has received at least secondary treatment and basic disinfection and is reused after flowing out of a domestic wastewater treatment facility.

To comply with drinking water quality standards, the section deems reclaimed water to be a water source for public water supply systems.

The bill provides that existing water quality protections that prohibit discharges from causing or contributing to violations of water quality standards in groundwater and surface water apply to potable reuse projects. Additionally, the bill specifies that when reclaimed water is released or

discharged into groundwater or surface water for portable reuse purposes, there must be a consideration of emerging constituents and impact to other users of such groundwater or surface water.

The section declares potable reuse to be an alternative water supply as defined in s. 373.709.⁶⁷

The section requires DEP to:

- Adopt rules that authorize potable reuse projects;
- Review existing rules governing reclaimed water and potable reuse to identify obsolete and inconsistent requirements and adopt rules that revise existing potable reuse rules to eliminate such inconsistencies, while maintaining existing public health and environmental protections;
- Review aquifer recharge rules, and, if revisions are necessary to ensure continued compliance with existing public health and environmental protection rules when reclaimed water is used for aquifer recharge, adopt such rules; and
- Initiate rulemaking by December 31, 2020, and submit the adopted rules to the President of the Senate and the Speaker of the House of Representatives by December 12, 2021, for approval and incorporation into ch. 403, F.S. Such rules may not be published as administrative rules by the DEP.

The section requires the DEP and WMDs are required to develop and execute a memorandum of agreement providing for the procedural requirements of a coordinated review of all permits associated with the construction and operation of an indirect potable reuse project. The memorandum of agreement must provide that the coordinated review will occur only if requested by a permittee. The bill states the purpose of the coordinated review is to: share information, avoid the redundancy of information requested from the permittee, and ensure consistency in the permit for the protection of the public health and the environment. The DEP and the WMDs must develop and execute the memorandum of agreement by December 31, 2022.

The section provides that to encourage investment in the development of potable reuse projects by private entities, a potable reuse project developed as a qualifying project⁶⁸ is:

- Beginning January 1, 2025, eligible for expedited permitting under s. 403.973 (using a permit application processing period of 90-days after receipt of a completed application).
- Granted an annual credit against the corporate income tax in an amount equal to five percent of the eligible capital costs⁶⁹ generated by a qualifying project for a period not to exceed 20 years after the date that project operations begin. The tax credit applies only to the corporate

⁶⁷ “Alternative water supplies” means salt water; brackish surface and groundwater; surface water captured predominately during wet-weather flows; sources made available through the addition of new storage capacity for surface or groundwater, water that has been reclaimed after one or more public supply, municipal, industrial, commercial, or agricultural uses; the downstream augmentation of water bodies with reclaimed water; stormwater; and any other water supply source that is designated as nontraditional for a water supply planning region in the applicable regional water supply plan. Section 373.019 (1), F.S.

⁶⁸ Section 255.065, F.S., provides for public-private partnerships involving public property and buildings, with the stated intent to encourage private entity investment in the development and operation of qualifying projects. “Qualifying project” is defined to include a variety of specific types of facilities or projects that serve a public purpose, including a water, wastewater, or surface water management facility, or other related infrastructure.

⁶⁹ Section s. 220.191(1)(c), F.S, defines “eligible capital costs” to mean all expenses incurred by a qualifying business in connection with the acquisition, construction, installation, and equipping of a qualifying project during the period from the beginning of construction of the project to the commencement of operations, including specified types of costs.

income tax liability or the premium tax liability generated by or arising out of the qualifying project, and the sum of all tax credits provided pursuant to this section may not exceed 100 percent of eligible capital costs. Any credit granted may not be carried forward or backward.

- Granted a three-year extension of applicable deadlines.
- Eligible for priority funding in the same manner as other alternative water supply projects from the Drinking Water State Revolving Fund, under the Water Protection and Sustainability Program, and for water management district cooperative funding, as consistent with s. 373.707, F.S., which encourages alternative water supply development.

Section 4 requires that, in implementing this new statute, the DEP, in coordination with one or more technical working groups, adopt rules for the implementation of potable reuse projects. The DEP is required to:

- Revise the appropriate chapters in the Florida Administrative Code, including chapter 62-610, Florida Administrative Code, to ensure that all rules implementing potable reuse are in the Florida Administrative Code chapter 62 governing drinking water regulation.
- Revise existing drinking water rules to include reclaimed water as a source water for the public water supply and require such treatment of the water as is necessary to meet existing drinking water rules, including rules for pathogens.
- Include in the potable reuse rules the implementation of a log reduction credit system using advanced treatment technology to meet pathogen treatment requirements, and must require a public water supplier to provide an approach to meet the required pathogen treatment requirements in an engineering report as part of its public water supply permit application for authorization of potable reuse. To ensure protection of the public health, as part of the public water supply permit application to authorize potable reuse, a public water supplier shall provide a department-specified level of treatment or propose an approach to achieving the log reduction targets based on source water characterization that is sufficient for a pathogen risk of infection which meets the national drinking water criteria of less than 1×10^{-4} annually.
- Prescribe the means for using appropriate treatment technology to address emerging constituents in potable reuse projects. The advanced treatment technology must be technically and economically feasible and must provide for flexibility in the specific treatment processes employed to recognize different project scenarios, emerging constituent concentrations, desired finished water quality, and the treatment capability of the facility. The advanced treatment technology may also be used for pathogen removal or reduction.

