Hazen and Sawyer
1000 N Ashley Drive, Suite 1000
Tampa, FL 33602 • 813.630.4498

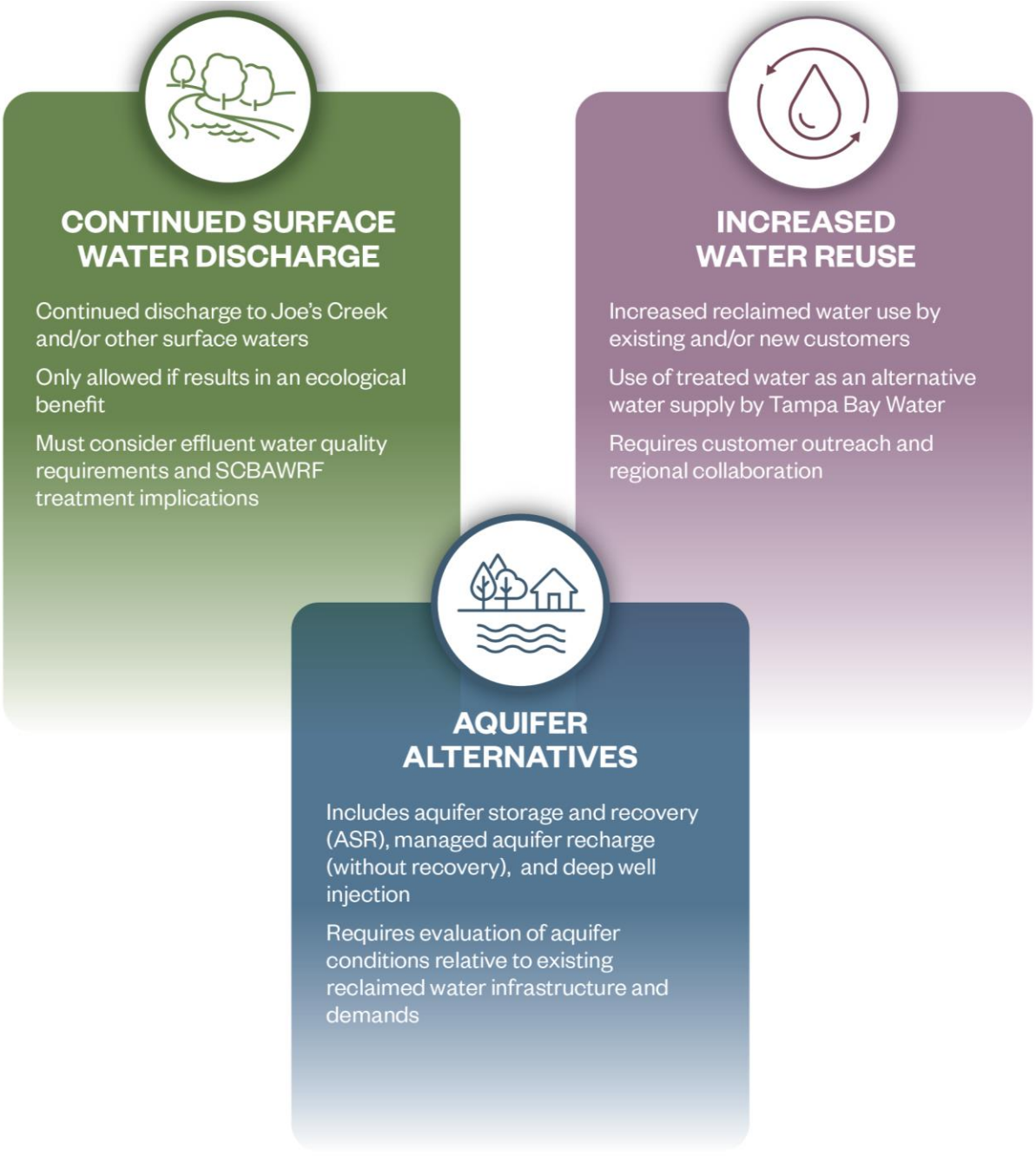
Surface Water Discharge Elimination Plan

Board of County Commissioners' Work Session
Supplementary Material
April 7, 2022

Table of Contents

Surface Water Discharge Elimination Plan Summary

Pinellas County Utilities prepared a Plan for the Elimination of Nonbeneficial Surface Water Discharge for the South Cross Bayou Advanced Water Reclamation Facility (SCBAWRF) in response to Senate Bill 64. The effluent management options described below are being evaluated in terms of feasibility, costs, and benefits.



