

**South Beaches:
Deep Injection Well
Improvements**

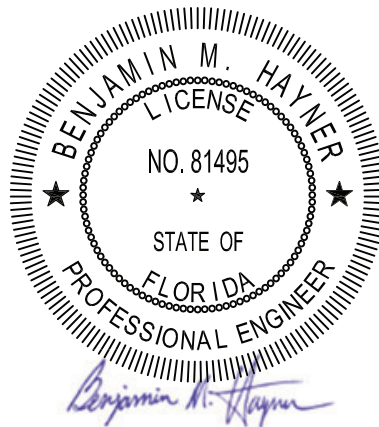
Brevard County 2026 Facility Plan

March 2026



In accordance with Chapter 471 of Florida Statutes, this Facility Plan for the Brevard County South Beaches Wastewater Treatment Facility Deep Injection Well Improvements, has been prepared under the direct supervision of a Professional Engineer registered in the State of Florida.

REGISTERED ENGINEERS
STATE OF FLORIDA
CDM Smith Inc.
101 Southhall Lane, Suite 200
Maitland, Florida 32751



Benjamin M
Hayner
Benjamin M Hayner FL PE # 81495
2026.03.31
13:07:19-04'00'

Benjamin M. Hayner, P.E.
CDM Smith Inc.
Florida Registered Professional
Engineer No. 81495

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BENJAMIN M. HAYNER ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Table of Contents

Section 1 Introduction	1-1
1.1 Objective and Project Background	1-1
1.2 Project Need	1-3
Section 2 Existing Conditions	2-1
2.1 Description of Planning Area	2-1
2.1.1 Climate and Topography	2-3
2.1.2 Surface Water Hydrology	2-3
2.1.3 Air Quality	2-4
2.1.4 Wetlands and Floodplains	2-4
2.1.5 Soils, Geology, and Groundwater	2-4
2.1.6 Source Water Protection	2-4
2.1.7 Impact on Historic and Archeological Resources	2-5
2.1.8 Impact upon Flora, Fauna, Threatened or Endangered Plant or Animal Species	2-5
Section 3 Wastewater System	3-1
3.1 Description of Existing System	3-1
3.2 Treatment Facilities	3-1
3.2.1 Preliminary Treatment	3-1
3.2.2 Biological Oxidation	3-1
3.2.3 Return Activated Sludge	3-2
3.2.4 Filtration	3-3
3.2.5 Disinfection and Dechlorination	3-3
3.2.6 Effluent Reuse and Disposal	3-3
3.3 Alternative Analysis	3-4
3.3.1 Background and Summary	3-4
3.3.2 Effluent Disposal Options	3-6
3.3.3 Aquifer Recharge	3-6
Regulatory and Treatment Requirements	3-6
Advantages	3-7
Disadvantages	3-7
Cost	3-7
3.3.4 Salinity Barrier	3-7
Regulatory and Treatment Requirements	3-7
Advantages	3-8
Disadvantages	3-8
Cost	3-8
3.3.5 Aquifer Storage and Recovery	3-8
Regulatory and Treatment Requirements	3-8
Advantages	3-8
Disadvantages	3-9
Cost	3-9
3.3.6 Direct Potable Reuse	3-9
Regulatory and Treatment Requirements	3-9

Advantages.....	3-9
Disadvantages.....	3-9
Cost.....	3-9
3.3.7 Indirect Potable Reuse	3-10
Regulatory and Treatment Requirements.....	3-10
Advantages.....	3-10
Disadvantages.....	3-10
Cost.....	3-10
3.3.8 MGD Reclaimed Water Distribution Expansion.....	3-11
Regulatory and Treatment Requirements.....	3-11
Advantages.....	3-11
Disadvantages.....	3-11
Cost.....	3-11
Advantages.....	3-11
Disadvantages.....	3-11
Cost.....	3-11
3.3.9 Second Deep Injection Well	3-12
Regulatory and Treatment Requirements.....	3-12
Advantages.....	3-12
Disadvantages.....	3-12
Cost.....	3-12
3.4 The Selected Plan.....	3-13
Section 4 Implementation and Compliance	4-1
4.1 Public Hearing.....	4-1
4.2 Regulatory Agency Review	4-1
4.3 Financial Planning – Wastewater System.....	4-1
4.4 Financing Plan Model.....	4-3
4.5 Implementation Schedule.....	4-6

List of Figures

Figure 1-1 Brevard County SBWWTF Location Map 1-2
 Figure 2-1 South Beaches WWTF Wastewater Collection System 2-2
 Figure 3-1 South Beaches WWTF Site Map 3-5

List of Tables

Table 2-1 Summary of South Beaches Collection System from GIS 2-3
 Table 3-1 Design and Current Raw Wastewater Flows at the South Beaches WWTF 3-2
 Table 3-2 Historical Flows at the South Beaches WWTF 3-2
 Table 3-3 South Beaches Wastewater Treatment Facility Flow Projections* 3-4
 Table 3-4 Present Worth Analysis 3-13
 Table 4-1 Wastewater System Project Costs with SRF Financing 4-2
 Table 4-2 Comparison of SRF Funding VS. Conventional Revenue Bond Financing 4-2
 Table 4-3 Schedule of Projected Revenues and Debt Coverage for Pledged Revenue 4-4
 Table 4-4 Implementation Schedule Phase I 4-6
 Table 4-5 Implementation Schedule Phase II 4-7

Appendices

Appendix A – South Beaches Regional WWTF Deep Injection Well Environmental Review
 Appendix B – Finance Plan for Deep Injection Well
 Appendix C – Finance Plan for Deep Injection Well Effluent Pump Station
 Appendix D - Board of County Commissioners of Brevard County Resolution Number 2026-000

Section 1

Introduction

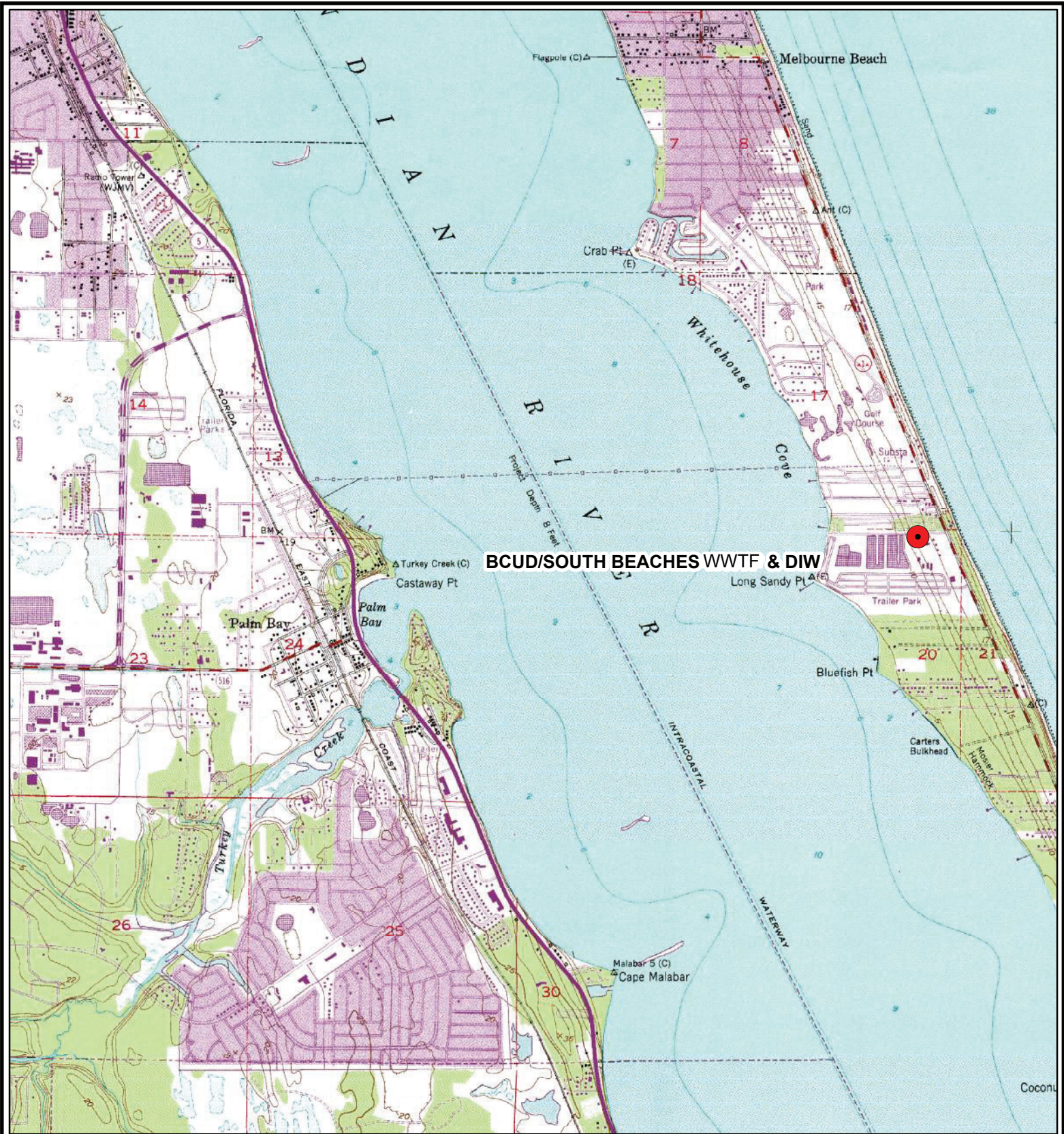
1.1 Objective and Project Background

The purpose of this facility plan update is to clearly describe Brevard County's (County) implementation of wastewater facilities for the disposal of secondary treated effluent at the South Beaches Wastewater Treatment Facility (SBWWTF). The County owns and operates SBWWTF located in Melbourne Beach. The SBWWTF is located on South Highway A1A approximately 3.7 miles south of State Road 192 in eastern Brevard County. SBWWTF is located in Section 20, Township 28S, and Range 38E. The location of the SBWWTF is shown on **Figure 1-1**.

The current primary method for disposing of secondary treated effluent at the SBWWTF is reuse. If the effluent flow rate exceeds demand for reuse, the injection well system serves as an alternative means of disposal as well as for disposal of any effluent that does not meet public access standards. The current injection well system consisting of one Class I municipal injection well (IW-1), effluent pumping station, two monitor wells, and control and monitoring instrumentation, has a permitted disposal capacity of 12.73 million gallons per day (MGD). Emergency discharges of the treated effluent can occur during extreme weather events to the adjacent Indian River Lagoon (IRL), which the Florida Department of Environmental Protection (FDEP) has designated an impaired water body.

The project includes two phases. Phase I is for the construction of a second Class I municipal deep injection well (DIW-2) and Phase II is for the construction of a new effluent pump station at the South Beaches Wastewater Treatment Facility (SBWWTF). These improvements will expand the facility's effluent disposal capacity and are necessary to provide reliable, long-term disposal for secondary treated effluent, eliminate routine and emergency surface water discharges to the Indian River Lagoon, and achieve compliance with Florida Statutes 403.064 and 403.086.

The facility plan update will satisfy the Florida Department of Environmental Protection's requirements as summarized within Section 62-503.700(2) F.A.C. for the State Revolving Loan Program. Brevard County is interested in pursuing State Revolving Fund (SRF) loan money to finance the proposed project stated above.



BCUD/SOUTH BEACHES WWTF & DIW
 Long Sandy Pt (E)

SBRWWTP IW-1 Coordinates:
 Latitude 28° 02' 27.082", Longitude -80° 32' 49.186"
 SBRWWTP IW-2 Coordinates:
 Latitude 28° 02' 28.155", Longitude -80° 32' 47.142"
 Source: USGS 7.5" Topographic Map



Legend
 SBWWTF

Figure 1-1
South Beaches WWTF
Site Location Map

1.2 Project Need

This facility plan update is intended to define the County's approach to implementing critical capital improvements to its wastewater treatment infrastructure for the disposal of secondary treated effluent at the South Beaches Wastewater Treatment Facility (SBWWTF). The proposed improvements encompass the final design and construction of a second deep injection well (DIW-2), along with a new pump station, to support the County's goal of fully eliminating wastewater discharges to the Indian River Lagoon. These actions are required to achieve compliance with Florida Statutes 403.064 and 403.086.

The project scope also includes:

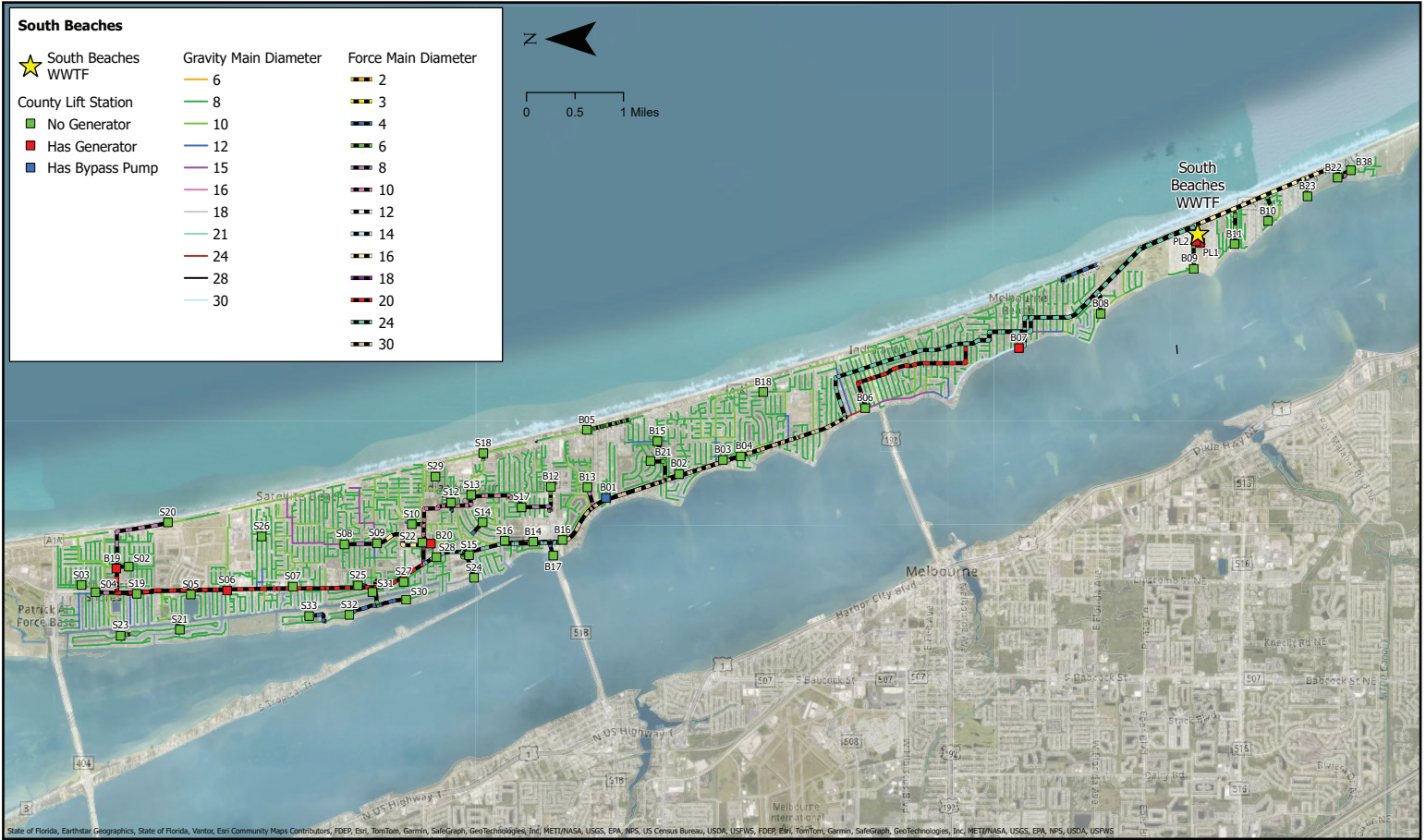
- Retirement of the existing effluent disposal pump station.
- Preparation of comprehensive engineering drawings and technical specifications consistent with Chapter 62-528, F.A.C.
- Elimination of Indian River Lagoon Discharges: Provide infrastructure necessary to discontinue wastewater discharges to the Indian River Lagoon in accordance with state law.
- Regulatory Compliance: Ensure wastewater and stormwater systems meet current Florida Statutes and applicable Florida Administrative Code requirements.
- Infrastructure Modernization: Replace and decommission outdated effluent disposal facilities while constructing a second deep injection well and improving treated effluent pumping capacity.

Section 2

Existing Conditions

2.1 Description of Planning Area

The service area for the SBWWTF encompasses the municipalities of Satellite Beach, Indian Harbour Beach, Indialantic, Melbourne Beach, a portion of the City of Melbourne, as well as several areas of unincorporated Brevard County. The service area is bounded by the Atlantic Ocean to the east, the Indian River Lagoon to the west, Patrick Air Force Base to the north and the south line of Section 28, Township 28 S, Range 28 E on the south. The south boundary of the service area is also the north line of a barrier island included in the Coastal Barrier Resources Act (CBRA). A review of County Geographic Information System (GIS) data shows that the system was installed in the 1950's and has been added to over time. The SBWWTF service area development is suburban in nature, dominated by single-family residential subdivisions and commercial development typically associated with residential development. Natural barriers and land development barriers regulated by the Federal Government Military Interdepartmental Purchase Request confine the service area. The County has shown good faith in maintaining the collection system in such a way to minimize issues with neighbors and odor nuisance and complaints are infrequent. **Figure 2-1** provides an overview of the South Beaches collection system including lift stations, manholes and both gravity pipe and force mains. No satellite collection systems are connected to the facility collection system. The County uses ArcGIS for inventory management for all collection system facilities. These files are viewed and utilized on a daily basis to conduct system operations and maintenance. **Table 2-1** provides a summary of the South Beaches collection system assets from the County's GIS.



State of Florida, Earthstar Geographics, State of Florida, Vantox, Esri Community Maps Contributors, FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnology, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnology, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS



Figure 2-1
South Beaches WWTF
Wastewater Collection System

Table 2-1 Summary of South Beaches Collection System from GIS

Collection System Asset	Quantity
Length of Gravity Sewer Main (LF)	994,068
Length of Force Main (LF)	206,186
Number of Manhole Structures	3,543
Number of County-Owned Lift Stations	55
Number of Private Lift Stations	19

The gravity and force main range in size from 2 to 30 inches in diameter. The majority of the piping is vitrified clay pipe (VCP). There is also some ductile iron pipe (DIP), polyvinyl chloride (PVC) pipe, high-density polyethylene (HDPE) pipe, cast iron pipe (CIP), and asbestos cement pipe (ACP).

Each of the fifty-five (55) County-owned lift stations connected to the SBWWTF are monitored via the County's Supervisory Control and Data Acquisition (SCADA) system. Wastewater is collected and conveyed to the SBWWTF located at 2800 South Highway A1A, Melbourne Beach, FL. The facility provides high-level treatment and the production of a high-quality effluent that is primarily disposed of via land application (irrigation) with the remainder disposed through a deep underground injection well. The historical flows to SBWWTF have remained flat to slightly decreasing due to the County's ongoing efforts with reducing Inflow and Infiltration (I/I) into the system. In addition, future demand projections show slight decreases based on the past 10 years of historical plant flow and due to the service area being mostly built out.