The section provides that the rules must require appropriate monitoring to evaluate advanced treatment technology treatment performance, including the monitoring of surrogate parameters and controls, which monitoring must occur either before or after the advanced treatment technologies treatment process, or both, as appropriate.

For direct potable reuse projects, the bill provides the rules must require reclaimed water to be included in the source water characterization for a drinking water treatment facility and, if that source water characterization indicates the presence of emerging constituents at levels of public health interest, must specify how appropriate treatment technology will be used to address those emerging constituents.

For indirect potable reuse projects, the DEP must amend the existing monitoring requirements contained within part V of chapter 62-610, F.A.C., to require monitoring for one or more representative emerging constituents. The utility responsible for the indirect potable reuse project shall develop an emerging constituent monitoring protocol consisting of the selection of one or more representative emerging constituents for monitoring and the identification of action levels associated with such emerging constituents. The monitoring protocol must provide that, if elevated levels of the representative emerging constituent are detected, the utility must report the elevated detection to the department and investigate the source and cause of such elevated emerging constituent. The utility shall submit the monitoring protocol to the department for review and approval and shall implement the monitoring protocol as approved by the DEP. If the monitoring protocol detects an elevated emerging constituent, and if the utility's investigation indicates that the use of the reclaimed water is the cause of such elevated emerging constituent, the utility must develop a plan to address or remedy that cause. The utility's monitoring results, investigation of any detected elevated emerging constituent levels, determination of cause, and any plan developed to address or remedy the cause must be submitted to the department for review and approval.

The rules also must specify industrial pretreatment requirements for potable reuse projects which must match the industrial pretreatment requirements contained in chapter 62-625, F.A.C., as of the effective date. If necessary, the DEP also must require the utility operating a potable reuse project to implement a source control program, and the utility shall identify the sources that need to be addressed.

Additionally, section states that the rules must:

- Provide off-spec reclaimed water requirements for potable reuse projects which include the immediate disposal, temporary storage, alternative nonpotable reuse, or retreatment or disposal of off-spec reclaimed water based on operating protocols established by the public water supplier and approved by the DEP.
- Revise existing rules to specify the point of compliance with drinking water standards for potable reuse projects as the point where the finished water is finally discharged from the drinking water treatment facility to the water distribution system.
- Ensure that, as rules for potable reuse projects are implemented, chapter 62-610.850, F.A.C., is applicable.
- Revise the definition of the term "indirect potable reuse" provided in chapter 62-610, F.A.C., to match the definition created in the bill.

The department must convene and lead one or more technical advisory committees to coordinate the required rulemaking and review of rules. The technical advisory committees, which must assist in the development of such rules, must be composed of knowledgeable representatives of a broad group of interested stakeholders, including, but not limited to, representatives from the water management districts, the wastewater utility industry, the water utility industry, the environmental community, the business community, the public health community, and the agricultural community, and consumers.

Graywater Incentives

Section 3 creates s. 403.892, F.S., to provide incentives for the use of graywater technologies.

This section defines the terms “developer” to have the same meaning as in s. 380.031, F.S.⁷⁰ and “graywater” to have the same meaning as in s. 381.0065(2)(e), F.S.⁷¹

The section requires a county, municipality, and special district to promote the beneficial reuse of water in this state by authorizing graywater technologies and providing incentives to developers.

Specifically, the section requires a county, municipality, and special district to authorize the use of residential graywater technologies in their respective jurisdictions which comply with the Florida Building Code.

The section requires a county, municipality, and special district also to provide incentives to developers to fully offset the costs of their beneficial reuse of water contribution through graywater technology, which may include, but are not limited to:

- Allowing the developer density or intensity bonus incentives or more floor space than allowed under the current or proposed future land use designation or zoning;
- Reducing or waiving fees, such as impact fees or water and sewer charges; or
- Granting other incentives.

If the local government as already applied one the above incentives to a developer, the local government must provide the developer with an additional incentive to meet the requirements under this section.