Continued Surface Water Discharge

Description

Treated water from the SCBAWRF is preferentially managed via beneficial reuse, including public access reuse, golf course irrigation, and onsite reuse; however, effluent may also be discharged to Joe's Creek when necessary due to low reclaimed water demands and/or wet weather conditions. The County is permitted to discharge up to 20 million gallons per day to Joe's Creek. The table below provides a summary of the annual average discharges from SCBAWRF for the past five calendar years.

The discharge from SCBAWRF to Joe's Creek may be entirely or partially allowed to continue under Senate Bill 64 if an ecological benefit can be demonstrated.

Summary of Annual Average Effluent Management at SCBAWRF

Time Period (Aug – July)	Reclaimed Water		Surface Water Discharge	
	Average Flow, million gallons per day	Average Percent of Total Effluent Flow	Average Flow, million gallons per day	Average Percent of Total Effluent Flow
2016 – 2017	15.9	71.7%	7.6	28.3%
2017 – 2018	15.0	64.8%	8.6	35.2%
2018 – 2019	13.4	57.4%	11.1	42.6%
2019 – 2020	14.2	65.6%	8.8	34.4%
2020 – 2021	13.9	61.9%	9.4	38.1%

Potential Advantages and Disadvantages

- ✓ Continued use of existing outfall infrastructure.
- ✓ SCBAWRF discharge provides an ecological benefit to Joe's Creek.
- ✘ Treatment improvements at the SCBAWRF may be required for improved effluent water quality.
- ✘ Lack of clarity on definition of "ecological benefit".

Forthcoming Activities

Preliminary analyses show that although SCBAWRF discharge contributes nutrients to Joe's Creek, the discharge increases flow rates in the subbasin. Increased flowrates are anticipated to minimize algae growth downstream of the outfall. The County is developing a combined flow and water quality model to further evaluate the impact of discharge from SCBAWRF on receiving waters and the extent to which an ecological benefit can be demonstrated.

Increased Water Reuse – South County Master Urban Reuse System

Description

Reclaimed water for non-potable applications is directed to the permitted 33 million gallon per day South County Master Urban Reuse System. The reclaimed water transmission and distribution system serves customers in the cities of Pinellas Park, Indian Rocks Beach, Treasure Island, Madeira Beach, Tierra Verde, and St. Pete Beach.

Approximately 13,500 customers are connected to the SCBAWRF Master Urban Reuse System, of which 8,400 are active customers and 5,100 are inactive customers. Inactive customers are those that have a connection box on property, but they have not yet elected to connect to reclaimed water. Inactive customers may be encouraged to use reclaimed water via a public outreach campaign.

Additionally, the County has identified 17 potential new interruptible reclaimed water customers within two miles of existing reclaimed water infrastructure. Reclaimed water use by these potential new interruptible customers would provide an opportunity manage seasonal reclaimed water demands with the added ecological benefit of reducing their groundwater use.

Potential Advantages and Disadvantages

- ✓ Continued use of an existing reclaimed water system with known operational requirements.
- ✓ Reduces the use of potable water supplies for non-potable applications.
- ✘ Solely relying on public access reuse may not be sufficient to meet full compliance requirements.

Forthcoming Activities

The County is planning to implement an Advanced Metering Infrastructure (AMI) system for potable water and reclaimed water service connections. If the project moves forward, the AMI system may be leveraged to increased reclaimed water use when it is available, and conserve reclaimed water when it is limited.

The County will also be engaging with existing, inactive reclaimed water customers and potential new interruptible reclaimed water customers to estimate potential increased reclaimed water use and identify any barriers to use.

Lastly, the County will assess the hydraulic capacity of the existing reclaimed water distribution and storage system to identify improvements that may be required to accommodate increased reclaimed water use by existing and/or new customers.

Increased Water Reuse – Alternative Water Supply for Tampa Bay Water

Description

Pinellas County is a member government of Tampa Bay Water and as such, Pinellas County receives its drinking water from Tampa Bay Water. Tampa Bay Water's supply, which is a dynamic blend of treated groundwater, surface water, and desalinated seawater, is anticipated to require an expansion to meet increasing water demands. The 2018 Long-term Master Water Plan Update projected that approximately 20 million gallons per day of new drinking water supplies need to be developed within the next 20 years. Accordingly, Tampa Bay Water and its member governments are working together to evaluate and rank a wide range of water supply options to meet the 20 million gallon per day need.

The advanced treatment of effluent from SCBAWRF for use as an alternative water supply would reduce discharge to Joe's Creek and serve to augment regional water supplies.

Potential Advantages and Disadvantages

- ✓ Cost effectiveness of this alternative water supply can be compared with other water supply options being considered by Tampa Bay Water.
- ✓ Benefits regional water supply availability.
- ✘ Substantial outreach may be required for public support.