2.1.1 Climate and Topography

Brevard County is located along Florida's east-central coast and experiences a subtropical climate characterized by warm temperatures, high humidity, and distinct wet and dry seasons. Average annual temperatures generally range from the mid-60s °F in winter to the low-90s °F in summer, with most of the annual rainfall occurring between May and October during the wet season, often associated with convective thunderstorms and tropical weather systems. The County's low-lying coastal topography is generally flat, with ground elevations typically ranging from sea level to approximately 30 feet above mean sea level, gradually rising westward toward the St. Johns River basin. The eastern portion of the County is dominated by barrier islands, coastal lagoons, and estuarine systems, while the central and western areas consist primarily of poorly drained flatwoods, wetlands, and floodplain landscapes associated with the upper St. Johns River. These climatic conditions and low elevations influence stormwater runoff patterns, floodplain hydrology, and infrastructure design considerations, particularly for wastewater and stormwater management facilities located near sensitive surface waters.

2.1.2 Surface Water Hydrology

Several surface waters within Brevard County receive elevated regulatory protection and are experiencing documented water quality impairment. The Indian River Lagoon and Banana River are designated Outstanding Florida Waters (OFWs) under Chapter 62-302, Florida Administrative Code, and portions of Turkey Creek and the St. Johns River within the County

carry similar protective status, requiring that discharges and stormwater systems be designed to prevent any degradation of existing water quality. In addition, multiple surface waters in Brevard County—including segments of the Indian River Lagoon, Banana River, Turkey Creek, Eau Gallie River, and Crane Creek, as well as selected lakes and canal systems are listed as impaired waters under Section 303(d) of the Clean Water Act due primarily to nutrient enrichment, dissolved oxygen deficiencies, and other pollutants. These waterbodies are subject to adopted Total Maximum Daily Loads (TMDLs) and Basin Management Action Plans (BMAPs) administered by the Florida Department of Environmental Protection and the St. Johns River Water Management District, which necessitate enhanced wastewater and stormwater management practices to reduce pollutant loading and protect sensitive receiving waters.

2.1.3 Air Quality

Air quality in Brevard County is in attainment with all National Ambient Air Quality Standards (NAAQS) under the Clean Air Act and is not designated by the U.S. Environmental Protection Agency as a nonattainment or maintenance area for any criteria pollutants. This designation reflects generally low ambient concentrations of ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead across the County.

2.1.4 Wetlands and Floodplains

Brevard County contains extensive wetland systems and floodplains associated with the Indian River Lagoon, Banana River, and the St. Johns River basin, including freshwater marshes, swamps, floodplain wetlands, and estuarine wetlands. Large portions of the western and central County lie within FEMA-designated 100-year floodplains, particularly along the St. Johns River floodplain, while coastal areas are influenced by tidal flooding, storm surge, and low-lying topography. These wetlands and floodplains provide critical flood storage, water quality treatment, and habitat functions, and their presence necessitates careful siting and design of wastewater and stormwater infrastructure to minimize impacts and ensure compliance with applicable federal, state, and local regulations.

2.1.5 Soils, Geology, and Groundwater

Brevard County is underlain by unconsolidated sandy soils and sediments derived from marine and coastal deposition, with surface soils consisting primarily of poorly drained sands, flatwoods soils, and organic soils associated with wetlands and floodplains. The County's geology is characterized by shallow sedimentary layers overlying limestone formations of the Floridan Aquifer system, with the intermediate aquifer system locally present as a confining unit separating surficial groundwater from deeper groundwater resources. Groundwater in Brevard County occurs within both the surficial aquifer system, which is generally shallow and hydraulically connected to surface waters, and the Floridan Aquifer, which in coastal areas commonly contains brackish water and is primarily utilized for deep injection wells and limited potable supply under regulated conditions.

2.1.6 Source Water Protection

Source water protection in Brevard County is implemented in accordance with the Safe Drinking Water Act and Florida law to protect public potable water supplies from contamination. Primary drinking water sources within the County include the surficial aquifer system and the Floridan

Aquifer system, which are protected through Wellhead Protection Areas (WHPAs) delineated by the Florida Department of Environmental Protection (FDEP) for public water supply wells. Within these areas, land uses and activities with the potential to adversely affect groundwater quality are regulated through a combination of local land development controls, FDEP drinking water regulations, and groundwater management and permitting programs administered by the St. Johns River Water Management District (SJRWMD). These source water protection measures are intended to minimize contaminant risks to existing and future potable water supplies and are consistent with FDEP SRF Facility Plan requirements.

2.1.7 Impact on Historic and Archeological Resources

It is not expected that any portion of the projects mentioned in this report will impact any historic or archeological resources. Any historic or archeological findings will be reported and handled in accordance with local and state regulations.

2.1.8 Impact upon Flora, Fauna, Threatened or Endangered Plant or Animal Species

CDM Smith conducted a database search and field visit to assess the potential for protected species. The focus of the evaluation was to determine the potential for state or federally protected animal species or their habitats to occur within the project area.

The protected species evaluation included review of recorded occurrences in the vicinity of the project area and review of soil, land use, and natural communities' data with reference to suitable habitat for species of potential occurrence. These data sources included NRCS soil web mapper (NRCS 2025); the U.S. Fish and Wildlife Service (USFWS) NWI database (2025); St. Johns River Water Management District Land Use data (FDEP 2023); the Florida Natural Areas Inventory (FNAI) database (2025); the USFWS Information for Planning and Conservation (IPaC) database (2025); and aerial photography (Google Earth, 2025). Reference Appendix A for the technical memorandum titled "South Beaches Regional WWTF Deep Injection Well Environmental Review" for more information.

Section 3

Wastewater System

3.1 Description of Existing System

The original facility at the SBWWTF was a 2.0 MGD activated sludge plant constructed in 1968. In 1985, a 1.0 MGD ring-steel activated sludge plant was added to the site and was later decommissioned in 2003 and removed altogether in 2022. In 1991, a 6.0 MGD oxidation ditch plant was constructed on site and became the primary treatment process. The current permitted configuration of the facility is a 6.0 MGD oxidation ditch plant with a 2.0 MGD activated sludge plant that operates in parallel. The 2.0 MGD activated sludge plant has been offline since October 2020. Plans are currently underway to convert the 2.0 MGD activated sludge plant into Advanced Wastewater Treatment (AWT) to restore capacity, improve efficiency, and ensure the quality of treated wastewater.

Due to the volumes of wastewater being processed and since direct discharge to surface waters is no longer an acceptable long-term or continuous solution per Section 403.064(17) Florida Statutes, utilities are continually evaluating effluent disposal solutions that are more sensitive to the environment as well as developing water conservation methodologies. Highly treated wastewater effluent, or reclaimed water, has been recognized as an economical and beneficial source of water for residential, commercial, and agricultural irrigation purposes. Deep Well Injection (DWI) has also been found to be an acceptable disposal method in coastal regions where the volume of treated effluent typically exceeds the reclaimed water demand. South Beaches primary means of effluent disposal is through their Class I deep injection well, which was placed in operation in April 1987 and recently re-rated to 12.7 MGD capacity. The facility also discharges to a public access reuse (PAR) system, constructed in 1984, and provides high quality reuse water for irrigation up to 3.0 MGD.

3.2 Treatment Facilities

3.2.1 Preliminary Treatment

The SBWWTF is equipped with an automatically cleaned Huber step bar screen and a manually cleaned bar screen functioning in a backup role. Screened sewage is de-gritted in a grit separation unit. Screenings and grit removed by these processes is collected and disposed at a permitted Class I Landfill.

3.2.2 Biological Oxidation

The SBWWTF is classified as a Secondary Treatment plus Filtration Facility (Category I, Class A), utilizing two (2) parallel wastewater treatment plants to treat the incoming raw wastewater from the service area, as described below, and meets all Class II Reliability criteria.

- A 6.0 MGD AADF dual-train Carrousel® Oxidation Ditch Treatment System utilizing mechanical surface aerators to provide oxygenation and mixing of the Mixed Liquor Suspended Solids (MLSS).

- A 2.0 MGD AADF Conventional Activated Sludge Process Treatment System consisting of one large plug-flow basin (5 passes) with anoxic and aerobic zones using centrifugal blowers and coarse bubble diffusers. A project is currently in the design phase to upgrade this system to Advanced Wastewater Treatment (AWT) using biological nutrient removal (BNR).

Both wastewater treatment plants process the incoming raw wastewater and generate an effluent meeting all FDEP requirements. Design and current raw wastewater flow for the SBWWTF are shown in **Table 3-1**:

Table 3-1 Design and Current Raw Wastewater Flows at the South Beaches WWTF

Flow Condition	Raw Wastewater Flow Rate (MGD) Aug 2024-Jul 2025	
	Design	Actual Operation
Annual Average Daily Flow (AADF)	8.00	6.19
Maximum Daily Flow (MDF)	12.00*	14.35**/12.48***
Peak Hourly Flow (PHF)	18.00	16.72**/15.14***

Notes: *MDF assumed to be 150% of the AADF
 **Occurred during Hurricane Milton (Oct 2024)
 ***Maximum and Peak flows (Storm Adjusted)

A review of the historical raw wastewater flows to the South Beaches WWTF, during the past five (5) years (2020-2025) and during the last twelve (12) months are summarized in **Table 3-2**.

Table 3-2 Historical Flows at the South Beaches WWTF

Raw Wastewater Flow Condition	South Beaches WWTF Raw Wastewater Flow (MGD)	
	Aug 2020 - July 2025	Aug 2024 – July 2025
Average Daily Flow	6.19	5.80
Maximum Daily Flow	14.35*/13.51**	14.35*/12.48**
Minimum Day Flow	1.09	1.08
Monthly ADF Range	4.77 – 8.38	4.65 – 8.40
3-Month ADF Range	4.88 – 7.91	4.89 – 7.39
AADF Range (monthly rolling average)	4.75 – 9.25	4.75 – 8.54

Notes: *Occurred during Hurricane Milton (Oct 2024)
 **Maximum Daily Flow (Storm Adjusted)

3.2.3 Return Activated Sludge

Each activated sludge plant has independent return activated sludge pumps. In 2003, a return activated sludge line was connected to the influent force main at the plant entrance for the purposes of reducing hydrogen sulfide (H₂S) before the pretreatment process.

3.2.4 Filtration

The facility has three (3) mixed media filters (anthracite sand) originally rated at average capacity of 1.0 MGD, or 3.0 MGD total. Influent to the filters is supplied by gravity flow from the 6.0 MGD treatment train clarifiers' effluent splitter box. This splitter box has two (2) adjustable weirs that control flows to both the filters and secondary effluent chlorine contact chamber (CCC)/equalization tank. Only the public access reuse water produced at the facility is filtered. Effluent discharged to the deep injection well is not filtered. Filter backwash is captured in two (2) backwash recovery tanks and returned to the plant influent pump station.

3.2.5 Disinfection and Dechlorination

The facility uses sodium hypochlorite for disinfection of effluent sent to the public access reuse system.

3.2.6 Effluent Reuse and Disposal

The facility uses a combination of deep well injection and public access reuse for effluent disposal. The effluent disposal systems are permitted through the facility's FDEP Operations Permit (FL0040622) and FDEP Underground Injection Control Operating Permit (185898-005-UO/1M) as indicted below:

Underground Injection System (U-001): An existing 12.7 MGD Annual Average Daily Flow (AADF) permitted capacity Deep Injection Well (DIW) system consisting of one (1) Class I underground injection well (2,916 feet deep) permitted under FDEP Permit No. 01858980-004 discharging to a Class G-IV ground water. The DIW is located at Latitude 28° 02' 27" N, Longitude 80° 32' 49" W. An effluent equalization tank is used in conjunction with this operation.

Land Application System (R-001): An existing 3.0 MGD AADF permitted capacity slow-rate public access re-use system. R-001 is a reuse system, which consists of a reclaimed water transmission/distribution system for public access irrigation within the Reuse Service Area. Filtered tertiary effluent meeting the High-Level Disinfection standard is stored in an on-site 0.6 MG ground storage tank and is delivered to reuse customers via high service pumps. Reclaimed water is also pumped to an existing retention pond system located at the Spessard Holland Golf Course that is not interconnected to the stormwater management system. These ponds have a combined storage capacity of 4.31 MG. The 4.31 MG retention pond system consists of seven (7) ponds that are interconnected with underground pipes at the golf course.

During mechanical integrity testing (MIT) of the Deep Injection Well, a portion of the treated effluent may be temporarily diverted to an onsite unlined holding pond. The pond has an approximate area of 3.8 acres and a storage capacity of 5.4 million gallons. This pond is designed solely for temporary containment during MIT and is not permitted for routine discharge to surface waters.

Effluent retained in the holding pond will be managed in accordance with permit requirements, including dechlorination using sodium bisulfite prior any controlled release or transfer. Any discharge or bypass event must comply with FDEP emergency provisions, including notification and reporting requirements, and cannot exceed the duration and conditions specified in the permit.

Permitted discharge point (D-001) and the associated weir to the Indian River Lagoon are not authorized under the current permit for routine or planned discharge. All effluent disposal must occur through approved methods (e.g., deep well injection) unless otherwise directed by FDEP under emergency conditions. A consent order was issued in July of 2025 requiring the County to only utilize the D-001 for significant weather events only and to fully utilize and facilitate the disposal capacity of the existing deep injection well. The consent order also requires the County to submit a request for a permit modification to eliminate the surface water discharge component of the Permit (D-001) following the installation of pumping equipment required to fully facilitate the disposal capacity of the deep injection well.

Wastewater flow projections for the South Beaches Wastewater Management System, shown in **Table 3-3**, were developed using the assumptions outlined in Section 3, “Future Conditions,” SBWWTF historical flows and Brevard County’s wastewater flow methodology.

Table 3-3 South Beaches Wastewater Treatment Facility Flow Projections*

Design Year	Flow Through Plant (MGD)	Reserved Capacity (MGD)	Total Flow Through Plant - AADF (MGD)	Projected Max 3-Month Flow (MGD)	Maximum Monthly Flow (MGD)
2026	6.198	0.007	6.205	7.092	7.291
2028	6.197	0.007	6.204	7.091	7.289
2030	6.196	0.007	6.203	7.090	7.288
2032	6.194	0.007	6.201	7.087	7.286
2034	6.193	0.007	6.200	7.087	7.285
2036	6.192	0.007	6.199	7.085	7.284
2038	6.191	0.007	6.198	7.084	7.282
2040	6.189	0.007	6.196	7.082	7.280
2045	6.186	0.007	6.193	7.079	7.277

Note: *Brevard County ERC Factor of 200 gpd/ERC; BEBR population density of 2.3 capita/dwelling; slight decrease in flows through 2045 estimated at -0.01% determined using the slope of the 10-year historical plant flow trendline. Project Maximum 3-Month and Maximum Month Flow factors utilized were 1.143 and 1.175, respectively (storm adjusted).

3.3 Alternative Analysis

3.3.1 Background and Summary

The SBWWTF produces secondary treated effluent that is reused through golf course irrigation and/or disposed of through deep well injection. **Figure 3-1** presents the project site vicinity map, including the location of the SBWWTP, existing deep injection well and monitor wells. Treatment process upgrades and construction of a second deep injection well are planned for the facility.



**Figure 3-1
South Beaches WWTF
Site Map**

In January 2023, the County contracted with CDM Smith Inc. (CDM Smith) to evaluate the different effluent disposal alternatives at the SBWWTF and are consistent with Florida Statutes 403.064 (*Reuse of Reclaimed Water*) and 403.086 (Sewage Disposal Facilities; Advanced and Secondary Waste Treatment) regarding the elimination of wastewater discharge to the Indian River Lagoon. CDM Smith identified potential treatment technologies and evaluated the advantages, disadvantages, and capital cost estimates for each treatment technology.

CDM Smith and the County participated in an effluent disposal evaluation workshop in November 2023, where the County determined an option best aligned with their disposal goals and needs. Further presentation of the evaluation of the effluent disposal options is outlined below.

3.3.2 Effluent Disposal Options

CDM Smith evaluated and presented nine effluent disposal options to discuss with the County. The effluent disposal options are summarized below:

- Aquifer Recharge,
- Salinity Barrier,
- Aquifer Storage and Recovery,
- Direct Potable Reuse,
- Indirect Potable Reuse,
- Reclaimed Water Distribution Expansion,
- Additional Storage,
- Second Deep Injection Well, and
- Infiltration & Inflow Program.

The regulatory and treatment requirements, advantages, disadvantages, and approximate cost for each option is presented below.

3.3.3 Aquifer Recharge

Aquifer recharge (AR) is a treatment technology that replenishes water in an aquifer by injecting treated water into AR wells likely located in the Upper Floridan aquifer.

Regulatory and Treatment Requirements

Treatment requirements depend on the concentration of Total Dissolved Solids (TDS) in groundwater in the receiving aquifer.

Aquifers containing groundwater with less than or equal to 3,000 mg/L TDS must meet the full treatment requirements (including primary drinking water standards), and high-level disinfection (HLD) contained in FAC 62-610.560, and FAC 62-610.563(3). Additionally, full treatment requires the following: Total Nitrogen (TN) \leq 10 mg/L, Total Organic Carbon (TOC) \leq 3 mg/L, and Total Organic Halogen (TOX) \leq 0.2mg/L.

Aquifers with TDS levels 3,000-10,000 mg/L must meet principal treatment of secondary treated wastewater effluent with HLD under FAC 62-610.560 and FAC 62-610.563(2). Aquifers with this level of TDS do not have to meet the TOC and TOX requirements of full treatment. Principal treatment requires TN to be 10 mg/L or less.

Low-Pressure Reverse Osmosis (LPRO) membrane treatment and Advanced Oxidation Process (AOP) treatment technologies are likely needed to meet the full treatment requirements. In addition to the LPRO and AOP treatment technologies, aquifer recharge requires multiple barriers and pathogen removal approaches to protect public health and safety. Six to twelve months of pilot testing and evaluation of removal of emerging contaminants for full treatment is required.

Advantages

Aquifer recharge would be more practical the closer that it is located to the South Beaches Wastewater Treatment Plant. This treatment technology can also offset drawdowns from water supply withdrawals and aid in the beneficial reuse of reclaimed water for aquifer recharge.

Disadvantages

The risk of vertical migration of the injected water (aquifer recharge) is problematic in that a higher level of treatment (e.g., principal vs. full treatment) would be required. The aquifer recharge will also need placement in the aquifer upgradient to water supply wellfields to send the purified effluent to the nearest recharge location. It is unlikely that this option would provide substantial benefit to the County since there are no water supply wells nearby to the WWTP.

Cost

The following estimated construction costs for an aquifer recharge system are presented below:

- 8 MGD RO/Membrane Plant with AOP (\$20/gal) - \$160 Million
- Principal treatment with HLD - \$20-30 Million
- Aquifer recharge wells (6-8 wells) - \$8 Million

3.3.4 Salinity Barrier

Salinity barrier systems inject reclaimed water into aquifers to create freshwater barriers to impede landward or upward migration of salt water into potable aquifers containing fresh groundwater.

Regulatory and Treatment Requirements

Secondary wastewater treatment and HLD for principal treatment is required for groundwater with TDS levels of 1,000 to 3,000 mg/L pursuant to FAC 62-610.562(4) and 62-610.563(3). Principal treatment requires the parameter of TN to be 10 mg/L or less. Salinity barriers also have location constraints and cannot be placed within 1,000 feet of any potable supply well.