Rules for Injection of Reclaimed Water into Groundwater

Section 5 provides to further promote the reuse of reclaimed water for irrigation purposes, the rules that apply when reclaimed water is injected into a receiving groundwater having 1,000 to 3,000 mg/L total dissolved solids are applicable to reclaimed water aquifer storage and recovery wells injecting into a receiving groundwater of less than 1,000 mg/L total dissolved solids if the applicant demonstrates that there are no public supply wells within 3,500 feet of the aquifer storage and recovery wells and that it has implemented institutional controls to prevent the future construction of public supply wells within 3,500 feet of the aquifer storage and recovery wells.

Declaration of Important State Interest

Section 7 states that the Legislature determines and declares that this act fulfills an important state interest.

⁷⁰ Section 381.0065, F.S., defines “graywater” to mean “that part of domestic sewage that is not blackwater, including waste from the bath, lavatory, laundry, and sink, except kitchen sink waste.”

⁷¹ Section 380.031, F.S., defines “developer” to mean any person, including a governmental agency, undertaking any development as defined in this chapter.

Effective Date / Direction to Division of Law Revision

The bill takes effect upon becoming a law, and the Division of Law Revision is directed to replace the phrase “the effective date of this act” wherever it occurs in the act with the date the act becomes a law.

IV. Constitutional Issues:**A. Municipality/County Mandates Restrictions:**

Article VII, s. 18(a) of the State Constitution provides, in pertinent part, that “no county or municipality shall be bound by any general law requiring such county or municipality to spend funds or take an action requiring the expenditure of funds unless the Legislature has determined that such law fulfills an important state interest and the law requiring such expenditure is approved by two-thirds of the membership in each house of the Legislature.” Section 7 contains a finding that the bill fulfills an important state interest.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None identified.

V. Fiscal Impact Statement:**A. Tax/Fee Issues:**

None.

B. Private Sector Impact:

The cost projections in *Evaluation of the Impacts of Eliminating Surface Water Discharges from Domestic Wastewater Facilities in Florida* are that the total statewide cost of compliance with the elimination of surface water discharge will be \$28 billion. The report maintains that these costs will be passed on to the ratepayers of the DWWTFs affected by the discharge elimination requirement.

These cost figures have not been evaluated by other sources.

Neither the DEP nor the WMDs have supplied cost projections.

C. Government Sector Impact:

It is likely that some of the costs of implementation of the bill will be borne by municipal utilities. Additionally, the DEP will experience an administrative burden and indeterminate negative fiscal impact in complying with the rulemaking requirements under the bill.

VI. Technical Deficiencies:

The bill directs DEP to adopt rules that authorize potable reuse projects⁷² and to:

[i]nitiate rulemaking by December 31, 2020, and submit the adopted rules to the President of the Senate and the Speaker of the House of Representatives by December 12, 2021, for approval and incorporation into chapter 403 by the Legislature. Such rules may not be published as administrative rules by the department.⁷³

Thus, DEP will establish by rule, pursuant to Chapter 120, F.S., the authorization of potable reuse projects and then submit the adopted rules by December 12, 2021. The DEP will be required to file rules for final adoption with the Department of State⁷⁴ and those rules are *adopted* upon being filed.⁷⁵ (emphasis added).

The language in the bill is a bit confusing given the rulemaking process. The language of the bill suggests that the Legislature may approve the rules. But other language suggests that the Legislature will not act upon the rules but will codify all or a portion of those rules into ch. 403, F.S. It is suggested that this portion of the bill – lines 203 to 208 - be clarified.

VII. Related Issues:

The engineering report, *Evaluation of the Impacts of Eliminating Surface Water Discharges from Domestic Wastewater Facilities in Florida*, points out that it will take a significant amount of time to comply with the elimination of surface water discharge provisions in Section 2. The report concludes that the earliest date a potable water reuse project could be completed is September 2026, and the latest is June 2028. Part of the issue is that surface water discharge elimination project activities cannot be begun until all rulemaking activities on potable reuse are completed.

⁷² Lines 192-193.

⁷³ Lines 203-208.

⁷⁴ Section 120.54(3)(e)1., F.S.

⁷⁵ Section 120.54(3)(e)6., F.S. The rule becomes effective 20 days after filing, on a later date as specified in the rule, or as provided by law.

VIII. Statutes Affected:

This bill substantially amends section 403.064 of the Florida Statutes.

This bill creates sections 403.8531 and 403.892 of the Florida Statutes.

IX. Additional Information:

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

CS by Innovation, Industry, and Technology on February 3, 2020:

The committee substitute:

- Creates additional exemptions from the prohibition against surface water discharge for wastewater treatment facilities with reuse systems that provide a minimum of 90 ninety percent of a facility’s annual average flow and for treatment facilities located in municipalities that have less than \$10 million in total revenue;
- Changes the date by which DEP must submit the required rules to the Legislature from December 12, 2022 to December 12, 2021, and changes the Legislature’s treatment of these rules from “ratification” to “approval and incorporation into chapter 403 by the Legislature;”
- Creates graywater incentives; and
- Makes a finding of an important state interest.

- B. Amendments:

None.