Forthcoming Activities

The County will collaborate with Tampa Bay Water to identify areas of the regional system that would most benefit from supply augmentation and quantify the regional water supply benefit of using SCBAWRF effluent as an alternative water supply.

The County will conduct a comprehensive effluent water quality and flow characterization at SCBAWRF to inform storage and treatment requirements for its use as an alternative water supply. Additionally, a desktop feasibility study will be performed to develop a proposed treatment train based on the findings of the effluent characterization.

The County will evaluate local surface waters to determine if any may be suitable for use in an alternative water supply configuration. For example, high quality water from SCBAWRF may be discharged to a surface water to improve the waterbody's condition and then subsequently withdrawn for use as an alternative water supply. Surface waters will be evaluated based on existing impairments, reclaimed water compatibility, and location.

Aquifer Alternatives

Description

Aquifer storage and recovery (ASR), aquifer recharge, and/or deep well injection may be effective alternative effluent management strategies that both reduce surface water discharge and provide additional local/regional benefits. These alternatives are described together as "aquifer alternatives" because the feasibility evaluations for ASR, aquifer recharge, and deep well injection are largely the same.

ASR involves using a Class V injection well to recharge the aquifer with reclaimed water and subsequently recover the water. The schedule for ASR recharge and recovery would be based on seasonal variability in reclaimed water supply and demand.

Aquifer recharge (without recovery) via a Class V injection well may be implemented to protect groundwater supplies from saltwater intrusion. Aquifer recharge may be preferred over ASR if local geology does not lend itself to efficient recovery.

Deep well injection using a Class I injection well requires the identification of a lower quality receiving groundwater. Deep well injection is anticipated to only be pursued as an as-needed strategy for peak flows and/or as a backup option if other strategies are deemed infeasible. Deep well injection is considered a means of effluent disposal, not beneficial reuse.

Potential Advantages and Disadvantages

- ✓ ASR could provide storage for excess reclaimed water during the wet season and additional reclaimed water supply for distribution in the dry season.
- ✓ Aquifer recharge, i.e., groundwater augmentation, may provide a regional water supply benefit.
- ✓ Deep well injection may allow for simplified treatment requirements at SCBAWRF.
- ✘ ASR and aquifer recharge may require treatment improvements at the SCBAWRF for improved effluent water quality depending on the classification/quality of receiving groundwater.
- ✘ Deep well injection is effluent disposal, not beneficial reuse.

Forthcoming Evaluations

The County is embarking on a desktop aquifer alternatives feasibility study to evaluate the location, extent, depth, water quality, capacity, geochemical compatibility, and estimated cost of potential ASR, aquifer recharge, and/or deep well injection locations. Sites will be characterized in terms of proximity to existing reclaimed water infrastructure and groundwater conditions.

Senate Bill 64

Please see the following text.

CHAPTER 2021-168

Committee Substitute for Senate Bill No. 64

An act relating to reclaimed water; amending s. 403.064, F.S.; requiring certain domestic wastewater utilities to submit to the Department of Environmental Protection by a specified date a plan for eliminating nonbeneficial surface water discharge within a specified timeframe; providing requirements for the plan; requiring the department to approve plans that meet certain requirements; requiring the department to make a determination regarding a plan within a specified timeframe; requiring the utilities to implement approved plans by specified dates; providing for administrative and civil penalties; requiring certain utilities to submit updated annual plans until certain conditions are met; requiring domestic wastewater utilities applying for permits for new or expanded surface water discharges to prepare a specified plan for eliminating nonbeneficial discharges as part of its permit application; requiring the department to submit an annual report to the Legislature by a specified date; providing applicability; providing construction; authorizing the department to convene and lead one or more technical advisory groups; providing that potable reuse is an alternative water supply and that projects relating to such reuse are eligible for alternative water supply funding; requiring the department and the water management districts to develop and execute, by a specified date, a memorandum of agreement for the coordinated review of specified permits; providing that potable reuse projects are eligible for certain expedited permitting and priority funding; providing construction; creating s. 403.892, F.S.; providing definitions; requiring counties, municipalities, and special districts to authorize graywater technologies under certain circumstances and to provide certain incentives for the implementation of such technologies; providing requirements for the use of graywater technologies; providing that the installation of residential graywater systems meets certain public utility water conservation measure requirements; providing for the applicability of specified reclaimed water aquifer storage and recovery well requirements; providing a declaration of important state interest; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Subsection (17) of section 403.064, Florida Statutes, is renumbered as subsection (18) and amended, and a new subsection (17) is added to that section, to read:

403.064 Reuse of reclaimed water.—

(17) By November 1, 2021, domestic wastewater utilities that dispose of effluent, reclaimed water, or reuse water by surface water discharge shall submit to the department for review and approval a plan for eliminating nonbeneficial surface water discharge by January 1, 2032, subject to the

requirements of this section. The plan must include the average gallons per day of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters and the date of such elimination, the average gallons per day of surface water discharge which will continue in accordance with the alternatives provided for in subparagraphs (a)2. and 3., and the level of treatment that the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative.