Advantages

For heavily stressed coastal aquifers, salinity barrier systems enable freshwater to replenish aquifer systems while restraining the movement of saltwater. Salinity Barriers are not required to meet TOC and TOX requirements of full treatment.

Disadvantages

Salinity Barriers pose more risk in the permitting process, as there are restrictive discharge limitations for parameters included as drinking water standards. Also, there would have to be a demonstrated need for a salinity barrier such as lateral saltwater intrusion from the IRL or vertically from depth in the aquifer affecting water supply wells nearby. The permitting challenges, restrictive discharge limitations, limited applicability, and maintenance challenges indicate salinity barriers to be a challenging and costly effluent disposal option for the County.

Cost

The following estimated costs for a salinity barrier are listed below:

- Principal treatment: HLD - \$20-30 Million
- Cost of wells (6-8 wells) - \$8 Million

3.3.5 Aquifer Storage and Recovery

Aquifer storage and recovery (ASR) involves injecting reclaimed water into aquifers for storage and recovery of the stored reclaimed water through the same well for later beneficial purposes.

Regulatory and Treatment Requirements

ASR treatment is regulated under FAC Chapter 62-258 and FAC 62-610.446. Treatment requirements are dependent on the amount of Total Dissolved Solids (TDS) present in groundwater in the aquifer.

Aquifers containing groundwater with less than or equal to 3,000 mg/L TDS are required to meet the full treatment (which includes primary drinking water standards) requirements in FAC 62-610.560 and 62-610.563(3). Full treatment requires the following: Total Nitrogen (TN) \leq 10 mg/L, Total Organic Carbon (TOC) \leq 3 mg/L, and Total Organic Halogen (TOX) \leq 0.2mg/L.

Aquifers containing groundwater with TDS levels 3,000-10,000 mg/L do not have to meet the TOC and TOX requirements of full treatment. Principal treatment requires the parameter of TN to be 10 mg/L or less.

LPRO membrane treatment and AOP treatment technologies are likely needed to meet the full treatment requirements. In addition to the LPRO and AOP treatment technologies, ASR requires multiple barriers and pathogen removal approaches to protect public health and safety. Six to twelve months of pilot testing and evaluation of removal of emerging contaminants for full treatment is required.

Advantages

ASR has no limited location conditions that need to be met and can be placed anywhere in the hydrogeologic profile.

Disadvantages

ASR requires a secondary source of water, such as surface water or reclaimed water, to be effective. Water injected into an aquifer must be recovered and reused, requiring expanding the customer base or locating means of placing the water. ASR is primarily a temporary storage tool using an aquifer for storage and for demand management. This alternative is not a reuse or disposal method. This treatment technology also requires confinement above the injection zone and requires a suitable injection zone. This option is not feasible for the County primarily due to its reliance on expanding the customer base or finding alternative means to accommodate the discharges water. The associated costs and complexities of these endeavors pose financial burdens of additional infrastructure and outreach investments.

Cost

The following estimated costs for an ASR system are listed below:

- Principal treatment including HLD - \$20-30 Million
- Additional Pumps & Cost of ASR wells (6-8 wells) - \$8 Million

3.3.6 Direct Potable Reuse

Direct potable reuse (DPR) is the direct connection of purified recycled water into a drinking water system.

Regulatory and Treatment Requirements

Direct potable water reuse is currently not permitted in the state of Florida. Florida Department of Environmental Protection is drafting regulations, Chapter 62-565, FAC – Potable Reuse.

Advantages

This treatment technology introduces a new water source by providing highly treated wastewater effluent for drinking water.

Disadvantages

As previously stated before, direct potable water reuse is not presently permitted in the state of Florida. Requirements for emerging microconstituents and microbiological concerns also need to be met by AOP and membranes, requiring 12 months of pilot testing to monitor treatment technology on microconstituents. Facilities utilizing direct potable water reuse must overcome the public perception of utilizing wastewater effluent. The requirements for emerging microconstituents concerns adds substantial cost and time to the implementation process of direct potable reuse, rendering this effluent treatment option impractical for the County.

Cost

The following estimated costs for an aquifer recharge are listed below:

- Membrane Plant & Infrastructure: Plant - \$160 Million

3.3.7 Indirect Potable Reuse

Indirect potable reuse (IPR) includes the introduction of recycled water into an environmental buffer such as a surface reservoir or groundwater aquifer.

Regulatory and Treatment Requirements

Indirect potable water reuse follows the same regulatory requirements as aquifer recharge permitted under Part V of Rule 62-610, FAC – Groundwater Recharge and Indirect Potable Reuse. Treatment requirements depend on the concentration of Total Dissolved Solids (TDS) in the groundwater of the receiving aquifer.

Aquifers containing groundwater with equal, or less than 3,000 mg/L TDS must meet full treatment (including primary drinking water standards), and high-level disinfection (HLD) under FAC 62-610.560 and 62-610.563(3). Full treatment requires the following: Total Nitrogen (TN) \leq 10 mg/L, Total Organic Carbon (TOC) \leq 3 mg/L, and Total Organic Halogens (TOX) \leq 0.2mg/L.

Aquifers with TDS levels 3,000-10,000 mg/L must meet principal treatment of secondary treatment with HLD pursuant to FAC 62-610.560, FAC and 62-610.563(2). Aquifers containing groundwater with this level of TDS do not have to meet the TOC and TOX requirements of full treatment. Principal treatment requires the parameter of TN to be 10 mg/L or less.

LPRO membrane treatment and AOP treatment technologies are likely needed to meet the full treatment requirements. In addition to the LPRO and AOP treatment technologies, IPR and groundwater recharge requires multiple barriers and pathogen removal approaches to protect public health and safety. Six to twelve months of pilot testing and evaluation of removal of emerging contaminants for full treatment is required.

Advantages

This treatment technology provides an opportunity for the beneficial reuse of reclaimed water through aquifer recharge.

Disadvantages

Indirect potable water reuse requires a considerable amount of treatment. Requirements for emerging microconstituents and microbiological concerns also need to be met by AOP and membranes, requiring 12 months of pilot testing to monitor treatment technology on microconstituents. Similar to direct potable reuse, the requirements for emerging microconstituents concerns adds substantial cost and time to the implementation process, rendering this effluent treatment option impractical for the County.

Cost

The following estimated costs for IPR are presented below:

- Membrane Plant & Infrastructure: Plant - \$160 Million
- Advance Oxidation Process Infrastructure - TBD
- Cost of wells (6-8 wells) - \$8 Million

3.3.8 MGD Reclaimed Water Distribution Expansion

Regulatory and Treatment Requirements

HLD is required for reclaimed distribution expansion. The HLD includes rapid or slow sand filters and chlorine treatment with a residence time of 15 to 30 minutes. The following parameters must also be met: TSS \leq 5 mg/L, CBOD \leq 5 mg/L, TN \leq 3 mg/L, and TP \leq 1 mg/L.

Advantages

This treatment technology increases beneficial reuse of effluent.

Disadvantages

A deep injection well, approximately 17 miles of piping and infrastructure, are required to manage effluent flows during wet weather conditions when there is no demand for reuse. The cost of infrastructure to implement this effluent disposal option proves to be infeasible for the County.

Cost

The following estimated costs for a 5 MGD reclaimed distribution expansion are listed below:

- 17 miles of piping & infrastructure: - \$17 Million (\$1,000,000/mile (piping))
- Deep Injection Well: \$17 to 18 Million
- Principal treatment: HLD - \$20 to 30 Million

Storage (3-4 days of ADF; 8 MGD)

Storage would include surface impoundment of approximately 33 acres with 3 feet of live storage for during Mechanical Integrity Testing (MIT) events of the deep injection well.

Regulatory and Treatment Requirements

A minimum of 3 feet of freeboard is required for storage and percolation pond designs.

Advantages

Storage during MITs for deep injection well system is provided by surface impoundment.

Disadvantages

This technology requires a large amount of land, approximately 23 acres, as the County currently has approximately 10 acres of onsite storage. The County must reuse or dispose of stored water and future needs may require disposal via a deep injection well. This effluent discharge option is deemed infeasible for the County primarily due to its demand for a significant amount of land, incurring substantial costs.

Cost

The following estimated costs for additional storage are listed below:

- Land (23 acres) - \$21 Million (\$900,000/acre)

- Piping & Infrastructure: TBD

3.3.9 Second-Deep Injection Well

Deep injection wells dispose of appropriately treated fluids via underground injection wells that discharge into the Boulder Zone of the Lower Floridan aquifer.

Regulatory and Treatment Requirements

New Class I municipal deep injection wells require secondary wastewater treatment with HLD, which requires the effluent have a TSS of ≤ 5 mg/L and a residual chlorine ≥ 1.0 mg/L after 15 minutes of contact at peak hourly flow pursuant to Rule 62-600.440(6), FAC. The following limits for additional parameters are needed: TP ≤ 6 mg/L, TN ≤ 10 mg/L and a pH of 6.5-8.5. Public Access Reuse (PAR) is required per the Central Indian Lagoon BMAP.

Advantages

This treatment technology involves no effluent disposal to the IRL, assisting the County in reaching its goal of following Florida Statutes 403.064 and 403.086. A second deep injection well significantly reduces discharges to the Indian River Lagoon, providing a long-term sustainable solution to dispose emergency discharges. A deep injection well allows for operational and location flexibility and easier permitting, as existing monitoring wells are already onsite for IW-1. Deep injection allows for the disposal of treated wastewater without requiring extensive land area, making it a more space-efficient option. Compared to surface disposal methods, deep injection wells minimize public exposure to treated effluent, addressing potential concerns related to odor, aesthetics, and other nuances.

Disadvantages

Public perception of deep injection wells may have a negative connotation.

Cost

The following costs are estimated for a new deep injection well and effluent pump station:

- Deep Injection Well: \$23.2 Million
- Effluent Pump Station: \$16.9 Million

The alternatives above were evaluated during the project's preliminary phase. The aquifer recharge, direct potable water reuse, and indirect potable water reuse alternatives were eliminated due to the high capital costs. Aquifer storage recovery includes risks with arsenic leaching and will still require a disposal mechanism. The reclaimed water distribution expansion alternative would require customers/infrastructure, and a deep injection well would still be required. The alternative to build an additional storage pond would require the purchase of approximately 23 acres of land which does not appear to be viable considering the project location. These alternatives were eliminated for further evaluation. **Table 3-4** shows the estimated present worth of the two viable disposal alternatives.

Table 3-4 Present Worth Analysis

Alternatives	Order of Magnitude Capital Cost	Annual Estimated O&M	O&M Present Worth (20 Years of O&M to Present Dollars)	20-Year Present Worth (O&M Present Worth & Capital Cost)
Salinity Barrier	\$38,000,000	\$215,000	\$2,921,000	\$40,921,000
Deep Injection Well 2	\$40,130,000	\$80,000	\$1,087,000	\$41,217,000

3.4 The Selected Plan

The County has decided to pursue a second deep injection well as their effluent disposal option. A second deep injection well enables the County to meet all current regulations and follow Florida Statutes 403.064 and 403.086. This option is also cost-feasible as the County has existing infrastructure to support the deep injection well, such as existing monitoring wells near the proposed injection site. The County also has operational flexibility with a second deep injection well, as they can utilize both the existing and proposed deep injection wells. The Salinity Barrier requires a larger amount of infrastructure, space for each of the eight wells, a greater deal of maintenance, monitoring, and reporting requirements.

Section 4

Implementation and Compliance

4.1 Public Hearing

A public hearing will be held at the Brevard County commission chambers after advertisement in the area newspaper. Records of the public notice and the hearing will be made available in the County's Public Utility office.

4.2 Regulatory Agency Review

The County's wastewater system has the relevant treatment facility – South Beaches Water Reclamation Facility with an average daily flow (ADF) capacity of 8 MGD. The primary disposal method is through reuse, with a capacity of 3 MGD. During wet weather events, reuse is not a viable means of disposal, requiring an alternative which in this case is a deep injection well with a capacity of 12.73 MGD. There have been record weather events previously which have caused treated effluent discharges into the Indian River Lagoon. It is the intent of this project to provide an additional deep injection well to eliminate emergency discharges to the Indian River Lagoon. There is an additional effluent pump station required in order to transmit the flow to the new deep injection well. The time frame for the effluent pump station design and construction lags behind that of the deep injection well and will result in an additional SRF loan request, with the impact of both costs presented below.

As part of the review process for this plan and in order to qualify for an SRF loan, various governmental agencies must approve the manner in which the County will implement the plan. Agencies that will have the opportunity to review and comment on the plan include:

- Florida Department of Environmental Protection
- Office of the Governor's State Clearinghouse

4.3 Financial Planning – Wastewater System

The scope of this financing plan includes the planned wastewater improvements for an estimated construction cost of \$23.7 million (in 2025 dollars with 10% contingency) for the deep injection well and \$17.24 million (in 2025 dollars with 10% contingency) for the effluent pump station. (**Table 4-1**). The recommended financial plan funds the wastewater CIP improvements with two SRF loans.

Table 4-1 Wastewater System Project Costs with SRF Financing

Item	Deep Injection Well	Effluent Pump Station	SRF Loan Total
Project Cost ^a	\$23,230,000	\$16,900,000	\$40,130,000
Finance Costs-SRF ^b	464,600	338,000	802,600
Subtotal	\$23,694,600	\$17,238,000	\$40,932,600
Capitalized Interest ^c	216,806	210,304	427,110
Par Amount of Loan	\$23,911,406	\$17,448,304	\$41,359,710
Annual Debt Service^d	\$1,350,980	\$985,819	\$2,336,798
First Payment Date	November 2028	June 2030	

^aTotal construction costs including engineering and contingency.

^bFinance costs for SRF equals 2% of the amount borrowed.

^cCapitalized interest is based on linear draw of project amount over a 1-year construction period.

^dAnnual Debt Service for SRF based on 20 years at 1.22% interest.

Table 4-2 presents the estimated debt service payments for SRF funding versus the costs of using revenue bond funding. As presented, SRF funding is preferable due to a significantly lower cost.

Table 4-2 Comparison of SRF Funding VS. Conventional Revenue Bond Financing

Item	With SRF Funds	With Revenue Bonds
Program Costs ^a	\$40,130,000	\$40,130,000
Finance Costs - SRF and Revenue Bonds ^b	802,600	1,003,000
Subtotal	\$40,932,600	\$41,133,000
Capitalized Interest ^c	427,110	-
Principal Loan/Bond Subtotal	\$41,359,710	\$41,133,000
Annual Debt Service^d	\$2,336,798	\$2,764,800

^aSubtotal equals construction and contingency costs.

^bFinance costs for SRF equals 2% of the amount borrowed and revenue bonds equal 2.5%.

^cCapitalized interest is based on linear draw of project amount over a 1-year construction period.

^dAnnual Debt Service for SRF based on 20 years at 1.22 % interest and revenue bonds based on 20 years at 3% interest.

The Financing Plan was determined using a spreadsheet model. Debt service was calculated to estimate the annual debt service costs with either SRF funding or conventional revenue bonds. Financial assumptions included the following:

- Debt terms (SRF) – 20 years: 1.22% interest rate with a 2% issuance cost.
- Debt terms (revenue bonds) – 20 years: 3% interest rate with 2.5% issuance cost.

The County has already adopted indexing provisions tied to the Water and Sewer Maintenance Index, allowing for annual rate adjustments. The projected financial analysis indicates that this indexing mechanism is projected to yield approximately 4% annually. When combined with anticipated customer growth, this revenue will provide sufficient funds to support debt coverage for existing and projected bonds as well as State Revolving Fund loans through 2030. Consequently, no rate adjustments beyond the adopted index are anticipated to be required to meet debt coverage requirements.

4.4 Financing Plan Model

A financial analysis of the wastewater systems was performed and presents the overall impact of the improvements and identifies wastewater system costs and the resulting net revenue through 2030. The result of this analysis indicates that with the annual projected rate increases of 4% annually and estimated customer increases, the existing and projected wastewater rates will provide for the existing revenue bond debt and existing and projected SRF loans with adequate coverage through 2030.

Table 4-3 presents a pro-forma that projects revenue and expenses through FY 2030. The existing and estimated new debt service is presented as well as debt service coverage. This analysis provides adequate debt service coverage through this time period. The data in Table 4-4 was prepared by the County's Rate Consultant (Raftelis) and is consistent with the Capital Finance Plans included as **Appendix B and C**.

Table 4-3 Schedule of Projected Revenues and Debt Coverage for Pledged Revenue

		2026	2027	2028	2029	2030
(a)	Operating Revenues					
	Service Charges [1]	\$58,515,000	\$60,776,000	\$63,127,000	\$65,573,000	\$68,116,000
(b)	Interest Income [2]	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
(c)	Other Incomes or Revenues (Identify) [3]	-	-	-	-	-
(d)	Total Revenues	\$62,015,000	\$64,276,000	\$66,627,000	\$69,073,000	\$71,616,000
(e)	Operating Expenses (excluding interest on debt, depreciation and other non-cash items) [4]	\$46,698,633	\$48,416,401	\$50,197,623	\$52,044,655	\$53,959,937
(f)	Net Revenues (f = d-e)	\$15,316,367	\$15,859,599	\$16,429,377	\$17,028,345	\$17,656,063
(g)	Existing Debt Service on Non-SRF Projects (excluding coverage) [5]	\$1,473,431	\$1,475,056	\$1,472,406	\$1,474,156	\$1,475,156
	Debt Service Coverage (1.10 required)	1040%	1075%	1116%	1155%	1197%
	Net Revenue Less Revenue Bond Debt (f - g)	\$13,842,936	\$14,384,543	\$14,956,970	\$15,554,189	\$16,180,907
(h)	Existing SRF Loan Debt Service (excluding coverage)	\$2,877,958	\$2,877,958	\$2,877,958	\$2,877,958	\$2,877,958
(j)	Projected Debt Service on SRF Future Projects (excluding coverage) [6]					
	Projected Debt Service - Jacobs	\$0	\$0	\$0	\$647,491	\$1,294,981
	Projected Debt Service - Wade-Trim	\$0	\$0	\$557,545	\$1,115,089	\$1,115,089
	Projected Debt Service - CDM Smith #1	\$0	\$0	\$0	\$675,490	\$1,350,980
	Projected Debt Service - CDM Smith #2	\$0	\$0	\$0	\$0	\$985,819
(k)	Total SRF Loan Debt Service (excluding coverage)	\$2,877,958	\$2,877,958	\$3,435,503	\$5,316,028	\$7,624,828
(l)	SRF Debt Service Coverage (1.15% Required)	481%	500%	435%	293%	212%
(m)	Net Revenues After Debt Service (m = f-g-k) [7]	\$10,964,978	\$11,506,585	\$11,521,467	\$10,238,160	\$8,556,079

Source:

Notes:

- [1] Revenue projection for FY26 is assumes a 7.5% rate adjustment (adopted by the County) (pro rated for only 8 months since it is effective February 1st 2026) and for all future years 4.0% rate adjustments were assumed which is slightly below the 5 year average for the BLS water and sewerage maintenance index which the County adopted as its rate adjustment index for future years. Revenue projections exclude impact fees.
- [2] Includes interest income on unrestricted cash balances, which were assumed to be held constant during the forecast.
- [3] Although excluded from the projections, the County recovered on average approximately \$4.76 million in water and wastewater impact fees during the Fiscal Years 2024 and 2025. The County continues to charge new connections the impact fees.
- [4] Amounts are based on the County's adopted budget for operating expenses for the Fiscal Year 2026 and escalated thereafter at an average annual factor of approximately 3.7%.
- [5] Pursuant to the Bond Resolution authorizing the issuance of the outstanding Water and Wastewater Revenue Bonds, Series 2014, the county must: a) generate sufficient Net Revenue equal to or greater than 110% of the annual debt service of the outstanding bonds; and b) generate sufficient Net Revenues plus impact fees equal to or greater than 120% of the annual debt service of the outstanding bonds. For purposes of the CFP we have assumed the senior lien coverage requirement at 110% in recognition that no impact fees were assumed in the projections contained in the Schedule of Projected Revenues and Debt Coverage for Pledged Revenue.
- [6] Amounts reflect the estimated annual debt service for the proposed SRF Loan.
- [7] For the purposes of full disclosure, the County budgets and funds: a) transfers to the general fund associated with Payment in Lieu of Taxes and b) capital outlay for minor units of equipment and vehicles. The following provides a forecast of net revenues after such transfers and payments:

Net Revenues After Debt	\$10,964,978	\$11,506,585	\$11,521,467	\$10,238,160	\$8,556,079
Less:					
Payment in Lieu of Taxes (PILOT)	\$1,754,149	\$1,754,149	\$1,754,149	\$1,754,149	\$1,754,149
Capital Outlay (Excludes Major Maintenance)	2,750,000	2,750,000	2,750,000	2,750,000	2,750,000
Net Available to Utility Reserve Fund	\$6,460,829	\$7,002,436	\$7,017,319	\$5,734,012	\$4,051,930

The County has the sole responsibility and authority to implement the recommended facilities. There are no inter-local agreements necessary for the County to provide wastewater services through 2030.