(a) The department shall approve a plan that includes all of the information required under this subsection as meeting the requirements of this section if one or more of the following conditions are met:

1. The plan will result in eliminating the surface water discharge.

2. The plan will result in meeting the requirements of s. 403.086(10).

3. The plan does not provide for a complete elimination of the surface water discharge but does provide an affirmative demonstration that any of the following conditions apply to the remaining discharge:

a. The discharge is associated with an indirect potable reuse project;

b. The discharge is a wet weather discharge that occurs in accordance with an applicable department permit;

c. The discharge is into a stormwater management system and is subsequently withdrawn by a user for irrigation purposes;

d. The utility operates domestic wastewater treatment facilities with reuse systems that reuse a minimum of 90 percent of a facility's annual average flow, as determined by the department using monitoring data for the prior 5 consecutive years, for reuse purposes authorized by the department; or

e. The discharge provides direct ecological or public water supply benefits, such as rehydrating wetlands or implementing the requirements of minimum flows and minimum water levels or recovery or prevention strategies for a waterbody.

The plan may include conceptual projects under sub-subparagraphs 3.a. and 3.e.; however, such inclusion does not extend the time within which the plan must be implemented.

(b) The department shall approve or deny a plan within 9 months after receiving the plan. A utility may modify the plan by submitting such modification to the department; however, the plan may not be modified such that the requirements of this subsection are not met, and the department may not extend the time within which a plan will be implemented. The approval of the plan or a modification by the department does not constitute final agency action.

(c) A utility shall fully implement the approved plan by January 1, 2032.

(d) If a plan is not timely submitted by a utility or approved by the department, the utility's domestic wastewater treatment facilities may not dispose of effluent, reclaimed water, or reuse water by surface water discharge after January 1, 2028. A violation of this paragraph is subject to administrative and civil penalties pursuant to ss. 403.121, 403.131, and 403.141.

(e) A domestic wastewater utility applying for a permit for a new or expanded surface water discharge shall prepare a plan in accordance with this subsection as part of that permit application. The department may not approve a permit for a new or expanded surface water discharge unless the plan meets one or more of the conditions provided in paragraph (a).

(f) By December 31, 2021, and annually thereafter, the department shall submit a report to the President of the Senate and the Speaker of the House of Representatives which provides the average gallons per day of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters by the utility and the dates of such elimination; the average gallons per day of surface water discharges that will continue in accordance with the alternatives provided in subparagraphs (a)2. and 3., and the level of treatment that the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative and utility; and any modified or new plans submitted by a utility since the last report.

(g) This subsection does not apply to any of the following:

1. A domestic wastewater treatment facility that is located in a fiscally constrained county as described in s. 218.67(1).

2. A domestic wastewater treatment facility that is located in a municipality that is entirely within a rural area of opportunity as designated pursuant to s. 288.0656.

3. A domestic wastewater treatment facility that is located in a municipality that has less than $10 million in total revenue, as determined by the municipality's most recent annual financial report submitted to the Department of Financial Services in accordance with s. 218.32.

4. A domestic wastewater treatment facility that is operated by an operator of a mobile home park as defined in s. 723.003 and has a permitted capacity of less than 300,000 gallons per day.

(h) This subsection does not prohibit the inclusion of a plan for backup discharges under s. 403.086(8)(a).

(i) This subsection may not be deemed to exempt a utility from requirements that prohibit the causing of or contributing to violations of water quality standards in surface waters, including groundwater discharges that affect water quality in surface waters.

(18)(a)~~(17)~~ By December 31, 2020, the department shall initiate rule revisions based on the recommendations of the Potable Reuse Commission's 2020 report "Advancing Potable Reuse in Florida: Framework for the Implementation of Potable Reuse in Florida." Rules for potable reuse projects must address contaminants of emerging concern and meet or exceed federal and state drinking water quality standards and other applicable water quality standards. Reclaimed water is deemed a water source for public water supply systems.

(b) The Legislature recognizes that sufficient water supply is imperative to the future of the state and that potable reuse is a source of water which may assist in meeting future demand for water supply.