4.5 Implementation Schedule

The proposed implementation schedule for the deep injection well (Phase I) is provided in **Table 4-4**.

Table 4-4 Implementation Schedule Phase I

Item Number	Description	Completion or Submittal Date
1	Request for Inclusion	Complete
2	Public Hearing - 201 Facilities Plan	04/07/2026
4	Capital Financing Plan	04/07/2026
5	Site Specific Study	Not Required
6	Plans and Specifications Complete	05/30/2026
7	Permits	05/30/2026
8	Advertise for Bids	09/08/2026
9	Certification of Availability of Sites	05/30/2026
10	Loan Application Submittal, Attorney's Opinion, and Loan Disbursement/Repayment Schedule	10/01/2026
11	Loan Closing	11/01/2026
12	Bid Opening	10/08/2026
13	Contract Award	11/01/2026
14	Construction Complete (Substantial)	05/01/2028
15	Facility Start-up	05/01/2028
16	First Year Operation Certification	05/01/2029

The proposed implementation schedule for the pump station (Phase II) is provided in **Table 4-5**.

Table 4-5 Phase Implementation Schedule Phase II

Item Number	Description	Completion or Submittal Date
1	Request for Inclusion	10/01/2026
2	Public Hearing - 201 Facilities Plan Update	04/07/2026
3	Capital Financing Plan	04/07/2026
4	Site Specific Study	Not Required
5	Plans and Specifications Complete	12/01/2026
6	Permits	12/01/2026
7	Advertise for Bids	9/01/2027
8	Certification of Availability of Sites	12/01/2026
9	Loan Application Submittal, Attorney's Opinion, and Loan Disbursement/Repayment Schedule	10/01/2027
10	Loan Closing	11/01/2027
11	Bid Opening	11/01/2027
12	Contract Award	12/01/2027
13	Construction Complete (Substantial)	12/01/2029
14	Facility Start-up	12/01/2029
15	First Year Operation Certification	12/01/2030

Appendix A

South Beaches Regional WWTF Deep Injection Well Environmental Review



Memorandum

To: FDEP

From: Brendan Brown, PWS

Date: December 29, 2025

*Subject: South Beaches Regional WWTF
Deep Injection Well
Environmental Review*

The purpose of this technical memorandum is to summarize the analysis and findings of the environmental review in support of the Facility Plan Review as part of the State Revolving Fund Program for the Brevard County South Beaches Wastewater Treatment Plant Deep Injection Well. This review included evaluation of potential effects on flora, fauna, threatened and endangered plant and animal species, surface water bodies, prime agricultural lands, wetlands, and undisturbed areas.

CDM Smith conducted a desktop review of environmental resources in addition to a field visit to document and evaluate the potential for environmental impacts. CDM Smith evaluated an approximately 5.5-acre area of investigation (**Figure 1**), which contains the proposed project. In the evaluation, a desktop review of publicly available state and federal data was conducted to assess the potential for state jurisdictional wetlands and surface waters, waters of the U.S., and state or federally protected species to occur.

After the desktop review, CDM Smith conducted field visits to the project site on December 11, 2025 to evaluate site conditions, delineate wetlands and surface waters, and determine habitat suitability for wildlife and protected species. During the field visits, CDM Smith assessed the potential presence of jurisdictional wetlands within the project area via pedestrian transects. The evaluation was conducted in general accordance with routine determination guidelines as specified in the Florida Unified Wetland Delineation Methodology produced by Florida Department of Environmental Protection (FDEP) (Chapter 62-340 F.A.C.) and in the US Army Corps of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory 1987) and Atlantic and Gulf Coastal Plain Regional Supplement Version 2.0 (USACE 2010).

Project Description and Environmental Benefit

The proposed project involves the final design and construction of a second deep injection well (DIW-2) and associated pump station improvements, with the primary objective of eliminating wastewater discharge to the Indian River Lagoon in compliance with Florida Statutes 403.064 and 403.086. The project includes the decommissioning of the existing effluent disposal pump station, preparation of detailed design drawings and technical specifications in accordance with Chapter 62-528, F.A.C., and the development of stormwater management systems to meet updated treatment requirements for Outstanding Florida Waters and impaired waterbodies.





Figure 1
Area of Investigation
South Beaches Wastewater Treatment Plant
Brevard County, FL

The proposed project will eliminate effluent discharge to the Indian River Lagoon, thereby benefiting flora and fauna of the estuary. The Indian River Lagoon is one of North America's most biodiverse estuaries, stretching along Florida's east coast and encompassing a mosaic of wetlands, mangroves, and seagrass beds. These habitats provide critical nursery grounds for fish, shellfish, and invertebrates, while supporting wildlife such as manatees, dolphins, and numerous bird species. Seagrass meadows stabilize sediments, improve water quality, and sustain species like sea turtles and juvenile gamefish. The lagoon's wetlands filter pollutants, buffer storm surges, and offer refuge for wading birds and amphibians, making this ecosystem vital for both ecological health and regional resilience.

Wetlands and Surface Waters

During the field visit, no wetlands or surface waters were observed within the area of investigation. The area consists of mowed and maintained grassland.



Photograph 1. Mowed and Maintained Grassland in Area of Investigation

Wildlife and Protected Species

CDM Smith conducted a database search and field visit to assess the potential for protected species. The focus of the evaluation was to determine the potential for state or federally protected animal species or their habitats to occur within the project area.

The protected species evaluation included review of recorded occurrences in the vicinity of the project area and review of soil, land use, and natural communities' data with reference to suitable habitat for species of potential occurrence. These data sources included NRCS soil web mapper (NRCS 2025); the U.S. Fish and Wildlife Service (USFWS) NWI database (2025); St. Johns River Water Management District Land Use data (FDEP 2023); the Florida Natural Areas Inventory (FNAI) database (2025); the USFWS Information for Planning and Conservation (IPaC) database (2025); and aerial photography (Google Earth, 2025).

Based on the FNAI database and biodiversity matrix report (generated November 11, 2025, **Attachment A**), there was one documented occurrence within the 1-mile biodiversity matrix grid that covers the project area. This was an occurrence of a leatherback sea turtle (*Dermochelys coriacea*) which is a federally and state listed endangered species. There were no other documented occurrences of state or federally threatened, endangered, or rare species within the project area or immediate vicinity based on the biodiversity matrix report. Species reported as likely to occur include Florida scrub-jay (*Aphelocoma coerulescens*), loggerhead sea turtle (*Caretta caretta*), and green sea turtle (*Chelonia mydas*).

Based on the USFWS IPaC database (**Attachment A**), several federally protected species may occur within or adjacent to the project area. There are no designated critical habitats within the site.

Following a review of the compiled species lists, CDM Smith conducted a field visit and habitat assessment to identify which species have a reasonable likelihood of occurring within or adjacent to the site (Table 1).

Table 1. Protected Species with a Reasonable likelihood of Occurring Within or Adjacent to the Project Area

Common Name	Scientific Name	Status	Suitable Habitat Present? (Yes/No)	Species Observed? (Yes/No)
Birds				
Eastern black rail	<i>Laterallus jamaicensis jamaicensis</i>	FT	N	N
Audubon's crested caracara	<i>Polyborus plancus audubonii</i>	FT	N	N
Everglades snail kite	<i>Rostrhamus sociabilis plumbeus</i>	FE	N	N
Wood stork	<i>Mycteria americana</i>	FT	N	N
Florida scrub-jay	<i>Aphelocoma coerulescens</i>	FT	N	N
Rufa red knot	<i>Calidris canutus rufa</i>	FT	N	N
Reptiles				
Eastern indigo snake	<i>Drymarchon corais couperi</i>	FT	N	N
American crocodile	<i>Crocodylus acutus</i>	FT	N	N
Green sea turtle	<i>Chelonia mydas</i>	FT	N	N
Gopher tortoise	<i>Gopherus polyphemus</i>	C/ST	Y	Y
Insects				
Monarch butterfly	<i>Danaus plexippus</i>	PT/ST	Y	N

Notes: FT = federally threatened; FE = federally endangered; PT = proposed threatened; ST = state threatened

During the field visit, no natural habitats or undisturbed areas were observed. The area of investigation is previously developed land that is mowed and maintained. It primarily contains bahiagrass (*Paspalum notatum*) and Bermuda grass (*Cynodon dactylon*).

Based on the observations during the field visit, CDM Smith determined that of the protected species identified during the desktop evaluation, only the gopher tortoise and monarch butterfly have the potential to occur in the area of investigation. A further discussion of these species is provided below.

Gopher Tortoise

The area of investigation includes grasslands that are suitable habitat for gopher tortoise (*Gopherus polyphemus*). One active burrow was observed within the area of investigation (Figure 2). Therefore, future surveys of the project area are recommended to identify any new burrows. Avoidance of impacts to burrows is recommended. A 100-foot buffer (Figure 2) would help avoid impacts to the burrow during the proposed project. Additionally, silt fences around the construction area would help prevent the gopher tortoise from entering active construction areas. If the burrow cannot be avoided, then relocation may be required. All Florida Fish and Wildlife Conservation Commission regulations and guidelines should be followed.



Photograph 2. Gopher Tortoise and Burrow

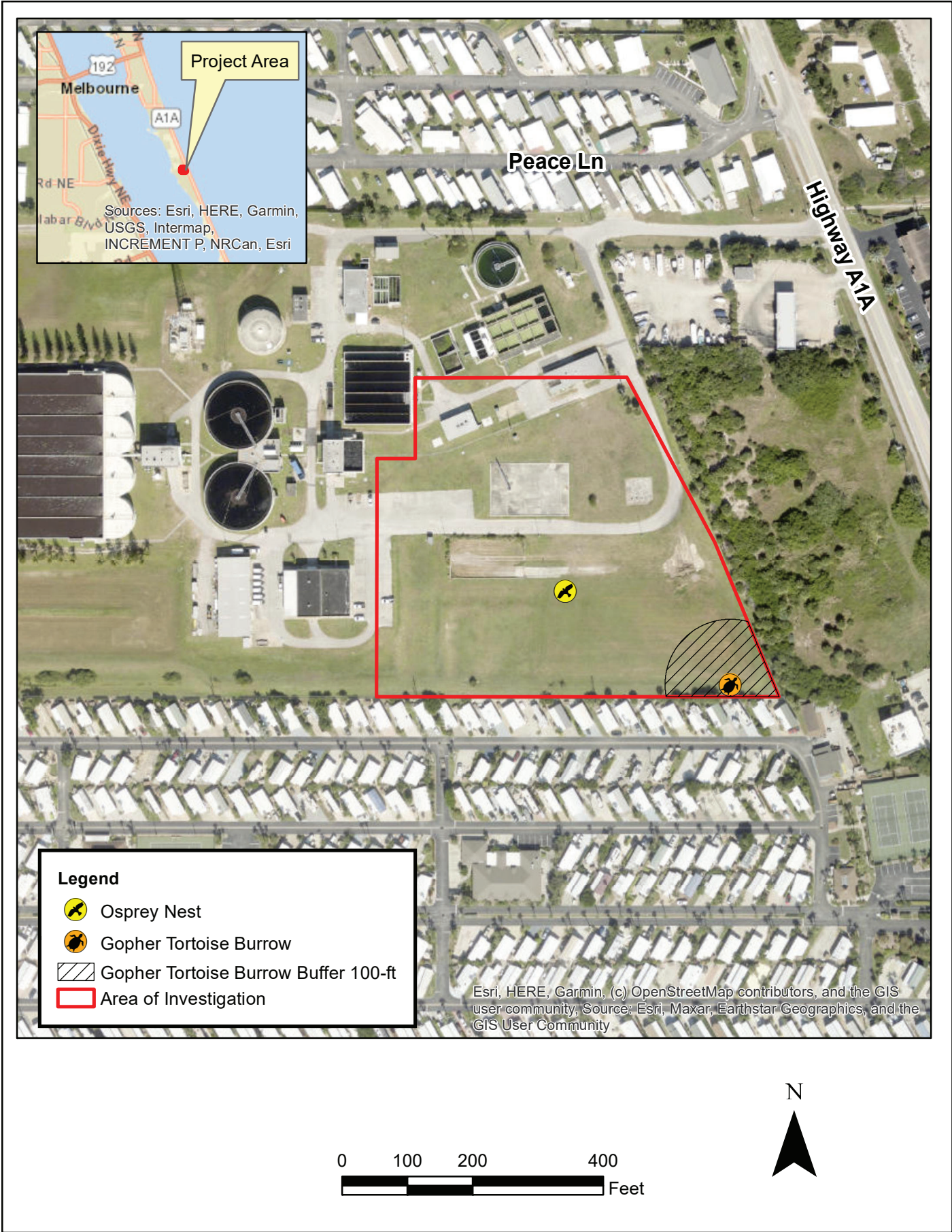


Figure 2
Environmental Features
South Beaches Wastewater Treatment Plant
Brevard County, FL

Monarch Butterfly

The monarch butterfly is a migratory species with orange and black coloration. In Florida, monarchs utilize a variety of habitats, including open fields, grasslands, and areas with abundant milkweed—their larval host plant. The monarch is currently listed as proposed threatened at the federal level and state threatened in Florida. While no monarch butterflies were observed during the field investigation, suitable foraging habitat is present within the area of investigation, particularly in mowed and maintained grasslands. Conservation of milkweed and nectar sources is important for supporting local populations. Any future site activities should consider the presence of suitable habitat and avoid unnecessary disturbance to areas where milkweed or flowering plants are present, in alignment with best management practices for pollinator conservation.

Osprey

While ospreys (*Pandion haliaetus*) are not a state or federally listed threatened or endangered species, ospreys and their nests are protected under Florida Administrative Code (Rule 68A-4.001). During the December site visit, an osprey nest was observed on the property; however, no ospreys were present and the nest appeared inactive (Figure 2). Under the Migratory Bird Treaty Act and Florida Fish and Wildlife Conservation Commission (FWC) rules, active nests (containing eggs or chicks) are protected and cannot be disturbed without appropriate permits. Inactive nests may be removed without a permit, provided no birds are using the structure. The client should confirm nest inactivity prior to any work in the vicinity and document the observation. If future site activities occur during nesting season (typically December through August), the client should schedule a pre-construction survey to verify nest status and, if active, coordinate with FWC and USFWS for compliance before proceeding.



Photograph 3. Abandoned osprey nest.

Prime Agricultural Lands

The area of investigation is mapped as Palm Beach Sand and Welaka sand (**Attachment A** [NRCS 2025]). The project area is not listed as prime farmland based on National Resource Conservation Service data.

Summary and Recommendations

CDM Smith conducted a desktop and field ecological investigation in the 5.5-acre area of investigation to assess the presence of jurisdictional wetlands, surface waters, and protected species. No wetlands or surface waters were identified, and the site is characterized by mowed and maintained grassland dominated by bahiagrass and Bermuda grass. Of the protected species evaluated, only the gopher tortoise and monarch butterfly have the potential to occur within the project area. One active gopher tortoise burrow was observed, and suitable monarch butterfly habitat is present. An inactive osprey nest was also documented. It is recommended that future surveys be conducted to identify any new gopher tortoise burrows, and that a 100-foot buffer and silt fencing be implemented to avoid impacts to the gopher tortoise. If avoidance of gopher tortoise burrows is not possible, relocation in accordance with Florida Fish and Wildlife Conservation Commission guidelines will be required. Any future site activities should consider the presence of suitable habitat for the monarch butterfly and avoid unnecessary disturbance to areas where milkweed or flowering plants are present, in alignment with best management practices for pollinator conservation. Prior to any work near the osprey nest, its status should be confirmed, and if active, coordination with FWC and USFWS is advised. The area is not classified as prime farmland. Overall, the proposed project is expected to provide environmental benefit by reducing effluent discharge to the Indian River Lagoon, supporting the health of this vital estuarine ecosystem.

References

- Cornell. 2025. *The Cornell Laboratory of Ornithology, eBird*. Database. Available at: <https://ebird.org/hotspot/L965788>. Accessed November 11, 2025.
- Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report T-87-1. US Army Corps of Engineers. Waterways Experiment Station. Vicksburg, Mississippi.
- Florida Department of Environmental Protection (FDEP). 2023. Water Data Central website. Available at: <https://floridadep.gov/fgs/data-maps>. November 11, 2025.
- Florida Natural Areas Inventory (FNAI). 2021. Biodiversity Matrix. Available at: <https://www.fnai.org/>. Accessed November 11, 2025.
- Google Earth. 2025. Earth.google.com/web. November 11, 2025.
- US Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0. ed. J.S. Wakeley., R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-20. Vicksburg, MS: US Army Engineer Research and Development Center. November 2010.
- US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). 2018. Field Indicators of Hydric Soils in the United States. Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils.
- _____. 2025. Web Soil Survey Available at: <http://websoilsurvey.sc.egov.usda.gov/>. Accessed December 16, 2025.
- _____. 2019. Wood Stork Nesting Colonies and Core Foraging Areas Active within 2009-2018 in Florida. Available at: https://www.fws.gov/northflorida/WoodStorks/WOST_Data/2019-WOST_FL_colonies_map_update_20190508.pdf. Accessed February 8, 2023.
- _____. 2025. National Wetland Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Available at: <http://www.fws.gov/wetlands/>. Accessed November 11, 2025.
- _____. 2025. Information for Planning and Consultation (IPaC). Available at: <https://ecos.fws.gov/ipac/>. Accessed November 11, 2025.

Attachment A

FNAI Biodiversity Matrix Report

USFWS IPaC Database Report

NRCS Soils Map



1018 Thomasville Road
 Suite 200-C
 Tallahassee, FL 32303
 850-224-8207
 850-681-9364 fax
 www.fnai.org

FLORIDA
Natural Areas
 INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

UNOFFICIAL REPORT

Created 11/11/2025

(Contact the FNAI Data Services Coordinator at 850.224.8207 or kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 63272

	<p>Descriptions</p> <p>DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.</p> <p>DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.</p> <p>LIKELY - The species or community is <i>known</i> to occur in this vicinity, and is considered likely within this Matrix Unit because:</p> <div style="border: 1px solid black; padding: 5px;"> <ol style="list-style-type: none"> 1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; <i>or</i> 2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit. </div> <p>POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.</p>
--	--

Matrix Unit ID: 63272

1 Documented Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Dermochelys coriacea Leatherback Sea Turtle	G2	S2	E	FE

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Aphelocoma coerulescens Florida Scrub-Jay	G2?	S1S2	T	FT
Caretta caretta Loggerhead Sea Turtle	G3	S3	T	FT

[Chelonia mydas](#)
Green Sea Turtle

G3

S2S3

T

FT

Matrix Unit ID: 63272**24 Potential** Elements for Matrix Unit 63272

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Acipenser oxyrinchus oxyrinchus</i> Atlantic Sturgeon	G3T3	S1	E	FE
Calopogon multiflorus many-flowered grass-pink	G2G3	S2S3	N	T
Centrosema arenicola sand butterfly pea	G2Q	S2	N	E
Charadrius melodus Piping Plover	G3	S2	T	FT
Conradina grandiflora large-flowered rosemary	G3	S3	N	T
<i>Ctenogobius stigmaturus</i> Spottail Goby	G2	S2	N	N
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Eretmochelys imbricata Hawksbill Sea Turtle	G3	S1	E	FE
<i>Glandularia maritima</i> coastal vervain	G3	S3	N	E
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Halophila johnsonii Johnson's seagrass	G2Q	S2	T	E
<i>Harrisia simpsonii</i> Simpson's prickly apple	G2	S2	N	N
Lechea cernua nodding pinweed	G3	S3	N	T
Lechea divaricata pine pinweed	G2	S2	N	E
<i>Mustela frenata peninsulae</i> Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana celestial lily	G2	S2	N	E
Nolina atopocarpa Florida beargrass	G3	S3	N	T
Peromyscus polionotus niveiventris Southeastern Beach Mouse	G5T1	S1	T	FT
<i>Rivulus marmoratus</i> Mangrove Rivulus	G4G5	S3	SC	N
Schizachyrium niveum scrub bluestem	G1G2	S1S2	N	E
<i>Setophaga discolor paludicola</i> Florida Prairie Warbler	G5T3	S3	N	N
Tephrosia angustissima var. curtissii coastal hoary-pea	G1T1	S1	N	E
<i>Trichechus manatus latirostris</i> Florida Manatee	G2G3T2	S2S3	T	N
Warea carteri Carter's warea	G1	S1	E	E

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance

on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitats (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Brevard County, Florida



Local office

Florida Ecological Services Field Office

☎ (352) 448-9151

📠 (772) 562-4288

✉ fw4filesregs@fws.gov

777 37th St
Suite D-101
Vero Beach, FL 32960-3559

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
West Indian Manatee <i>Trichechus manatus</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4469	Threatened Marine mammal

Birds

NAME	STATUS
Crested Caracara (audubon's) [fl Dps] <i>Caracara plancus audubonii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8250	Threatened
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite <i>Rostrhamus sociabilis plumbeus</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7713	Endangered

Florida Scrub-jay <i>Aphelocoma coerulescens</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6174	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1864	Threatened
Wood Stork <i>Mycteria americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8477	Threatened

Reptiles

NAME	STATUS
American Crocodile <i>Crocodylus acutus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6604	Threatened
Eastern Indigo Snake <i>Drymarchon couperi</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/646	Threatened
Green Sea Turtle <i>Chelonia mydas</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6199	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Flowering Plants

NAME	STATUS
Carter's Mustard <i>Warea carteri</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5583	Endangered
Lewton's Polygala <i>Polygala lewtonii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6688	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

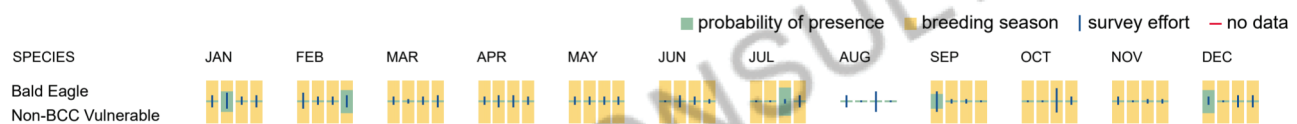
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases [birds of concern](#), including [Birds of Conservation Concern \(BCC\)](#), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the [Nationwide avoidance and minimization measures for birds](#) document, and any other project-specific avoidance and minimization measures suggested at the link [Measures for avoiding and minimizing impacts to birds](#) for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles document](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
American Oystercatcher <i>Haematopus palliatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31

Bald Eagle <i>Haliaeetus leucocephalus</i>	Breeds Sep 1 to Jul 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	
https://ecos.fws.gov/ecp/species/1626	
Black Skimmer <i>Rynchops niger</i>	Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/5234	
Chimney Swift <i>Chaetura pelagica</i>	Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
Great Blue Heron <i>Ardea herodias occidentalis</i>	Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	
Gull-billed Tern <i>Gelochelidon nilotica</i>	Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/9501	
Least Tern <i>Sternula antillarum antillarum</i>	Breeds Apr 25 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
Lesser Yellowlegs <i>Tringa flavipes</i>	Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/9679	
Magnificent Frigatebird <i>Fregata magnificens</i>	Breeds Oct 1 to Apr 30
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	
Painted Bunting <i>Passerina ciris</i>	Breeds Apr 25 to Aug 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	
Prairie Warbler <i>Setophaga discolor</i>	Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>	Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
Reddish Egret <i>Egretta rufescens</i>	Breeds Mar 1 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/7617	
Ruddy Turnstone <i>Arenaria interpres morinella</i>	Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	
Semipalmated Sandpiper <i>Calidris pusilla</i>	Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	

Short-billed Dowitcher *Limnodromus griseus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Swallow-tailed Kite *Elanoides forficatus*

Breeds Mar 10 to Jun 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8938>

Whimbrel *Numenius phaeopus hudsonicus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Willet *Tringa semipalmata*

Breeds Apr 20 to Aug 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wilson's Plover *Charadrius wilsonia*

Breeds Apr 1 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort - no data

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

American Kestrel BCC - BCR	++ +	+ ++	++ +	++++	++++	++++	++++	++++	++++	++++	++++	++++
American Oystercatcher BCC Rangwide (CON)	++ +	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Bald Eagle Non-BCC Vulnerable	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Black Skimmer BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Chimney Swift BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Great Blue Heron BCC - BCR	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Gull-billed Tern BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Least Tern BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Lesser Yellowlegs BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Magnificent Frigatebird BCC - BCR	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Painted Bunting BCC - BCR	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Prairie Warbler BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Red-headed Woodpecker BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Reddish Egret BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Ruddy Turnstone BCC - BCR	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Semipalmated Sandpiper BCC - BCR	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Short-billed Dowitcher BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Swallow-tailed Kite BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Whimbrel BCC - BCR	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Willet BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Wilson's Plover BCC Rangwide (CON)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for the species are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

Marine mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walrus, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The [Endangered Species Act](#) (ESA) of 1973.
2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee *Trichechus manatus*
<https://ecos.fws.gov/ecp/species/4469>

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

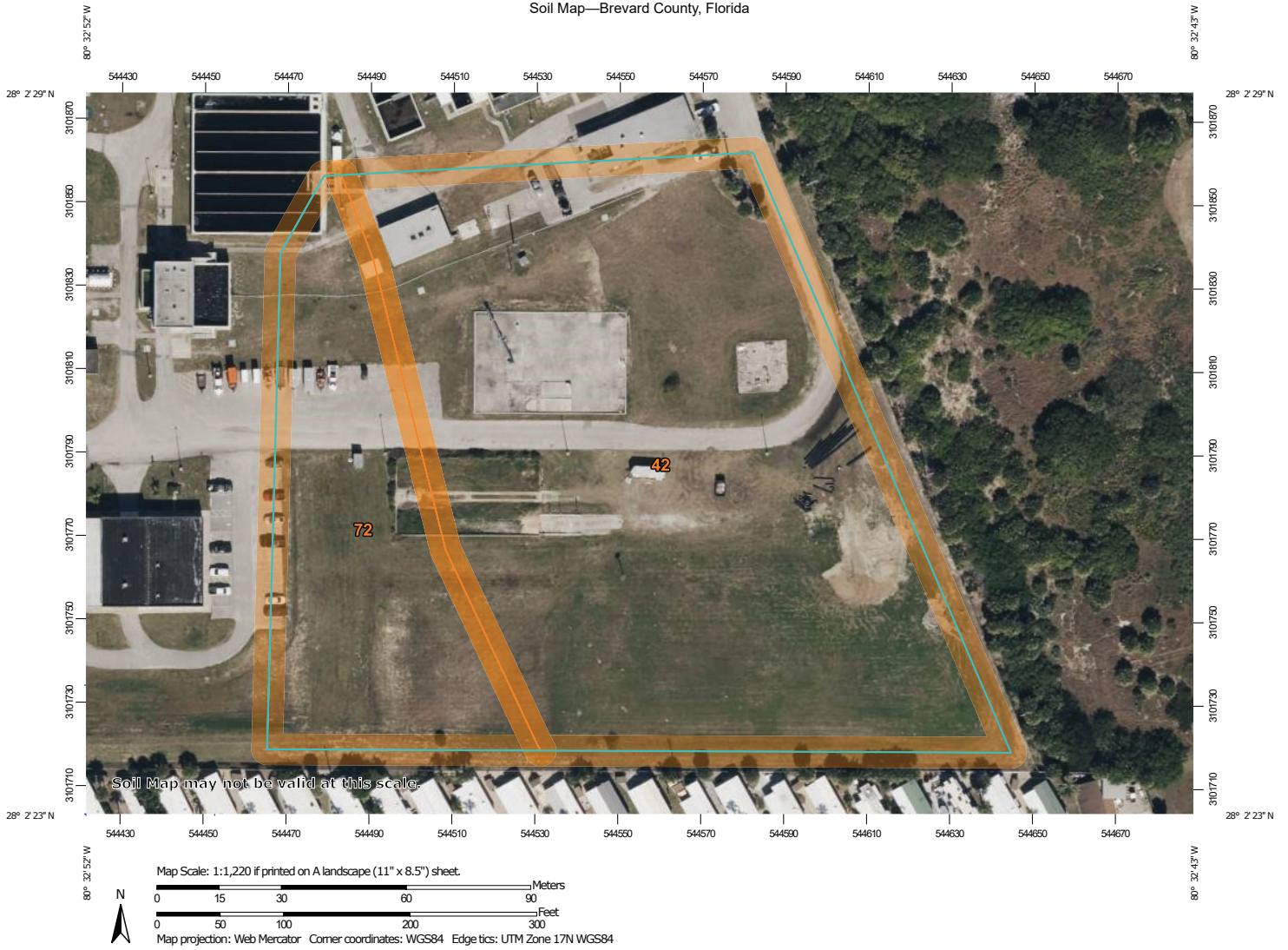
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.





































NOT FOR CONSULTATION

Soil Map—Brevard County, Florida



Soil Map—Brevard County, Florida

MAP LEGEND

-  Area of Interest (AOI)
- Soils**
-  Soil Map Unit Polygons
-  Soil Map Unit Lines
-  Soil Map Unit Points
- Special Point Features**
-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features
- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Brevard County, Florida
 Survey Area Data: Version 25, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 19, 2022—Mar 2, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
42	Palm Beach sand, 0 to 8 percent slopes	3.8	75.2%
72	Welaka sand	1.3	24.8%
Totals for Area of Interest		5.1	100.0%

Appendix B

Finance Plan for Deep Injection Well

CAPITAL FINANCING PLAN

Brevard County Utility Services

(Project Sponsor)

Edward Fontanin, PE, Utility Services Director

(Authorized Representative and Title)

Viera, Brevard, 32940

(City, State, and Zip Code)

Thierry Boveri, CGFM, Vice President, 407-628-2600

(Capital Financing Plan Contact, Title and Telephone Number)

341 N Maitland Ave, Maitland, FL 32751

(Mailing Address)

tboveri@raftelis.com

(Email Address)

Maitland, FL, 32751

(City, State, and Zip Code)

The Department needs to know about the financial capabilities of potential State Revolving Fund (SRF) loan applicants. Therefore, a financial capability demonstration (and certification is required well before the evaluation of the actual loan application).

The sources of revenues being dedicated to repayment of the SRF loan are Utility operating revenues (**Note: Projects pledging utility operating revenues should attach a copy of the existing /proposed rate ordinance**)

Estimation of Proposed SRF Loan Debt Service

Capital Cost [1]	\$	23,230,000
Loan Service Fee (2% of Capital Cost)	\$	464,600
Subtotal	\$	23,694,600
Capitalized Interest [2]	\$	216,806
Total Cost to be Amortized (Rounded)	\$	23,911,406
Interest Rate [3]		1.22%
Annual Debt Service	\$	1,350,980
Annual Debt Service Including Coverage Factor [4]	\$	1,553,628

Notes:

[1] Capital Cost = Allowance + Construction Cost.

[2] Estimated based on linear draw of project amount over a 1.5 year construction period.

[3] Based on previous CFP interest rate submission. FY 25/26 Q2 reported CWSRF rate equals 1.22%.

[4] Coverage Factor is assumed at 1.15 recognizing that no impact fees are assumed within the Schedule of Revenue and Debt Service Coverage.

SCHEDULE OF EXISTING DEBT SERVICE AND DEBT EQUIVALENTS ^[1]

List annual debt service beginning two years before the anticipated loan agreement date and continuing at least fifteen fiscal years.

Use additional pages as necessary.

IDENTIFY EACH OBLIGATION

#1 Water & Wastewater Utility Revenue Bonds, Series 2014 Coverage % [2] 110% Revenue Pledge Lien Priority 1st Insured (Yes/No) Yes	#2 CW-051170 Coverage % 115% Revenue Pledge Lien Priority 2nd Insured (Yes/No) N/A	#3 WW05110 Coverage % 115% Revenue Pledge Lien Priority 2nd Insured (Yes/No) N/A
#4 CW-051130 Coverage % 115% Revenue Pledge Lien Priority 2nd Insured (Yes/No) N/A	#5 Estimate - SRF Loan 1 (CDM2) (Proposed) Coverage % 115% Insured (Yes/No) N/A	#6 Estimate - SRF Loan 2 (Jacobs) (Proposed) Coverage % 115% Insured (Yes/No) N/A
#7 Estimate - SRF Loan 3 (CDM1) (Proposed) Coverage % 115% Insured (Yes/No) N/A	#8 Estimate - SRF Loan 1 (WT) (Proposed) Coverage % 115% Insured (Yes/No) N/A	

Fiscal Year	Annual Debt Service (Principal + Interest)							
	Existing Loans				Projected Loans			
	Non-SRF	SRF			SRF			
	1	#2 ^[3]	#3 ^[3]	#4	#5 [4]	#6 [4]	#7[4]	#8[4]
2025	1,473,431	113,183	2,166,769	598,006	0	0	\$0	\$
2026	1,473,431	113,183	2,166,769	598,006	0	0	0	0
2027	1,475,056	113,183	2,166,769	598,006	0	0	0	0
2028	1,472,406	113,183	2,166,769	598,006	0	0	0	557,54
2029	1,474,156	113,183	2,166,769	598,006	492,909	647,491	1,350,980	1,115,08
2030	1,475,156	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2031	1,475,406	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2032	1,472,781	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2033	1,474,344	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2034	1,473,800	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2035	1,471,075	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2036	1,472,650	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2037	1,472,200	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2038	1,474,725	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2039	1,475,000	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08
2040	1,473,025	113,183	1,083,385	598,006	985,819	1,294,981	1,350,980	1,115,08
2041	1,473,800	113,183		299,003	985,819	1,294,981	1,350,980	1,115,08
2042	1,473,400	113,183			985,819	1,294,981	1,350,980	1,115,08
2043	1,471,000	113,183			985,819	1,294,981	1,350,980	1,115,08
2044	1,471,600	56,592			985,819	1,294,981	1,350,980	1,115,08
2045					985,819	1,294,981	1,350,980	1,115,08
2046					985,819	1,294,981	1,350,980	1,115,08
2047					985,819	1,294,981	1,350,980	1,115,08
2048					985,819	1,294,981	1,350,980	557,54
2049					492,909	647,491		
2050								
2051								
2052								
2053								
2054								

Footnote:

- [1] Reflects debt service schedules from outstanding bonds and active SRF loans. It should be noted that the projections contained herein do not reflect any additional debt service that may be contemplated or required to fund future capital pursuant to the County's Capital Improvement Plan.
- [2] Pursuant to the Bond Resolution authorizing the issuance of the outstanding Water and Wastewater Revenue Bonds, Series 2014, the county must:
 - a) generate sufficient Net Revenue equal to or greater than 110% of the annual debt service of the outstanding bonds; and b) generate sufficient Net Revenues plus impact fees equal to or greater than 120% of the annual debt service of the outstanding bonds. For purposes of the CFP we have assumed the senior lien coverage requirement at 110% in recognition that no impact fees were assumed in the projections contained in the *Schedule of Projected Revenues and Debt Coverage for Pledged Revenue*.
- [3] Amounts shown reflect estimates and are subject to change based on completion of actual project cost and timing of completion.
- [4] Amounts shown reflect estimates of additional proposed SRF loans which would be submitted in parallel with the current submission.