(c) The department may convene and lead one or more technical advisory groups to coordinate the rulemaking and review of rules for potable reuse as required under this section. The technical advisory group, which shall 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, the agricultural community, and the consumers.

(d) Potable reuse is an alternative water supply as defined in s. 373.019, and potable reuse projects are eligible for alternative water supply funding. The use of potable reuse water may not be excluded from regional water supply planning under s. 373.709.

(e) The department and the water management districts shall develop and execute, by December 31, 2023, 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 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.

(f) To encourage investment in the development of potable reuse projects by private entities, a potable reuse project developed as a qualifying project under s. 255.065 is:

1. Beginning January 1, 2026, eligible for expedited permitting under s. 403.973.

2. Consistent with s. 373.707, 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.

(g) This subsection is not intended and may not be construed to supersede s. 373.250(3).

Section 2. Section 403.892, Florida Statutes, is created to read:

403.892 Incentives for the use of graywater technologies.—

(1) As used in this section, the term:

(a) "Developer" has the same meaning as in s. 380.031(2).

(b) "Graywater" has the same meaning as in s. 381.0065(2)(e).

(2) To promote the beneficial reuse of water in the state, a county, municipality, or special district shall:

(a) Authorize the use of residential graywater technologies in their respective jurisdictions which meet the requirements of this section, the Florida Building Code, and applicable requirements of the Department of Health and for which a developer or homebuilder has received all applicable regulatory permits or authorizations.

(b) Provide a 25 percent density or intensity bonus to a developer or homebuilder if at least 75 percent of a proposed or existing development will have a graywater system installed or a 35 percent bonus if 100 percent of a proposed or an existing development will have a graywater system installed. The bonus under this paragraph is in addition to any bonus provided by a county, municipality, or special district ordinance in effect on July 1, 2021.

(3) To qualify for the incentives under subsection (2), the developer or homebuilder must certify to the applicable governmental entity as part of its application for development approval or amendment of a development order that all of the following conditions are met:

(a) The proposed or existing development has at least 25 single-family residential homes that are either detached or multifamily dwellings. This paragraph does not apply to multifamily projects over five stories in height.

(b) Each single-family residential home or residence will have its own residential graywater system that is dedicated for its use.

(c) The developer or homebuilder has submitted a manufacturer's warranty or data providing reasonable assurance that the residential graywater system will function as designed and includes an estimate of anticipated potable water savings for each system. A submission of the manufacturer's warranty or data from a building code official, governmental entity, or research institute that has monitored or measured the residential graywater system that is proposed to be installed for such development shall be accepted as reasonable assurance and no further information or assurance is needed.

(d) The required maintenance of the graywater system will be the responsibility of the residential homeowner.

(e) An operation and maintenance manual for the graywater system will be supplied to the initial homeowner of each home. The manual shall provide a method of contacting the installer or manufacturer and shall include directions to the residential homeowner that the manual shall remain with the residence throughout the life cycle of the system.

(4) If the requirements of subsection (3) have been met, the county or municipality must include the incentives provided for in subsection (2) when it approves the development or amendment of a development order. The approval must also provide for the process that the developer or homebuilder will follow to verify that such systems have been purchased. Proof of purchase must be provided within 180 days after the issuance of a certificate of occupancy for single-family residential homes that are either detached or multifamily projects under five stories in height.

(5) The installation of residential graywater systems in a county or municipality in accordance with this section shall qualify as a water conservation measure in a public water utility's water conservation plan under s. 373.227. The efficiency of such measures shall be commensurate with the amount of potable water savings estimated for each system provided by the developer or homebuilder under paragraph (3)(c).

Section 3. To further promote the reuse of reclaimed water for irrigation purposes, the rules that apply when reclaimed water is injected into a receiving groundwater that has 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 it is injecting into a confined aquifer, that there are no potable water supply wells within 3,500 feet of the aquifer storage and recovery wells, that it has implemented institutional controls to prevent the future construction of potable water supply wells within 3,500 feet of the aquifer storage and recovery wells, and that the recovered water is being used for irrigation purposes. The injection of reclaimed water that meets the requirements of this section is not potable reuse. This section may not be construed to exempt the reclaimed water aquifer storage and recovery wells from requirements that prohibit the causing of or contribution to violations of water quality standards in surface waters, including groundwater discharges that flow by interflow and affect water quality in surface waters.

Section 4. The Legislature determines and declares that this act fulfills an important state interest.

Section 5. This act shall take effect upon becoming a law.

Approved by the Governor June 29, 2021.

Filed in Office Secretary of State June 29, 2021.