**SCHEDULE OF ACTUAL REVENUES AND DEBT COVERAGE
FOR PLEDGED REVENUE**

(Provide information for the two fiscal years preceding the anticipated date of the SRF loan agreement)

	FY 23-24 <small>[1]</small>	FY 24-25 <small>[1]</small>
(a) Operating Revenues (Identify)		
Charges for Service [2]	\$ 52,168,786	\$ 57,601,404
Other Operating Revenue	-	-
(b) Interest Income	\$6,075,498	\$4,907,624
(c) Other Incomes or Revenues	\$0	\$0
(d) Total Revenues	\$58,244,284	\$62,509,028
(e) Operating Expenses (excluding interest on debt, depreciation and other non-cash items)	\$41,469,096	\$43,860,028
(f) Net Revenues (f = d - e)	\$16,775,188	\$18,649,000
(g) Debt Service (including coverage) Excluding SRF Loans [3]	\$1,618,849	\$1,620,774
(h) Debt Service (including coverage) for Outstanding SRF Loans [3]	\$3,179,491	\$3,193,528
(i) Net Revenues After Debt Service (i = f - g - h)	\$11,976,847	\$13,834,698

<p>Source:</p>
<p>Notes:</p> <p>[1] Unless otherwise noted, amounts shown are derived from the County's audited financial statements for FY24 and unaudited budget to actuals document for FY25.</p> <p>[2] The Board approved the following rate adjustments at the February 8, 2022 Public Hearing;</p> <p style="padding-left: 20px;">a. The water and sewer user rates will be indexed as follows effective each year:</p> <p style="padding-left: 40px;">2022 – 6.5%</p> <p style="padding-left: 40px;">2023 – 8.5%</p> <p style="padding-left: 40px;">2024 – 8.5%</p> <p style="padding-left: 40px;">2025 – 8.5%</p> <p style="padding-left: 40px;">2026 – 7.5%</p> <p style="padding-left: 20px;">Beginning and in all subsequent years, the water and sewer user rates shall automatically increase based on the actual change in the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U) based on the average of the index from the previous 12 months (November to November).</p> <p>[3] Amounts shown reflect debt service as noted in the prior <i>Schedule Of Debt Service And Debt Equivalents</i>.</p>

**SCHEDULE OF PROJECTED REVENUES AND DEBT COVERAGE
FOR PLEDGED REVENUE**

	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>
(a) Operating Revenues Service Charges [1]	\$58,515,000	\$60,776,000	\$63,127,000	\$65,573,000	\$68,116,000
(b) Interest Income [2]	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000
(c) Other Incomes or Revenues (Identify) [3]	\$0	\$0	\$0	\$0	\$0
(d) Total Revenues	\$62,015,000	\$64,276,000	\$66,627,000	\$69,073,000	\$71,616,000
(e) Operating Expenses (excluding interest on debt, depreciation and other non-cash items) [4]	\$46,698,633	\$48,416,401	\$50,197,623	\$52,044,655	\$53,959,937
(f) Net Revenues (f = d - e)	\$15,316,367	\$15,859,599	\$16,429,377	\$17,028,345	\$17,656,063
(g) Existing Debt Service on Non-SRF Projects (including coverage) [5]	\$1,620,774	\$1,622,562	\$1,619,647	\$1,621,572	\$1,622,672
(h) Existing SRF Loan Debt Service (including coverage)	\$0	\$0	\$0	\$0	\$0
Total Existing Debt Service (i = g + h)	\$1,620,774	\$1,622,562	\$1,619,647	\$1,621,572	\$1,622,672
(j) Projected Debt Service on Non-SRF Future Projects (including coverage)	\$0	\$0	\$0	\$0	\$0
(k) Projected SRF Loan Debt Service (Other SRF Loans) (including coverage) [6]	\$3,309,652	\$3,309,652	\$3,950,828	\$5,903,465	\$7,214,925
(k) Projected SRF Loan Debt Service (This Loan) (including coverage) [6]	\$0	\$0	\$0	\$1,553,627	\$1,553,627
Total Debt Service (Existing and Projected) (l = i + j + k)	\$4,930,426	\$4,932,214	\$5,570,475	\$9,078,664	\$10,391,224
(m) Net Revenues After Debt Service (m = f - l) [7]	\$10,385,941	\$10,927,385	\$10,858,901	\$7,949,681	\$7,264,839

Source:

Notes:

- [1] Revenue projection for FY26 is assumes a 7.5% rate adjustment (adopted by the County) (pro rated for only 8 months since it is effective February 1st 2026) and for all future years 4.0% rate adjustments were assumed which is slightly below the 5 year average for the BLS water and sewerage maintenance index v the County adopted as its rate adjustment index for future years. Revenue projections exclude impact fees.
- [2] Includes interest income on unrestricted cash balances, which were assumed to be held constant during the forecast.
- [3] Although excluded from the projections, the County recovered on average approximately \$4.76 million in water and wastewater impact fees during the Fiscal Years 2024 and 2025. The County continues to charge new connections the impact fees.
- [4] Amounts are based on the County's adopted budget for operating expenses for the Fiscal Year 2026 and escalated thereafter at an average annual factor of approximately 3.7%.
- [5] Pursuant to the Bond Resolution authorizing the issuance of the outstanding Water and Wastewater Revenue Bonds, Series 2014, the county must:
a) generate sufficient Net Revenue equal to or greater than 110% of the annual debt service of the outstanding bonds; and b) generate sufficient Net Revenues plus impact fees equal to or greater than 120% of the annual debt service of the outstanding bonds. For purposes of the CFP we have assumed the senior lien coverage requirement at 110% in recognition that no impact fees were assumed in the projections contained in the Schedule of Projected Revenues and Debt Coverage for Pledged Revenue.
- [6] Amounts reflect the estimated annual debt service for the proposed SRF Loan.
- [7] For the purposes of full disclosure, the County budgets and funds: a) transfers to the general fund associated with Payment in Lieu of Taxes and b) capital outlay for minor units of equipment and vehicles. The following provides a forecast of net revenues after such transfers and payments:

Net Revenues After Debt	\$10,385,941	\$10,927,385	\$10,858,901	\$7,949,681	\$7,264,839
Less:					
Payment in Lieu of Taxes (PILOT)	\$1,754,149	\$1,754,149	\$1,754,149	\$1,754,149	\$1,754,149
Capital Outlay (Excludes Major Maintenance)	2,750,000	2,750,000	2,750,000	2,750,000	2,750,000
Net Available to Utility Reserve Fund	\$5,881,792	\$6,423,237	\$6,354,753	\$3,445,532	\$2,760,690

CERTIFICATION

I, Edward Fontanin, PE, certify that I have reviewed the information
Utility Services Department Director

included in the preceding capital financing plan worksheets, and to the best of my knowledge, this
information accurately reflects the financial capability of Brevard County Utility Services
Department,
Local Government

I further certify that Brevard County Utility Services Department
Local Government

adequate construction, operation, and maintenance of the system, including this SRF project.



Signature

MAR 18/26

Date

**Brevard County, Florida
Water and Wastewater Utility System**

Projected Debt Service Coverage Analysis III

Line No.	Description	Historical				Projected				
		2023	2024	2025	2026	2027	2028	2029	2030	2031
Gross Revenues:										
1	Water User Service Fees [1]	\$ 1,687,730	\$ 1,862,189	\$ 2,213,092	\$ 2,324,000	\$ 2,417,000	\$ 2,514,000	\$ 2,615,000	\$ 2,720,000	\$ 2,829,000
2	Wastewater User Service Fees [2]	43,412,307	48,536,699	51,610,188	54,191,000	56,359,000	58,613,000	60,958,000	63,396,000	65,932,000
3	Other Revenues	1,534,020	2,111,651	2,307,012	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
4	Investment Earnings	2,259,620	3,836,317	4,121,471	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
5	Transfers (to) / from Rate Stabilization Fund	-	-	-	-	-	-	-	-	-
6	Total	\$ 48,893,677	\$ 56,346,856	\$ 60,251,762	\$ 62,015,000	\$ 64,276,000	\$ 66,627,000	\$ 69,073,000	\$ 71,616,000	\$ 74,261,000
Operating Expenses:										
7	Compensation and Benefits	\$ 12,015,751	\$ 14,045,840	\$ 16,022,308	\$ 16,663,201	\$ 17,329,729	\$ 18,022,918	\$ 18,743,834	\$ 19,493,588	\$ 20,273,331
8	Operating Expenses	21,313,536	28,337,664	29,019,741	30,035,432	31,086,672	32,174,706	33,300,820	34,466,349	35,672,671
9	Total	\$ 33,329,287	\$ 42,383,504	\$ 45,042,049	\$ 46,698,633	\$ 48,416,401	\$ 50,197,623	\$ 52,044,655	\$ 53,959,937	\$ 55,946,003
10	Net Revenues	\$ 15,564,390	\$ 13,963,351	\$ 15,209,713	\$ 15,316,367	\$ 15,859,599	\$ 16,429,377	\$ 17,028,345	\$ 17,656,063	\$ 18,314,997

Footnotes:

- [1] Projected water revenues are increased by the County adopted inflationary index (water and sewerage maintenance index) of 4%
- [2] Projected wastewater revenues are increased by the County adopted inflationary index (water and sewerage maintenance index) of 4%

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$19,232,000
Construction Period (Years)	1.00	SRF Loan Service Fee \$	\$384,640
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	<u>\$119,662</u>
Semiannual Payments:	40	Total Principal Amount:	<u>\$19,736,302</u>
Semiannual Payment:			<u><u>\$557,545</u></u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	5/1/2028	2028	1	\$19,736,302	\$437,153	\$120,391	\$557,545	\$19,299,148
2	11/1/2028	2029	2	19,299,148	439,820	117,725	557,545	18,859,328
3	5/1/2029	2029	3	18,859,328	442,503	115,042	557,545	18,416,825
4	11/1/2029	2030	4	18,416,825	445,202	112,343	557,545	17,971,623
5	5/1/2030	2030	5	17,971,623	447,918	109,627	557,545	17,523,705
6	11/1/2030	2031	6	17,523,705	450,650	106,895	557,545	17,073,055
7	5/1/2031	2031	7	17,073,055	453,399	104,146	557,545	16,619,656
8	11/1/2031	2032	8	16,619,656	456,165	101,380	557,545	16,163,491
9	5/1/2032	2032	9	16,163,491	458,947	98,597	557,545	15,704,544
10	11/1/2032	2033	10	15,704,544	461,747	95,798	557,545	15,242,797
11	5/1/2033	2033	11	15,242,797	464,564	92,981	557,545	14,778,233
12	11/1/2033	2034	12	14,778,233	467,398	90,147	557,545	14,310,836
13	5/1/2034	2034	13	14,310,836	470,249	87,296	557,545	13,840,587
14	11/1/2034	2035	14	13,840,587	473,117	84,428	557,545	13,367,470
15	5/1/2035	2035	15	13,367,470	476,003	81,542	557,545	12,891,467
16	11/1/2035	2036	16	12,891,467	478,907	78,638	557,545	12,412,560
17	5/1/2036	2036	17	12,412,560	481,828	75,717	557,545	11,930,732
18	11/1/2036	2037	18	11,930,732	484,767	72,777	557,545	11,445,965
19	5/1/2037	2037	19	11,445,965	487,724	69,820	557,545	10,958,240
20	11/1/2037	2038	20	10,958,240	490,699	66,845	557,545	10,467,541
21	5/1/2038	2038	21	10,467,541	493,693	63,852	557,545	9,973,848
22	11/1/2038	2039	22	9,973,848	496,704	60,840	557,545	9,477,144
23	5/1/2039	2039	23	9,477,144	499,734	57,811	557,545	8,977,409
24	11/1/2039	2040	24	8,977,409	502,783	54,762	557,545	8,474,627
25	5/1/2040	2040	25	8,474,627	505,850	51,695	557,545	7,968,777
26	11/1/2040	2041	26	7,968,777	508,935	48,610	557,545	7,459,842
27	5/1/2041	2041	27	7,459,842	512,040	45,505	557,545	6,947,802
28	11/1/2041	2042	28	6,947,802	515,163	42,382	557,545	6,432,639
29	5/1/2042	2042	29	6,432,639	518,306	39,239	557,545	5,914,334
30	11/1/2042	2043	30	5,914,334	521,467	36,077	557,545	5,392,866
31	5/1/2043	2043	31	5,392,866	524,648	32,896	557,545	4,868,218
32	11/1/2043	2044	32	4,868,218	527,849	29,696	557,545	4,340,370
33	5/1/2044	2044	33	4,340,370	531,068	26,476	557,545	3,809,301
34	11/1/2044	2045	34	3,809,301	534,308	23,237	557,545	3,274,993
35	5/1/2045	2045	35	3,274,993	537,567	19,977	557,545	2,737,426
36	11/1/2045	2046	36	2,737,426	540,846	16,698	557,545	2,196,579
37	5/1/2046	2046	37	2,196,579	544,146	13,399	557,545	1,652,434
38	11/1/2046	2047	38	1,652,434	547,465	10,080	557,545	1,104,969
39	5/1/2047	2047	39	1,104,969	550,804	6,740	557,545	554,164
40	11/1/2047	2048	40	554,164	554,164	3,380	557,545	(0)

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$22,200,000
Construction Period (Years)	2.00	SRF Loan Service Fee \$	\$444,000
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	\$276,257
Semiannual Payments:	40	Total Principal Amount:	<u>\$22,920,257</u>
Semiannual Payment:			<u><u>\$647,491</u></u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	5/30/2029	2029	1	\$22,920,257	\$507,677	\$139,814	\$647,491	\$22,412,580
2	11/30/2029	2030	2	22,412,580	510,774	136,717	647,491	21,901,806
3	5/30/2030	2030	3	21,901,806	513,890	133,601	647,491	21,387,916
4	11/30/2030	2031	4	21,387,916	517,024	130,466	647,491	20,870,892
5	5/30/2031	2031	5	20,870,892	520,178	127,312	647,491	20,350,714
6	11/30/2031	2032	6	20,350,714	523,351	124,139	647,491	19,827,363
7	5/30/2032	2032	7	19,827,363	526,544	120,947	647,491	19,300,819
8	11/30/2032	2033	8	19,300,819	529,756	117,735	647,491	18,771,064
9	5/30/2033	2033	9	18,771,064	532,987	114,503	647,491	18,238,077
10	11/30/2033	2034	10	18,238,077	536,238	111,252	647,491	17,701,838
11	5/30/2034	2034	11	17,701,838	539,509	107,981	647,491	17,162,329
12	11/30/2034	2035	12	17,162,329	542,800	104,690	647,491	16,619,529
13	5/30/2035	2035	13	16,619,529	546,111	101,379	647,491	16,073,417
14	11/30/2035	2036	14	16,073,417	549,443	98,048	647,491	15,523,975
15	5/30/2036	2036	15	15,523,975	552,794	94,696	647,491	14,971,180
16	11/30/2036	2037	16	14,971,180	556,166	91,324	647,491	14,415,014
17	5/30/2037	2037	17	14,415,014	559,559	87,932	647,491	13,855,455
18	11/30/2037	2038	18	13,855,455	562,972	84,518	647,491	13,292,483
19	5/30/2038	2038	19	13,292,483	566,406	81,084	647,491	12,726,076
20	11/30/2038	2039	20	12,726,076	569,861	77,629	647,491	12,156,215
21	5/30/2039	2039	21	12,156,215	573,338	74,153	647,491	11,582,877
22	11/30/2039	2040	22	11,582,877	576,835	70,656	647,491	11,006,042
23	5/30/2040	2040	23	11,006,042	580,354	67,137	647,491	10,425,688
24	11/30/2040	2041	24	10,425,688	583,894	63,597	647,491	9,841,795
25	5/30/2041	2041	25	9,841,795	587,456	60,035	647,491	9,254,339
26	11/30/2041	2042	26	9,254,339	591,039	56,451	647,491	8,663,300
27	5/30/2042	2042	27	8,663,300	594,644	52,846	647,491	8,068,655
28	11/30/2042	2043	28	8,068,655	598,272	49,219	647,491	7,470,384
29	5/30/2043	2043	29	7,470,384	601,921	45,569	647,491	6,868,463
30	11/30/2043	2044	30	6,868,463	605,593	41,898	647,491	6,262,870
31	5/30/2044	2044	31	6,262,870	609,287	38,204	647,491	5,653,583
32	11/30/2044	2045	32	5,653,583	613,004	34,487	647,491	5,040,579
33	5/30/2045	2045	33	5,040,579	616,743	30,748	647,491	4,423,836
34	11/30/2045	2046	34	4,423,836	620,505	26,985	647,491	3,803,331
35	5/30/2046	2046	35	3,803,331	624,290	23,200	647,491	3,179,040
36	11/30/2046	2047	36	3,179,040	628,098	19,392	647,491	2,550,942
37	5/30/2047	2047	37	2,550,942	631,930	15,561	647,491	1,919,012
38	11/30/2047	2048	38	1,919,012	635,785	11,706	647,491	1,283,228
39	5/30/2048	2048	39	1,283,228	639,663	7,828	647,491	643,565
40	11/30/2048	2049	40	643,565	643,565	3,926	647,491	0

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$23,230,000
Construction Period (Years)	1.50	SRF Loan Service Fee \$	\$464,600
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	\$216,806
Semiannual Payments:	40	Total Principal Amount:	<u>\$23,911,406</u>
Semiannual Payment:			<u>\$675,490</u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	11/1/2028	2029	1	\$23,911,406	\$529,631	\$145,860	\$675,490	\$23,381,775
2	5/1/2029	2029	2	23,381,775	532,861	142,629	675,490	22,848,914
3	11/1/2029	2030	3	22,848,914	536,112	139,378	675,490	22,312,802
4	5/1/2030	2030	4	22,312,802	539,382	136,108	675,490	21,773,420
5	11/1/2030	2031	5	21,773,420	542,672	132,818	675,490	21,230,747
6	5/1/2031	2031	6	21,230,747	545,983	129,508	675,490	20,684,765
7	11/1/2031	2032	7	20,684,765	549,313	126,177	675,490	20,135,451
8	5/1/2032	2032	8	20,135,451	552,664	122,826	675,490	19,582,787
9	11/1/2032	2033	9	19,582,787	556,035	119,455	675,490	19,026,752
10	5/1/2033	2033	10	19,026,752	559,427	116,063	675,490	18,467,325
11	11/1/2033	2034	11	18,467,325	562,840	112,651	675,490	17,904,486
12	5/1/2034	2034	12	17,904,486	566,273	109,217	675,490	17,338,213
13	11/1/2034	2035	13	17,338,213	569,727	105,763	675,490	16,768,486
14	5/1/2035	2035	14	16,768,486	573,202	102,288	675,490	16,195,283
15	11/1/2035	2036	15	16,195,283	576,699	98,791	675,490	15,618,584
16	5/1/2036	2036	16	15,618,584	580,217	95,273	675,490	15,038,367
17	11/1/2036	2037	17	15,038,367	583,756	91,734	675,490	14,454,611
18	5/1/2037	2037	18	14,454,611	587,317	88,173	675,490	13,867,294
19	11/1/2037	2038	19	13,867,294	590,900	84,590	675,490	13,276,394
20	5/1/2038	2038	20	13,276,394	594,504	80,986	675,490	12,681,890
21	11/1/2038	2039	21	12,681,890	598,131	77,360	675,490	12,083,760
22	5/1/2039	2039	22	12,083,760	601,779	73,711	675,490	11,481,980
23	11/1/2039	2040	23	11,481,980	605,450	70,040	675,490	10,876,530
24	5/1/2040	2040	24	10,876,530	609,143	66,347	675,490	10,267,387
25	11/1/2040	2041	25	10,267,387	612,859	62,631	675,490	9,654,528
26	5/1/2041	2041	26	9,654,528	616,598	58,893	675,490	9,037,930
27	11/1/2041	2042	27	9,037,930	620,359	55,131	675,490	8,417,571
28	5/1/2042	2042	28	8,417,571	624,143	51,347	675,490	7,793,428
29	11/1/2042	2043	29	7,793,428	627,950	47,540	675,490	7,165,478
30	5/1/2043	2043	30	7,165,478	631,781	43,709	675,490	6,533,697
31	11/1/2043	2044	31	6,533,697	635,635	39,856	675,490	5,898,062
32	5/1/2044	2044	32	5,898,062	639,512	35,978	675,490	5,258,550
33	11/1/2044	2045	33	5,258,550	643,413	32,077	675,490	4,615,137
34	5/1/2045	2045	34	4,615,137	647,338	28,152	675,490	3,967,799
35	11/1/2045	2046	35	3,967,799	651,287	24,204	675,490	3,316,513
36	5/1/2046	2046	36	3,316,513	655,259	20,231	675,490	2,661,253
37	11/1/2046	2047	37	2,661,253	659,257	16,234	675,490	2,001,997
38	5/1/2047	2047	38	2,001,997	663,278	12,212	675,490	1,338,719
39	11/1/2047	2048	39	1,338,719	667,324	8,166	675,490	671,395
40	5/1/2048	2048	40	671,395	671,395	4,096	675,490	(0)

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$16,900,000
Construction Period (Years)	2.00	SRF Loan Service Fee \$	\$338,000
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	\$210,304
Semiannual Payments:	40	Total Principal Amount:	<u>\$17,448,304</u>
Semiannual Payment:			<u>\$492,909</u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	6/30/2029	2029	1	\$17,448,304	\$386,475	\$106,435	\$492,909	\$17,061,829
2	12/30/2029	2030	2	17,061,829	388,832	104,077	492,909	16,672,996
3	6/30/2030	2030	3	16,672,996	391,204	101,705	492,909	16,281,792
4	12/30/2030	2031	4	16,281,792	393,591	99,319	492,909	15,888,202
5	6/30/2031	2031	5	15,888,202	395,991	96,918	492,909	15,492,210
6	12/30/2031	2032	6	15,492,210	398,407	94,502	492,909	15,093,803
7	6/30/2032	2032	7	15,093,803	400,837	92,072	492,909	14,692,966
8	12/30/2032	2033	8	14,692,966	403,282	89,627	492,909	14,289,684
9	6/30/2033	2033	9	14,289,684	405,742	87,167	492,909	13,883,941
10	12/30/2033	2034	10	13,883,941	408,217	84,692	492,909	13,475,724
11	6/30/2034	2034	11	13,475,724	410,708	82,202	492,909	13,065,016
12	12/30/2034	2035	12	13,065,016	413,213	79,697	492,909	12,651,803
13	6/30/2035	2035	13	12,651,803	415,733	77,176	492,909	12,236,070
14	12/30/2035	2036	14	12,236,070	418,269	74,640	492,909	11,817,800
15	6/30/2036	2036	15	11,817,800	420,821	72,089	492,909	11,396,980
16	12/30/2036	2037	16	11,396,980	423,388	69,522	492,909	10,973,592
17	6/30/2037	2037	17	10,973,592	425,971	66,939	492,909	10,547,621
18	12/30/2037	2038	18	10,547,621	428,569	64,340	492,909	10,119,052
19	6/30/2038	2038	19	10,119,052	431,183	61,726	492,909	9,687,869
20	12/30/2038	2039	20	9,687,869	433,813	59,096	492,909	9,254,055
21	6/30/2039	2039	21	9,254,055	436,460	56,450	492,909	8,817,596
22	12/30/2039	2040	22	8,817,596	439,122	53,787	492,909	8,378,474
23	6/30/2040	2040	23	8,378,474	441,801	51,109	492,909	7,936,673
24	12/30/2040	2041	24	7,936,673	444,496	48,414	492,909	7,492,177
25	6/30/2041	2041	25	7,492,177	447,207	45,702	492,909	7,044,970
26	12/30/2041	2042	26	7,044,970	449,935	42,974	492,909	6,595,035
27	6/30/2042	2042	27	6,595,035	452,680	40,230	492,909	6,142,355
28	12/30/2042	2043	28	6,142,355	455,441	37,468	492,909	5,686,914
29	6/30/2043	2043	29	5,686,914	458,219	34,690	492,909	5,228,694
30	12/30/2043	2044	30	5,228,694	461,014	31,895	492,909	4,767,680
31	6/30/2044	2044	31	4,767,680	463,827	29,083	492,909	4,303,853
32	12/30/2044	2045	32	4,303,853	466,656	26,254	492,909	3,837,197
33	6/30/2045	2045	33	3,837,197	469,503	23,407	492,909	3,367,695
34	12/30/2045	2046	34	3,367,695	472,367	20,543	492,909	2,895,328
35	6/30/2046	2046	35	2,895,328	475,248	17,662	492,909	2,420,080
36	12/30/2046	2047	36	2,420,080	478,147	14,762	492,909	1,941,933
37	6/30/2047	2047	37	1,941,933	481,064	11,846	492,909	1,460,870
38	12/30/2047	2048	38	1,460,870	483,998	8,911	492,909	976,872
39	6/30/2048	2048	39	976,872	486,951	5,959	492,909	489,921
40	12/30/2048	2049	40	489,921	489,921	2,989	492,909	(0)

Appendix C

Finance Plan for Deep Injection Well Effluent Pump Station

CAPITAL FINANCING PLAN

Brevard County Utility Services

(Project Sponsor)

Edward Fontanin, PE, Utility Services Director

(Authorized Representative and Title)

Viera, Brevard, 32940

(City, State, and Zip Code)

Thierry Boveri, CGFM, Vice President, 407-628-2600

(Capital Financing Plan Contact, Title and Telephone Number)

341 N Maitland Ave, Maitland, FL 32751

(Mailing Address)

tboveri@raftelis.com

(Email Address)

Maitland, FL, 32751

(City, State, and Zip Code)

The Department needs to know about the financial capabilities of potential State Revolving Fund (SRF) loan applicants. Therefore, a financial capability demonstration (and certification is required well before the evaluation of the actual loan application).

The sources of revenues being dedicated to repayment of the SRF loan are Utility operating revenues (**Note: Projects pledging utility operating revenues should attach a copy of the existing /proposed rate ordinance**)

Estimation of Proposed SRF Loan Debt Service

Capital Cost [1]	\$	16,900,000
Loan Service Fee (2% of Capital Cost)	\$	338,000
Subtotal	\$	17,238,000
Capitalized Interest [2]	\$	210,304
Total Cost to be Amortized (Rounded)	\$	17,448,304
Interest Rate [3]		1.22%
Annual Debt Service	\$	985,819
Annual Debt Service Including Coverage Factor [4]	\$	1,133,692

Notes:

[1] Capital Cost = Allowance + Construction Cost.

[2] Estimated based on linear draw of project amount over a 2 year construction period.

[3] Based on previous CFP interest rate submission. FY 25/26 Q2 reported CWSRF rate equals 1.22%.

[4] Coverage Factor is assumed at 1.15 recognizing that no impact fees are assumed within the Schedule of Revenue and Debt Service Coverage.

SCHEDULE OF EXISTING DEBT SERVICE AND DEBT EQUIVALENTS ^[1]

List annual debt service beginning two years before the anticipated loan agreement date and continuing at least fifteen fiscal years.
Use additional pages as necessary.

IDENTIFY EACH OBLIGATION

#1 Water & Wastewater Utility Revenue Bonds, Series 2014 Coverage % [2] 110% Revenue Pledge Lien Priority 1st Insured (Yes/No) Yes	#2 CW-051170 Coverage % 115% Revenue Pledge Lien Priority 2nd Insured (Yes/No) N/A	#3 WW05110 Coverage % 115% Revenue Pledge Lien Prior 2nd Insured (Yes/No) N/A
#4 CW-051130 Coverage % 115% Revenue Pledge Lien Priority 2nd Insured (Yes/No) N/A	#5 Estimate - SRF Loan 1 (CDM2) (Proposed) Coverage % 115% Insured (Yes/No) N/A	#6 Estimate - SRF Loan 2 (Jacobs) (Propose) Coverage % 115% Insured (Yes/No) N/A
#7 Estimate - SRF Loan 3 (CDM1) (Proposed) Coverage % 115% Insured (Yes/No) N/A	#8 Estimate - SRF Loan 1 (WT) (Proposed) Coverage % 115% Insured (Yes/No) N/A	

Fiscal Year	Annual Debt Service (Principal + Interest)								
	Existing Loans				Projected Loans				
	Non-SRF	SRF			SRF				
	1	#2 ^[3]	#3 ^[3]	#4	#5 [4]	#6 [4]	#7[4]	#8[4]	
2025	1,473,431	113,183	2,166,769	598,006	0	0	\$0	\$	
2026	1,473,431	113,183	2,166,769	598,006	0	0	0	0	
2027	1,475,056	113,183	2,166,769	598,006	0	0	0	0	
2028	1,472,406	113,183	2,166,769	598,006	0	0	0	557,54	
2029	1,474,156	113,183	2,166,769	598,006	492,909	647,491	1,350,980	1,115,08	
2030	1,475,156	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2031	1,475,406	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2032	1,472,781	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2033	1,474,344	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2034	1,473,800	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2035	1,471,075	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2036	1,472,650	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2037	1,472,200	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2038	1,474,725	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2039	1,475,000	113,183	2,166,769	598,006	985,819	1,294,981	1,350,980	1,115,08	
2040	1,473,025	113,183	1,083,385	598,006	985,819	1,294,981	1,350,980	1,115,08	
2041	1,473,800	113,183		299,003	985,819	1,294,981	1,350,980	1,115,08	
2042	1,473,400	113,183			985,819	1,294,981	1,350,980	1,115,08	
2043	1,471,000	113,183			985,819	1,294,981	1,350,980	1,115,08	
2044	1,471,600	56,592			985,819	1,294,981	1,350,980	1,115,08	
2045					985,819	1,294,981	1,350,980	1,115,08	
2046					985,819	1,294,981	1,350,980	1,115,08	
2047					985,819	1,294,981	1,350,980	1,115,08	
2048					985,819	1,294,981	1,350,980	557,54	
2049					492,909	647,491			
2050									
2051									
2052									
2053									
2054									

Footnote:

- [1] Reflects debt service schedules from outstanding bonds and active SRF loans. It should be noted that the projections contained herein do not reflect any additional debt service that may be contemplated or required to fund future capital pursuant to the County's Capital Improvement Plan.
- [2] Pursuant to the Bond Resolution authorizing the issuance of the outstanding Water and Wastewater Revenue Bonds, Series 2014, the county must:
 - a) generate sufficient Net Revenue equal to or greater than 110% of the annual debt service of the outstanding bonds; and b) generate sufficient Net Revenues plus impact fees equal to or greater than 120% of the annual debt service of the outstanding bonds. For purposes of the CFP we have assumed the senior lien coverage requirement at 110% in recognition that no impact fees were assumed in the projections contained in the *Schedule of Projected Revenues and Debt Coverage for Pledged Revenue*.
- [3] Amounts shown reflect estimates and are subject to change based on completion of actual project cost and timing of completion.
- [4] Amounts shown reflect estimates of additional proposed SRF loans which would be submitted in parallel with the current submission.

**SCHEDULE OF ACTUAL REVENUES AND DEBT COVERAGE
FOR PLEDGED REVENUE**

(Provide information for the two fiscal years preceding the anticipated date of the SRF loan agreement)

	FY 23-24 <small>[1]</small>	FY 24-25 <small>[1]</small>
(a) Operating Revenues (Identify)		
Charges for Service [2]	\$ 52,168,786	\$ 57,601,404
Other Operating Revenue	-	-
(b) Interest Income	\$6,075,498	\$4,907,624
(c) Other Incomes or Revenues	\$0	\$0
(d) Total Revenues	\$58,244,284	\$62,509,028
(e) Operating Expenses (excluding interest on debt, depreciation and other non-cash items)	\$41,469,096	\$43,860,028
(f) Net Revenues (f = d - e)	\$16,775,188	\$18,649,000
(g) Debt Service (including coverage) Excluding SRF Loans [3]	\$1,618,849	\$1,620,774
(h) Debt Service (including coverage) for Outstanding SRF Loans [3]	\$3,179,491	\$3,193,528
(i) Net Revenues After Debt Service (i = f - g - h)	\$11,976,847	\$13,834,698

<p>Source:</p>
<p>Notes:</p> <p>[1] Unless otherwise noted, amounts shown are derived from the County's audited financial statements for FY24 and unaudited budget to actuals document for FY25.</p> <p>[2] The Board approved the following rate adjustments at the February 8, 2022 Public Hearing;</p> <p style="padding-left: 20px;">a. The water and sewer user rates will be indexed as follows effective each year:</p> <p style="padding-left: 40px;">2022 – 6.5%</p> <p style="padding-left: 40px;">2023 – 8.5%</p> <p style="padding-left: 40px;">2024 – 8.5%</p> <p style="padding-left: 40px;">2025 – 8.5%</p> <p style="padding-left: 40px;">2026 – 7.5%</p> <p style="padding-left: 20px;">Beginning and in all subsequent years, the water and sewer user rates shall automatically increase based on the actual change in the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U) based on the average of the index from the previous 12 months (November to November).</p> <p>[3] Amounts shown reflect debt service as noted in the prior <i>Schedule Of Debt Service And Debt Equivalents</i>.</p>

**SCHEDULE OF PROJECTED REVENUES AND DEBT COVERAGE
FOR PLEDGED REVENUE**

	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>
(a) Operating Revenues Service Charges [1]	\$58,515,000	\$60,776,000	\$63,127,000	\$65,573,000	\$68,116,000
(b) Interest Income [2]	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000
(c) Other Incomes or Revenues (Identify) [3]	\$0	\$0	\$0	\$0	\$0
(d) Total Revenues	<u>\$62,015,000</u>	<u>\$64,276,000</u>	<u>\$66,627,000</u>	<u>\$69,073,000</u>	<u>\$71,616,000</u>
(e) Operating Expenses (excluding interest on debt, depreciation and other non-cash items) [4]	<u>\$46,698,633</u>	<u>\$48,416,401</u>	<u>\$50,197,623</u>	<u>\$52,044,655</u>	<u>\$53,959,937</u>
(f) Net Revenues (f = d - e)	<u>\$15,316,367</u>	<u>\$15,859,599</u>	<u>\$16,429,377</u>	<u>\$17,028,345</u>	<u>\$17,656,063</u>
(g) Existing Debt Service on Non-SRF Projects (including coverage) [5]	<u>\$1,620,774</u>	<u>\$1,622,562</u>	<u>\$1,619,647</u>	<u>\$1,621,572</u>	<u>\$1,622,672</u>
(h) Existing SRF Loan Debt Service (including coverage)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total Existing Debt Service (i = g + h)	<u>\$1,620,774</u>	<u>\$1,622,562</u>	<u>\$1,619,647</u>	<u>\$1,621,572</u>	<u>\$1,622,672</u>
(j) Projected Debt Service on Non-SRF Future Projects (including coverage)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
(k) Projected SRF Loan Debt Service (Other SRF Loans) (including coverage) [6]	<u>\$3,309,652</u>	<u>\$3,309,652</u>	<u>\$3,950,828</u>	<u>\$6,890,246</u>	<u>\$7,634,861</u>
(l) Projected SRF Loan Debt Service (This Loan) (including coverage)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$566,846</u>	<u>\$1,133,692</u>
Total Debt Service (Existing and Projected) (m = i + j + k+l)	<u>\$4,930,426</u>	<u>\$4,932,214</u>	<u>\$5,570,475</u>	<u>\$9,078,664</u>	<u>\$10,391,224</u>
(n) Net Revenues After Debt Service (n = f - m) [7]	<u>\$10,385,941</u>	<u>\$10,927,385</u>	<u>\$10,858,901</u>	<u>\$7,949,681</u>	<u>\$7,264,839</u>

Source:

Notes:

- [1] Revenue projection for FY26 is assumes a 7.5% rate adjustment (adopted by the County) (pro rated for only 8 months since it is effective February 1st 2026) and for all future years 4.0% rate adjustments were assumed which is slightly below the 5 year average for the BLS water and sewerage maintenance index v the County adopted as its rate adjustment index for future years. Revenue projections exclude impact fees.
- [2] Includes interest income on unrestricted cash balances, which were assumed to be held constant during the forecast.
- [3] Although excluded from the projections, the County recovered on average approximately \$4.76 million in water and wastewater impact fees during the Fiscal Years 2024 and 2025. The County continues to charge new connections the impact fees.
- [4] Amounts are based on the County's adopted budget for operating expenses for the Fiscal Year 2026 and escalated thereafter at an average annual factor of approximately 3.7%.
- [5] Pursuant to the Bond Resolution authorizing the issuance of the outstanding Water and Wastewater Revenue Bonds, Series 2014, the county must:
a) generate sufficient Net Revenue equal to or greater than 110% of the annual debt service of the outstanding bonds; and b) generate sufficient Net Revenues plus impact fees equal to or greater than 120% of the annual debt service of the outstanding bonds. For purposes of the CFP we have assumed the senior lien coverage requirement at 110% in recognition that no impact fees were assumed in the projections contained in the Schedule of Projected Revenues and Debt Coverage for Pledged Revenue.
- [6] Amounts reflect the estimated annual debt service for the proposed SRF Loan.
- [7] For the purposes of full disclosure, the County budgets and funds: a) transfers to the general fund associated with Payment in Lieu of Taxes and b) capital outlay for minor units of equipment and vehicles. The following provides a forecast of net revenues after such transfers and payments:

Net Revenues After Debt	\$10,385,941	\$10,927,385	\$10,858,901	\$7,949,681	\$7,264,839
Less:					
Payment in Lieu of Taxes (PILOT)	\$1,754,149	\$1,754,149	\$1,754,149	\$1,754,149	\$1,754,149
Capital Outlay (Excludes Major Maintenance)	2,750,000	2,750,000	2,750,000	2,750,000	2,750,000
Net Available to Utility Reserve Fund	<u>\$5,881,792</u>	<u>\$6,423,237</u>	<u>\$6,354,753</u>	<u>\$3,445,532</u>	<u>\$2,760,690</u>

CERTIFICATION

I, Edward Fontanin, PE, certify that I have reviewed the information
Utility Services Department Director

included in the preceding capital financing plan worksheets, and to the best of my knowledge, this
information accurately reflects the financial capability of Brevard County Utility Services
Department,
Local Government

I further certify that Brevard County Utility Services Department
Local Government

adequate construction, operation, and maintenance of the system, including this SRF project.



Signature

MAR 18/26

Date

**Brevard County, Florida
Water and Wastewater Utility System**

Projected Debt Service Coverage Analysis [1]

Line No.	Description	Historical					Projected				
		2023	2024	2025	2026	2027	2028	2029	2030	2031	
Gross Revenues:											
1	Water User Service Fees [1]	\$ 1,687,730	\$ 1,862,189	\$ 2,213,092	\$ 2,324,000	\$ 2,417,000	\$ 2,514,000	\$ 2,615,000	\$ 2,720,000	\$ 2,829,000	
2	Wastewater User Service Fees [2]	43,412,307	48,536,699	51,610,188	54,191,000	56,359,000	58,613,000	60,958,000	63,396,000	65,932,000	
3	Other Revenues	1,534,020	2,111,651	2,307,012	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	
4	Investment Earnings	2,259,620	3,836,317	4,121,471	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	
5	Transfers (to) / from Rate Stabilization Fund	-	-	-	-	-	-	-	-	-	
6	Total	\$ 48,893,677	\$ 56,346,856	\$ 60,251,762	\$ 62,015,000	\$ 64,276,000	\$ 66,627,000	\$ 69,073,000	\$ 71,616,000	\$ 74,261,000	
Operating Expenses:											
7	Compensation and Benefits	\$ 12,015,751	\$ 14,045,840	\$ 16,022,308	\$ 16,663,201	\$ 17,329,729	\$ 18,022,918	\$ 18,743,834	\$ 19,493,588	\$ 20,273,331	
8	Operating Expenses	21,313,536	28,337,664	29,019,741	30,035,432	31,086,672	32,174,706	33,300,820	34,466,349	35,672,671	
9	Total	\$ 33,329,287	\$ 42,383,504	\$ 45,042,049	\$ 46,698,633	\$ 48,416,401	\$ 50,197,623	\$ 52,044,655	\$ 53,959,937	\$ 55,946,003	
10	Net Revenues	\$ 15,564,390	\$ 13,963,351	\$ 15,209,713	\$ 15,316,367	\$ 15,859,599	\$ 16,429,377	\$ 17,028,345	\$ 17,656,063	\$ 18,314,997	

Footnotes:

- [1] Projected water revenues are increased by the County adopted inflationary index (water and sewerage maintenance index) of 4%
- [2] Projected wastewater revenues are increased by the County adopted inflationary index (water and sewerage maintenance index) of 4%

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$19,232,000
Construction Period (Years)	1.00	SRF Loan Service Fee \$	\$384,640
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	<u>\$119,662</u>
Semiannual Payments:	40	Total Principal Amount:	<u>\$19,736,302</u>
Semiannual Payment:			<u><u>\$557,545</u></u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	5/1/2028	2028	1	\$19,736,302	\$437,153	\$120,391	\$557,545	\$19,299,148
2	11/1/2028	2029	2	19,299,148	439,820	117,725	557,545	18,859,328
3	5/1/2029	2029	3	18,859,328	442,503	115,042	557,545	18,416,825
4	11/1/2029	2030	4	18,416,825	445,202	112,343	557,545	17,971,623
5	5/1/2030	2030	5	17,971,623	447,918	109,627	557,545	17,523,705
6	11/1/2030	2031	6	17,523,705	450,650	106,895	557,545	17,073,055
7	5/1/2031	2031	7	17,073,055	453,399	104,146	557,545	16,619,656
8	11/1/2031	2032	8	16,619,656	456,165	101,380	557,545	16,163,491
9	5/1/2032	2032	9	16,163,491	458,947	98,597	557,545	15,704,544
10	11/1/2032	2033	10	15,704,544	461,747	95,798	557,545	15,242,797
11	5/1/2033	2033	11	15,242,797	464,564	92,981	557,545	14,778,233
12	11/1/2033	2034	12	14,778,233	467,398	90,147	557,545	14,310,836
13	5/1/2034	2034	13	14,310,836	470,249	87,296	557,545	13,840,587
14	11/1/2034	2035	14	13,840,587	473,117	84,428	557,545	13,367,470
15	5/1/2035	2035	15	13,367,470	476,003	81,542	557,545	12,891,467
16	11/1/2035	2036	16	12,891,467	478,907	78,638	557,545	12,412,560
17	5/1/2036	2036	17	12,412,560	481,828	75,717	557,545	11,930,732
18	11/1/2036	2037	18	11,930,732	484,767	72,777	557,545	11,445,965
19	5/1/2037	2037	19	11,445,965	487,724	69,820	557,545	10,958,240
20	11/1/2037	2038	20	10,958,240	490,699	66,845	557,545	10,467,541
21	5/1/2038	2038	21	10,467,541	493,693	63,852	557,545	9,973,848
22	11/1/2038	2039	22	9,973,848	496,704	60,840	557,545	9,477,144
23	5/1/2039	2039	23	9,477,144	499,734	57,811	557,545	8,977,409
24	11/1/2039	2040	24	8,977,409	502,783	54,762	557,545	8,474,627
25	5/1/2040	2040	25	8,474,627	505,850	51,695	557,545	7,968,777
26	11/1/2040	2041	26	7,968,777	508,935	48,610	557,545	7,459,842
27	5/1/2041	2041	27	7,459,842	512,040	45,505	557,545	6,947,802
28	11/1/2041	2042	28	6,947,802	515,163	42,382	557,545	6,432,639
29	5/1/2042	2042	29	6,432,639	518,306	39,239	557,545	5,914,334
30	11/1/2042	2043	30	5,914,334	521,467	36,077	557,545	5,392,866
31	5/1/2043	2043	31	5,392,866	524,648	32,896	557,545	4,868,218
32	11/1/2043	2044	32	4,868,218	527,849	29,696	557,545	4,340,370
33	5/1/2044	2044	33	4,340,370	531,068	26,476	557,545	3,809,301
34	11/1/2044	2045	34	3,809,301	534,308	23,237	557,545	3,274,993
35	5/1/2045	2045	35	3,274,993	537,567	19,977	557,545	2,737,426
36	11/1/2045	2046	36	2,737,426	540,846	16,698	557,545	2,196,579
37	5/1/2046	2046	37	2,196,579	544,146	13,399	557,545	1,652,434
38	11/1/2046	2047	38	1,652,434	547,465	10,080	557,545	1,104,969
39	5/1/2047	2047	39	1,104,969	550,804	6,740	557,545	554,164
40	11/1/2047	2048	40	554,164	554,164	3,380	557,545	(0)

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$22,200,000
Construction Period (Years)	2.00	SRF Loan Service Fee \$	\$444,000
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	\$276,257
Semiannual Payments:	40	Total Principal Amount:	<u>\$22,920,257</u>
Semiannual Payment:			<u><u>\$647,491</u></u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	5/30/2029	2029	1	\$22,920,257	\$507,677	\$139,814	\$647,491	\$22,412,580
2	11/30/2029	2030	2	22,412,580	510,774	136,717	647,491	21,901,806
3	5/30/2030	2030	3	21,901,806	513,890	133,601	647,491	21,387,916
4	11/30/2030	2031	4	21,387,916	517,024	130,466	647,491	20,870,892
5	5/30/2031	2031	5	20,870,892	520,178	127,312	647,491	20,350,714
6	11/30/2031	2032	6	20,350,714	523,351	124,139	647,491	19,827,363
7	5/30/2032	2032	7	19,827,363	526,544	120,947	647,491	19,300,819
8	11/30/2032	2033	8	19,300,819	529,756	117,735	647,491	18,771,064
9	5/30/2033	2033	9	18,771,064	532,987	114,503	647,491	18,238,077
10	11/30/2033	2034	10	18,238,077	536,238	111,252	647,491	17,701,838
11	5/30/2034	2034	11	17,701,838	539,509	107,981	647,491	17,162,329
12	11/30/2034	2035	12	17,162,329	542,800	104,690	647,491	16,619,529
13	5/30/2035	2035	13	16,619,529	546,111	101,379	647,491	16,073,417
14	11/30/2035	2036	14	16,073,417	549,443	98,048	647,491	15,523,975
15	5/30/2036	2036	15	15,523,975	552,794	94,696	647,491	14,971,180
16	11/30/2036	2037	16	14,971,180	556,166	91,324	647,491	14,415,014
17	5/30/2037	2037	17	14,415,014	559,559	87,932	647,491	13,855,455
18	11/30/2037	2038	18	13,855,455	562,972	84,518	647,491	13,292,483
19	5/30/2038	2038	19	13,292,483	566,406	81,084	647,491	12,726,076
20	11/30/2038	2039	20	12,726,076	569,861	77,629	647,491	12,156,215
21	5/30/2039	2039	21	12,156,215	573,338	74,153	647,491	11,582,877
22	11/30/2039	2040	22	11,582,877	576,835	70,656	647,491	11,006,042
23	5/30/2040	2040	23	11,006,042	580,354	67,137	647,491	10,425,688
24	11/30/2040	2041	24	10,425,688	583,894	63,597	647,491	9,841,795
25	5/30/2041	2041	25	9,841,795	587,456	60,035	647,491	9,254,339
26	11/30/2041	2042	26	9,254,339	591,039	56,451	647,491	8,663,300
27	5/30/2042	2042	27	8,663,300	594,644	52,846	647,491	8,068,655
28	11/30/2042	2043	28	8,068,655	598,272	49,219	647,491	7,470,384
29	5/30/2043	2043	29	7,470,384	601,921	45,569	647,491	6,868,463
30	11/30/2043	2044	30	6,868,463	605,593	41,898	647,491	6,262,870
31	5/30/2044	2044	31	6,262,870	609,287	38,204	647,491	5,653,583
32	11/30/2044	2045	32	5,653,583	613,004	34,487	647,491	5,040,579
33	5/30/2045	2045	33	5,040,579	616,743	30,748	647,491	4,423,836
34	11/30/2045	2046	34	4,423,836	620,505	26,985	647,491	3,803,331
35	5/30/2046	2046	35	3,803,331	624,290	23,200	647,491	3,179,040
36	11/30/2046	2047	36	3,179,040	628,098	19,392	647,491	2,550,942
37	5/30/2047	2047	37	2,550,942	631,930	15,561	647,491	1,919,012
38	11/30/2047	2048	38	1,919,012	635,785	11,706	647,491	1,283,228
39	5/30/2048	2048	39	1,283,228	639,663	7,828	647,491	643,565
40	11/30/2048	2049	40	643,565	643,565	3,926	647,491	0

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$23,230,000
Construction Period (Years)	1.50	SRF Loan Service Fee \$	\$464,600
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	\$216,806
Semiannual Payments:	40	Total Principal Amount:	\$23,911,406
		Semiannual Payment:	<u>\$675,490</u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	11/1/2028	2029	1	\$23,911,406	\$529,631	\$145,860	\$675,490	\$23,381,775
2	5/1/2029	2029	2	23,381,775	532,861	142,629	675,490	22,848,914
3	11/1/2029	2030	3	22,848,914	536,112	139,378	675,490	22,312,802
4	5/1/2030	2030	4	22,312,802	539,382	136,108	675,490	21,773,420
5	11/1/2030	2031	5	21,773,420	542,672	132,818	675,490	21,230,747
6	5/1/2031	2031	6	21,230,747	545,983	129,508	675,490	20,684,765
7	11/1/2031	2032	7	20,684,765	549,313	126,177	675,490	20,135,451
8	5/1/2032	2032	8	20,135,451	552,664	122,826	675,490	19,582,787
9	11/1/2032	2033	9	19,582,787	556,035	119,455	675,490	19,026,752
10	5/1/2033	2033	10	19,026,752	559,427	116,063	675,490	18,467,325
11	11/1/2033	2034	11	18,467,325	562,840	112,651	675,490	17,904,486
12	5/1/2034	2034	12	17,904,486	566,273	109,217	675,490	17,338,213
13	11/1/2034	2035	13	17,338,213	569,727	105,763	675,490	16,768,486
14	5/1/2035	2035	14	16,768,486	573,202	102,288	675,490	16,195,283
15	11/1/2035	2036	15	16,195,283	576,699	98,791	675,490	15,618,584
16	5/1/2036	2036	16	15,618,584	580,217	95,273	675,490	15,038,367
17	11/1/2036	2037	17	15,038,367	583,756	91,734	675,490	14,454,611
18	5/1/2037	2037	18	14,454,611	587,317	88,173	675,490	13,867,294
19	11/1/2037	2038	19	13,867,294	590,900	84,590	675,490	13,276,394
20	5/1/2038	2038	20	13,276,394	594,504	80,986	675,490	12,681,890
21	11/1/2038	2039	21	12,681,890	598,131	77,360	675,490	12,083,760
22	5/1/2039	2039	22	12,083,760	601,779	73,711	675,490	11,481,980
23	11/1/2039	2040	23	11,481,980	605,450	70,040	675,490	10,876,530
24	5/1/2040	2040	24	10,876,530	609,143	66,347	675,490	10,267,387
25	11/1/2040	2041	25	10,267,387	612,859	62,631	675,490	9,654,528
26	5/1/2041	2041	26	9,654,528	616,598	58,893	675,490	9,037,930
27	11/1/2041	2042	27	9,037,930	620,359	55,131	675,490	8,417,571
28	5/1/2042	2042	28	8,417,571	624,143	51,347	675,490	7,793,428
29	11/1/2042	2043	29	7,793,428	627,950	47,540	675,490	7,165,478
30	5/1/2043	2043	30	7,165,478	631,781	43,709	675,490	6,533,697
31	11/1/2043	2044	31	6,533,697	635,635	39,856	675,490	5,898,062
32	5/1/2044	2044	32	5,898,062	639,512	35,978	675,490	5,258,550
33	11/1/2044	2045	33	5,258,550	643,413	32,077	675,490	4,615,137
34	5/1/2045	2045	34	4,615,137	647,338	28,152	675,490	3,967,799
35	11/1/2045	2046	35	3,967,799	651,287	24,204	675,490	3,316,513
36	5/1/2046	2046	36	3,316,513	655,259	20,231	675,490	2,661,253
37	11/1/2046	2047	37	2,661,253	659,257	16,234	675,490	2,001,997
38	5/1/2047	2047	38	2,001,997	663,278	12,212	675,490	1,338,719
39	11/1/2047	2048	39	1,338,719	667,324	8,166	675,490	671,395
40	5/1/2048	2048	40	671,395	671,395	4,096	675,490	(0)

Future Debt Work Paper

Estimate Debt Service Payment Schedule for Proposed Clean Wastewater SRF Loan

Loan Service Fee %	2.0%	Project Funding Amount:	\$16,900,000
Construction Period (Years)	2.00	SRF Loan Service Fee \$	\$338,000
Assumed Interest Rate:	1.22%	Estimated Capitalized Interest	\$210,304
Semiannual Payments:	40	Total Principal Amount:	<u>\$17,448,304</u>
Semiannual Payment:			<u><u>\$492,909</u></u>

Line No.	Estimated Payment Date	Fiscal Year of Cash Payment	Semiannual Payment	Beginning Balance	Principal Payment	Interest Payment	Total Payment	Ending Balance
1	6/30/2029	2029	1	\$17,448,304	\$386,475	\$106,435	\$492,909	\$17,061,829
2	12/30/2029	2030	2	17,061,829	388,832	104,077	492,909	16,672,996
3	6/30/2030	2030	3	16,672,996	391,204	101,705	492,909	16,281,792
4	12/30/2030	2031	4	16,281,792	393,591	99,319	492,909	15,888,202
5	6/30/2031	2031	5	15,888,202	395,991	96,918	492,909	15,492,210
6	12/30/2031	2032	6	15,492,210	398,407	94,502	492,909	15,093,803
7	6/30/2032	2032	7	15,093,803	400,837	92,072	492,909	14,692,966
8	12/30/2032	2033	8	14,692,966	403,282	89,627	492,909	14,289,684
9	6/30/2033	2033	9	14,289,684	405,742	87,167	492,909	13,883,941
10	12/30/2033	2034	10	13,883,941	408,217	84,692	492,909	13,475,724
11	6/30/2034	2034	11	13,475,724	410,708	82,202	492,909	13,065,016
12	12/30/2034	2035	12	13,065,016	413,213	79,697	492,909	12,651,803
13	6/30/2035	2035	13	12,651,803	415,733	77,176	492,909	12,236,070
14	12/30/2035	2036	14	12,236,070	418,269	74,640	492,909	11,817,800
15	6/30/2036	2036	15	11,817,800	420,821	72,089	492,909	11,396,980
16	12/30/2036	2037	16	11,396,980	423,388	69,522	492,909	10,973,592
17	6/30/2037	2037	17	10,973,592	425,971	66,939	492,909	10,547,621
18	12/30/2037	2038	18	10,547,621	428,569	64,340	492,909	10,119,052
19	6/30/2038	2038	19	10,119,052	431,183	61,726	492,909	9,687,869
20	12/30/2038	2039	20	9,687,869	433,813	59,096	492,909	9,254,055
21	6/30/2039	2039	21	9,254,055	436,460	56,450	492,909	8,817,596
22	12/30/2039	2040	22	8,817,596	439,122	53,787	492,909	8,378,474
23	6/30/2040	2040	23	8,378,474	441,801	51,109	492,909	7,936,673
24	12/30/2040	2041	24	7,936,673	444,496	48,414	492,909	7,492,177
25	6/30/2041	2041	25	7,492,177	447,207	45,702	492,909	7,044,970
26	12/30/2041	2042	26	7,044,970	449,935	42,974	492,909	6,595,035
27	6/30/2042	2042	27	6,595,035	452,680	40,230	492,909	6,142,355
28	12/30/2042	2043	28	6,142,355	455,441	37,468	492,909	5,686,914
29	6/30/2043	2043	29	5,686,914	458,219	34,690	492,909	5,228,694
30	12/30/2043	2044	30	5,228,694	461,014	31,895	492,909	4,767,680
31	6/30/2044	2044	31	4,767,680	463,827	29,083	492,909	4,303,853
32	12/30/2044	2045	32	4,303,853	466,656	26,254	492,909	3,837,197
33	6/30/2045	2045	33	3,837,197	469,503	23,407	492,909	3,367,695
34	12/30/2045	2046	34	3,367,695	472,367	20,543	492,909	2,895,328
35	6/30/2046	2046	35	2,895,328	475,248	17,662	492,909	2,420,080
36	12/30/2046	2047	36	2,420,080	478,147	14,762	492,909	1,941,933
37	6/30/2047	2047	37	1,941,933	481,064	11,846	492,909	1,460,870
38	12/30/2047	2048	38	1,460,870	483,998	8,911	492,909	976,872
39	6/30/2048	2048	39	976,872	486,951	5,959	492,909	489,921
40	12/30/2048	2049	40	489,921	489,921	2,989	492,909	(0)

Appendix D

Board of County Commissioners of Brevard County Resolution Number 2026-000

- (Draft Resolution to be voted on by the Brevard County Board of County Commissioners on April 7, 2026.)

RESOLUTION NUMBER 2026-

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, RELATING TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) STATE REVOLVING FUND (SRF), ADOPTION OF THE WASTEWATER FACILITIES PLAN FOR THE IMPLEMENTATION OF THE SOUTH BEACHES DEEP INJECTION WELL IMPROVEMENTS, AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Florida Statutes provide for loans to local government agencies to finance the construction of wastewater facilities, and the Florida Administrative Code requires authorization by the Board to formally adopt a Facilities Plan outlining necessary wastewater facility improvements to comply with State of Florida funding requirements;

WHEREAS, formal adoption of the proposed Facilities Plan, including public participation through a public hearing, is required for Brevard County to participate in the State Revolving Loan Fund Program;

WHEREAS, the Board of County Commissioners of Brevard County, Florida agrees with the findings and summary of necessary improvements as outlined in the Facilities Plan for the purpose of providing reliable, long-term disposal for secondary treated effluent, eliminate routine and emergency surface water discharge in compliance with state regulations;

NOW THEREFORE BE IT RESOLVED by the Board of Commissioners of Brevard County, Florida, that:

SECTION 1. FINDINGS

The foregoing recitals are incorporated herein by reference and made a part hereof.

The Board of County Commissioners of Brevard County, Florida, is authorized to approve the proposed Facilities Plan, and hereby formally approves and adopts the South Beaches Deep Injection Well Improvements Facilities Plan as written and presented to the Board on this date, a copy of which is attached hereto and incorporated herein by reference.

The County Manager is hereby designated as the authorized representative to provide the assurances and commitments that will be required by the Facilities Plan.

The County Manager is hereby designated as the authorized representative to execute the Facilities Plan which will become the foundation of all activities related to the wastewater facility improvements. The County Manager is authorized to represent the County in carrying out the County's responsibilities under the Facilities Plan. The County Manager is authorized to delegate responsibility to appropriate County Staff to carry out technical, financial, and administrative activities associated with the Facilities Plan.

The legal authority for adoption of this facilities plan is pursuant to the County Charter, County Code of Ordinances, and the Laws of the State of Florida.

All Resolutions or part of Resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidated or impair the validity, force, or effect or any other section or part of this Resolution.

SECTION 2. EFFECTIVE DATE

This Resolution shall take effect upon its approval and adoption by the Board.

APPROVED AND ADOPTED IN REGULAR SESSION THIS ____ DAY OF _____, ..

ATTEST:

**BOARD OF COUNTY COMMISSIONERS
BREVARD COUNTY, FLORIDA**

CLERK

CHAIR (SEAL)

APPROVED AS TO FORM AND CONTENT:
